



# COMMERCIAL AUDIO

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# RCF BUILT ITS HISTORY OF SOUND AMPLIFICATION

**Founded in 1949, RCF built its history of sound amplification** from basic solutions for small spaces to vast and complex digital systems for theatres, shopping malls, airports, railway stations, underground metro's, exhibition centres, schools, hospitals, sports arenas, stadia, hotels.

Our Product's design and manufacturing are held in the Reggio Emilia headquarters where more than 240 people are employed ensuring the high quality of RCF's products and systems.

Today RCF produces a wide and diverse range of products to satisfy any sound and musical amplification need. This can range from a single product to complete integrated solution. In doing so, the company can cover everything from a small project to very large and complex system.

RCF controls every step of the production process, from the design to the construction and marketing of its products. Owning its own transducers technology gives RCF an enormous advantage in the development of complete speaker systems, achieving **the perfect match between transducers and electronics, now more and more focused on digital technology.** 

RCF has always been committed in providing complete support to its customers helping them to choose the most suitable solutions for their projects, instruct on how to install the products in the correct way and achieve the best possible performances.

This support activity **is crucial to RCF's continual success** and we keep investing in this department by expanding our engineering team of product specialists as well as the use of the latest equipments and software technologies.

The direct involvement in groups and more complex projects around the world is continually raising the know-how, experience and reputation of our team of specialists that is considered one of the best **Engineering Support Group** in our industry.

A system design must always be carried out considering the acoustics of the environment, the architectural and installation constraints, the maintenance costs and, on top of everything, the user's requirements. The extensive and complete range of RCF products enables the Engineering Support Group to submit multiple design solutions optimized and tailored according to costs' and performances' requirements. ESG engineers are also involved in educational and training activities where they can exchange information and opinion with consultants and contractors participating to the RCF Audio Academy program, an extensive range of courses and workshops organized worldwide on several subjects by RCF engineers.

Engineering Support Group is able to produce:

- Design proposal based on supplied venue details, including environment acoustic simulation, products list, bloc diagram, speaker coverage mapping.
- Design validation based on design submitted by the client providing guidance on the proper selection and placement of RCF products.
- Design of alternative solutions, based on existing specs, providing advice and improved system configurations based upon RCF products.
- Acoustical consultancy for the definition of projects specifications in cooperation with architects' and contractors' offices.
- On site system start-up and commissioning. Furthermore RCF provides on request rack already wired completed with connection diagrams and operation manuals.
- Educational and training activities, included in the RCF Audio Academy world-wide program, or tailor made for the client's requirements.

# VOICE ALARM AND CONTROL AND INDICATION EQUIPMENT IN COMPLIANCE WITH EN 54-16 AND EN 60849

For the management and broadcast of background music and announcements, including evacuation and emergency, with controls and reporting in accordance with EN 54-16 and EN 60849.



#### MODEL

NUMBER OF ZONES FOR 100 V SYSTEMS

AMPLIFIERS AND SPEAKERS LINES REDUNDANCY MANAGEMENT

SPARE AMPLIFIER MANAGEMENT

NUMBER OF MICROPHONE CONSOLES

CONSOLE WITH INFORMATIVE/INTERACTIVE LCD DISPLAY

AUDIO CHANNELS

PROGRAMMABLE CONSOLES

INPUT FOR MUSIC SOURCES

AUX CONNECTIONS ANALOG. AUDIO IN/OUT

CONFIGURATION

INTEGRATED PRE-RECORDED EVACUATION/ROUTINE MESSAGES

DSP

CONNECTIVITY

CONSOLE CONNECTION CABLES

SYSTEM COMPONENTS CONNECTION CABLES

SPEAKERS CONNECTION CABLES

REMOTE CONTROLS

BACK-UP POWER SUPPLY

COMPLIANT TO EN 60849

CERTIFICATION EN 54-16

CERTIFICATION EN 54-4









# **MU 7100EN**

p/n 171.70.157



**AMPLIFIED MASTER UNIT** 

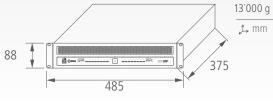


MU 7100EN is the master unit of the DXT 7000 Voice Alarm system, designed to fulfill all requirements of EN 54-16 and EN 60849 standard. The whole signal path from microphone to loudspeaker lines is completely and automatically monitored against faults. All properties and functions of the system are specified with Windows based DXT 7000 configuration software and are downloaded to master unit through its USB port.

- · 8 x 7 configurable digital matrix
- · Powerful DSP platform on-board
- · Dual AC and DC power supply
- · 8 x 80 W power amplifier
- · PC software configuration
- · Emergency messages on monitored memory
- · Up to 32 units linked together
- · Up to 256 loudspeaker lines

#### **REAR VIEW**





SPECIFICATIONS	MU 7100EN
POWER OUTPUT	8 x 80 W RMS @ 8 Ω
FREQUENCY RESPONCE	20 ÷ 20.000 Hz (± 1 dB)
DISTORTION (THD+N)	< 0,05% @ 1 kHz
SIGNAL/NOISE RATE:	> 96 dBA
INPUT SENSITIVITY	-40 ÷ +6 dBu (8 mV ÷ 1,55 V)
INPUT IMPEDANCE	20 K Ω BALANCED
PHANTOM POWER	12 V
POWER SUPPLY	100 V A.C MIN., 240 V A.C MAX. @ 50 - 60 Hz, 48 V DC
INPUT CONNECTORS	REMOVABLE SCREW TERMINAL

# MT 7308EN

p/n 171.70.159

POWER AMPLIFIER MANAGER



MT 7308 is a power amplifiers manager unit of the DXT 7000 Voice Alarm system, suitable to control up to 8 additional power amplifiers and several speaker lines, according to EN 54-16 norm. It works connected to the MU 7100EN master unit. When speaker lines drive high power loads, it could be convenient to optimize the system configuration by using one or more dedicated power amplifiers dimensioned according the loads involved.

- · Manages up to 8 power amplifiers
- · 500 W maximum power of each amplifier
- · Up to 8 zones managed
- · PC software configuration



# LT 7208EN

p/n 171.70.156

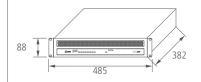
LINE TRANSFORMER INTERFACE





The LT 7208EN unit has 8 internal transformers (80 W / each) to convert the 8 ohm loudspeakers outputs of MU 7100EN master unit into constant voltage lines (100 - 70 - 50 V) for loudspeakers equipped with line transformers. It allows to implement several power configurations, such as 8 x 80 W, 4 x 160 W and 2 x 320 W.

- · 8 built -in line transformes
- · Link/group MU 7100EN amplifiers
- · Speakers line monitoring
- · Supports different line voltage setting



SPECIFICATIONS	LT 7208EN
POWER OUTPUT	8 x 80 W RMS COMBINABLE
OUTPUT VOLTAGE	100 V (OR INTERNALLY COMMUTABLE 70 V or 50 V)
INPUT IMPEDANCE	8 Ω BALANCED
OUTPUT CONNECTORS	REMOVABLE SCREW TERMINAL

# AC 7212

p/n 171.70.152

#### SPARE AMPLIFIER BOARD

AC 7212 is an additional board for the DXT 7000 Voice Alarm system that allows to add a spare amplifier unit. LT 7208EN override voltage output activates the AC 7212 relay in case of fault of the main amplifier and switch the spare amplifier output to the respective loudspeaker line.

- · Used to add a spare amplifier
- · Up to 4 boards connected to a LT 7208EN unit



# SI 7120

p/n 171.70.153

#### MONITORED GPI BOARD

SI 7120 is an additional board for the DXT 7000 Voice Alarm system. It can monitor the integrity of 2 speakers lines coming from master unit. In case of line open or shorted, it activates the related command.

- · Line open or sherted fault detection
- · Red LED signal
- · Up to 2 devices connected to easch MU 7100EN



# RO 7102

p/n 171.70.151

#### **GPO BOARD**

RO 7102 is an additional board for the DXT 7000 Voice Alarm system that can be directly connected to a couple of MU 7100EN control outputs. It converts the 2 MU 7100EN open-collector control outputs' into 2 dry closing contacts that can be used as commands or external devices. It also has resistors needed for monitored emergency lines.

- · Converts open-collector to dry closing contacts
- · Resistors for emergency lines included



# BM 7608

p/n 143.22.015

#### DESK-TOP EMERGENCY MICROPHONE CONSOLE

BM 7608 is a desk-top emergency microphone console exclusively dedicated to DXT 7000 Voice Alarm system, and can be used both for live announcements and pre-recorded messages activation. It features complete self-diagnostic functionalities and system status reporting in compliance with EN 54-16 standard. Up to 8 consoles can be daisy-chained on each paging bus, for a total of 32 consoles.





- · Live emergency announcements
- · Pre-recorded messages activation
- · Complete self-diagnostic
- · Numeric keyboard
- · Hi-quality cardioid microphone
- · Modern design

# BM 7608D

p/n 143.22.015

#### DESK-TOP EMERGENCY MICROPHONE CONSOLE

BM 7608D is a desk-top emergency microphone console exclusively dedicated to DXT 7000 Voice Alarm system, and can be used both for live announcements and pre-recorded messages activation. It features complete self-diagnostic functionalities and system status reporting in compliance with EN 54-16 standard. Up to 8 consoles can be daisy-chained on each paging bus, for a total of 32 consoles.





- · Live emergency announcements
- · Pre-recorded messages activation
- · Complete self-diagnostic
- · Numeric keyboard and display
- · Hi-quality cardioid microphone
- · Modern design

CDI	TIC.	ATL	<b>NIS</b>

SPECIFICATIONS	BM 7608 - BM 7608D
FREQUENCY RESPONCE (-3 dB)	200-17000 Hz (mic) - 50-17000 Hz (aux)
AUDIO INPUT (AUX)	-14 ÷ 0dB (adjustable)
THD + N 1 kHz	<0,1%
CONNECTORS	RJ 45
AUDIO OUTPUT	3,5mm TRS connector
EXTERNAL CONTROLLER	3 pin removable screw

# SV 7982

p/n 171.70.140

#### WALL-MOUNT REMOTE CONTROL

SV 7982 is a wall-mount remote control used as local audio control device. It can control a zone group volume and works as program selector. Connection to local or system bus using CAT5 or CAT6 cables.

- · Zone group control
- · Level control
- · Program Selector
- · CAT5 and CAT6 compatible



# LI 7903

p/n 171.70.141

#### LOCAL INPUT DEVICE

LI 7903 is a local input device allowing the connection and routing of a local program source. It features 3 function buttons that can be individually programmed. To be wall mounted by using the accessories

- · Local audio source management
- · 3 configurable buttons
- · Suitable for wall-mount



### EL 7001

p/n 635.31.167

#### **END OF LINE**

EL 7001 is a End Of Line terminator thats allow accurate monitoring of speakers lines integrity, and it is suitable for DXT 7000 Voice Alarm system.

· Monitors speakers lines integrty



# BM 7608DFM

p/n 143.22.014

CERTIFIED

#### DESK-TOP EMERGENCY MICROPHONE CONSOLE

BM 7608DFM is a desk-top emergency microphone console exclusively dedicated to DXT 7000 Voice Alarm system, and can be used both for live announcements and pre-recorded messages activation. It features complete self-diagnostic functionalities and system status reporting in compliance with EN 54-16 standard. Up to 8 consoles can be daisy-chained on each paging bus, for a total of 32 consoles.





- · Live emergency announcements
- · Pre-recorded messages activation
- · Handheld microphone with PTT button
- · Complete self-diagnostic
- · Numeric keyboard and display
- · Modern design

# BM 7624D

p/n 143.22.018

#### DESK-TOP EMERGENCY MICROPHONE CONSOLE

BM 7624D is a desk-top emergency microphone console exclusively dedicated to DXT 7000 Voice Alarm system, and can be used both for live announcements and pre-recorded messages activation. It features complete self-diagnostic functionalities and system status reporting in compliance with EN 54-16 standard. Up to 8 consoles can be daisy-chained on each paging bus, for a total of 32 consoles.



- · Live emergency announcements
- · Pre-recorded messages activation
- · Hi-quality cardioid microphone

· Numeric keyboard and display

- · Complete self-diagnostic
- · Modern design

SPECIFICATIONS	BM 7608	BM 7624D
FREQUENCY RESPONCE (-3 dB)	200-17 000 Hz (mic) - 50-17 000 Hz (aux)	200-17 000 Hz (mic) - 50-17 000 Hz (aux)
AUDIO INPUT (AUX)	-14 ÷ 0dB (adjustable)	-14 ÷ 0dB (regolabile)
THD + N 1 kHz	<0,1%	<0,1%
CONNECTORS	RJ45	RJ 45
AUDIO OUTPUT	3,5mm TRS connector	3,5mm TRS connector
EXTERNAL CONTROLLER	3 pin removable screw	removibile a vite 3 pin

# PS 6648

p/n 171.00.006

POWER SUPPLY CERTIFIED EN 54-4



PS 6648 is a power supply unit suitable to get continuity power for EN 54-16 systems units like DXT 9000 and DXT 7000, and relevant complementary devices in case of mains power supply interruptions. It includes recharging and monitoring functions for the lead-acid batteries connected to it. It must be equipped with batteries with suitable capacity, dimensioned according to the system power absorption and to the evacuation requirements. According to EN 54-16 standard, it shall be installed into the same rack cabinet where there is the audio system with emergency purposes (or a system part) to which it is connected.

SPECIFICATIONS	PS 6648
POWER FACTOR	1.34
EFFICIENCY (DURING BATTERY CHARGING)	84%
BATTERY NOMINAL VOLTAGE	48 V
MAX. CURRENT FROM MAIN OUTPUTS	6 x 15 A
MAX. CURRENT FROM AUXILIARY OUTPUTS	4 x 2 A
MAXIMUM CAPACITY OF CONNECTED BATTERIES	200 Ah
MAX. CHARGING CURRENT	2 ÷ 8 A
MAX. RESISTANCE OF BATTERY CIRCUIT	30 ÷ 100 mOhm
BATTERY DISCONNECTION THRESHOLD	40.8 V
OPERATING VOLTAGE	220-240 V~ 50Hz

- · 48 V batteries nominal voltage
- · 6 main outputs to system's units
- · 6 auxiliary outputs
- · Battery circuit control
- · PC software configuration and monitoring



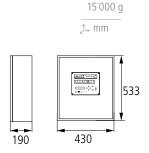
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AMPLIFIED MASTER UNIT





MX 3250 is the master unit of the Voice Alarm system DXT 3000, dedicated to small and medium size applications where an EN 54-16 certified system is required. It is equipped with powerful and exceptionally reliable Class D power amplifiers, able to provide up to 250 W of total power. Depending on the model, it is able to serve up to 6 independent zones. Moreover, the spare power amplifier facility is also available. The internal power supply is certified EN 54-4, and the back-up batteries can be host inside the cabinet, making the system a complete and extremely compact solution. Moreover, the on-board DSP platform allows optimizing environmental equalization, maximizing voice intelligibility and background music performance. The system can be completed with emergency microphone consoles BM 3804, BM 3804FM and ME 3801, and the buttons extensions BE 3806, allowing to add live announcements functionality.

- · 250 W total power
- · Up to 6 zones controlled
- · DSP platform on-board
- · Certified EN 54-16 and EN 54-4
- · Emergency messages on monitored SD card
- · Spare power amplifier facility
- · Integrated audio source on front panel
- · Wall mount or rack mount installation

MX 3500/2 MX 3500/4 MX 3500/6

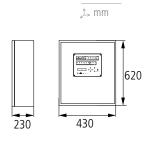
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p/n 121.00.011

AMPLIFIED MASTER UNIT





17'000 g

MX 3500 is the master unit of the Voice Alarm system DXT 3000, dedicated to small and medium size applications where an EN 54-16 certified system is required. It is equipped with powerful and exceptionally reliable Class D power amplifiers, able to provide up to 500 W of total power. Depending on the model, it is able to serve up to 6 independent zones. Moreover, the spare power amplifier facility is also available. The internal power supply is certified EN 54-4, and the back-up batteries can be host inside the cabinet, making the system a complete and extremely compact solution. Moreover, the on-board DSP platform allows optimizing environmental equalization, maximizing voice intelligibility and background music performance. The system can be completed with emergency microphone consoles BM 3804, BM 3804FM and ME 3801, and the buttons extensions BE 3806, allowing to add live announcements functionality.

- · 500 W total power
- · Up to 6 zones controlled
- · DSP platform on-board
- · Certified EN 54-16 and EN 54-4
- · Emergency messages on monitored SD card
- · Spare power amplifier facility
- · Integrated audio source on front panel
- · Wall mount or rack mount installation

SPECIFICATIONS	MX 3250	MX 3500
POWER	up to 250W distributed in 2, 4 o 6 zones	up to 500W distributed in 2, 4 or 6 zone
FREQUENCY RESPONCE	80 ÷ 16.000 Hz (± 1 dB)	80 ÷ 16.000 Hz (± 1 dB)
DISTORTION (THD + N):	< 0,3% @ 1 kHz	< 0,3% @ 1 kHz
SPEAKERS LINE OUTPUT:	100 V, 70 V	100 V, 70 V
SIGNAL/NOISE RATE:	> 70 dBA	> 80 dBA
AC POWER:	220-240/115 V~ 50/60Hz selection internal	220-240/115 V~ 50/60Hz selection internal
DC POWER:	24 V DC	48 V DC

# **DXT 3000 PLANNER**

#### **VOICE ALARM SYSTEM DESIGN SOFTWARE**

The software allows configuring small and medium VOICE-ALARM systems in accordance to the regulations (prescriptive method), using EN 54-24 loudspeakers and EN 54-16 management electronics of the RCF DXT 3000 Series (250W and 500W models; 2, 4 and 6 zones, in stand-alone or networked configuration) and related accessories. Free software download from web site.



# BM 3804

p/n 143.80.028

#### DESK-TOP EMERGENCY MICROPHONE CONSOLE



- · Live emergency announcements
- · Pre-recorded messages activation
- · Complete self-diagnostic
- · Powered by master unit
- · Hi-quality cardioid microphone
- · Robust metal case

# BE 3806

p/n 143.80.036

600 g

⊥ mm

#### ADDITIONAL KEYBOARD FOR BM 3804



- · Selective zones activation
- · Zones status indication



· Powered by microphone console

· Robust metal case

# **EOL 3-9**

p/n 171.70.176

#### **END OF LINE**

- · 20 Hz resonator
- · 200 Ohm impedance
- · Ceramic terminal with termal fuse
- · Plastic case UL94 V0
- · To be used with RCF cables CV 215, CV 225

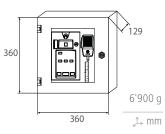


# BM 3804FM

p/n 143.80.037

#### FIREMEN EMERGENCY MICROPHONE CONSOLE





- · Live emergency announcements
- · Pre-recorded messages activation
- · Powered by master unit
- · Complete self-diagnostic

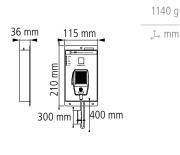
#### · Handheld microphone with PTT button · Protected into a robust metal box

# ME 3801

p/n 143.80.036

#### WALL MOUNT EMERGENCY MICROPHONE





- · Live emergency announcements
- · General call functionality
- · Handheld microphone with PTT button
- · Complete self-diagnostic
- · Powered by master unit
- · Robust metal case

# IE 3008

p/n 123.99.015

INTERLINK BOARD



- · Connects up to 8 units
- · Master/slave architecture
- · Fully redundant communication bus
- · Powered by master unit
- · General and zone alarm activation
- · Global and local BGM inputs

# MG 3006

p/n 133.60.344

MONITORED GPI BOARD



- · Faults detection and reporting
- · General and zone alarm activation
- · Reset function
- · Powered by master unit

IT 3010

p/n 123.99.049

#### TRANSFORMERS BOARD



- · Installation on IE 3008
- · 6 line transformers
- · Screw or RJ 45 connectors
- · Power supply not required

RC 3005

p/n 123.99.044

#### WALL MOUNT REMOTE CONTROL

RC 3005 is a wall mount remote control for DXT 3000 Voice Alarm system that allows to manage the music source integrated in the master units front panel. It is designed with a universal wall mount mechanics.



# MULTI-ZONE SYSTEMS

Paging and background music to different zones.



ZM 2124

p/n 121.35.085

240W 6 ZONES POWERED MASTER UNIT



- · Dual-bus system architecture
- $\cdot$  System Paging consoles input for up to 6 selective devices daisy chained
- Auxiliary external amplifier input and output terminals to manage primary and secondary buses independently
- Volume attenuators and switches with indicators to send or not the secondary bus program
- · Link to connect up to eight ZE 2200
- Dedicated wall mounting system remote control allows you to remote the main commands available on the master unit
- · Priority indicator to show when any system priority circuit has been triggered
- · Selectable chime generator is available on announcements

ZM 2100

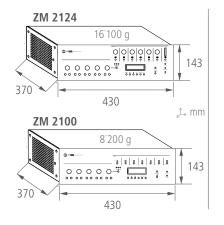
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6 ZONES PRE-AMPLIFIED MASTER UNIT



- · System Paging consoles input for up to 6 selective devices daisy chained
- $\cdot$  Switches with indicators to send or not the secondary bus program
- $\cdot$  Link to connect up to eight ZE 2200 6six-zone expansion units so to built-up paging systems in excess of 50 zones.
- $\cdot\,$  Priority indicator to show when any system priority circuit has been triggered
- · Selectable chime generator is available on announcements
- $\cdot$  GPI and GPO logic ports are available for interface purposes with third parties systems and for monitoring feedback.
- Dedicated wall mounting system remote control allows you to remote the main commands available on the master unit
- · RS 232 port for FW upgrade and communication/interface purposes

SPECIFICATIONS	ZM 2124	ZM 2100		
INTERNAL AMPLIFIER MAX. OUTPUT POWER	240 W	-		
INTERNAL AMPLIFIER OUTPUT VOLTAGE	100 – 70 V (direct), 100 V (6 zones)	-		
FREQUENCY RESPONSE (+1 / -3 dB)	MIC: 60 Hz ÷ 15 kH:	MIC: 60 Hz ÷ 15 kHz ; AUX: 50 Hz ÷ 20 kHz		
DISTORTION	<	< 1%		
INPUT SENSITIVITY MIC/LINE/AUX	1,5 mV (- 54 dBu) / 200 mV (- 12 dBu) / 200 mV (- 12 dBu)			
NOISE/SIGNAL RATIO INPUT MIC/LINE/AUX	> 60 dB / >	70 dB / > 75 dB		
INPUT IMPEDANCE MIC/LINE/AUX	600 $\Omega$ (balanced) / 600 $\Omega$ (balanced) / 10 k $\Omega$ (unbalanced)			
INPUTS	4 input mic. + 3 aux su RCA + 2 paging			
OUTPUTS	6 (power) 6 a 100 V / 0 dB depending on the cor			
EMERGENCY INPUT SENSITIVITY	100 mV (unbalanced audio signal), 100 V line			
SIGNAL/NOISE RATIO EMERGENCY INPUT	> 70 dB			
EMERGENGY INPUT IMPEDANCE	600 $\Omega$ (balanced audio signal, input 100 mV)			
POWER SUPPLY	115 V / 230 V ac, 24 V dc			
MAX POWER CONSUMPTION	720 W	100 W		





# $BM\ 2006 \quad |\ p/n\ 143.22.021$ PAGING MICROPHONE



- · 6 zone buttons for selective announcements
- · 1 general call button.
- $\cdot$  Up to 6 consoles can be linked to the main unit.

# BE 2012 | p/n 143.22.022 **EXTENSION MODULE**



- · 12 buttons for selective announcements on the zones.
- · Extensione for BM 2006 console
- · Up to 4 extensions can be linked to BM2006

RC 2946 p/n 133.60.237 WALL MOUNT REMOTE CONTROL



- · Wall mount remote control for the main units.
- · It controls the unit zones, source and volume (shown on the display).
- · Input for an external audio source.
- · Balanced mic input for announcements.
- · Inputs are mixable and adjustable.

SPECIFICATIONS	BM 2600	BE 2012
POWER HANDLING	24 V c.c.	24 V c.c. (with BM 2006)
MAX ABSORBED POWER	50 mA (BM 2006 only) 130 mA (with 1 BE 2012) 210 mA (with 2 BE 2012) 290 mA (with 3 BE 2012) 370 mA (with 4 BE 2012)	80 mA (with one single BE 2012)
MAX. OUTPUT LEVEL	1 V (RMS)	-
FREQUENCY RESPONSE	100 Hz ÷ 15 kHz	-
VOICE FILTER	high pass, cutoff frequency: 315 Hz 6 dB / octave	-
DIMENSIONS (L, H, P)	108 mm, 55 mm, 240 mm (BM 2006 only)	108 mm, 55 mm, 240 mm
WEIGHT	1 kg (solo BM 2006)	0,7 kg

# ZE 2200

p/n 171.70.167

**6 ZONES EXPANSION UNIT** 

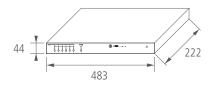


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⊥ mm

75 2200

3400 g



- $\cdot$  Direct link to ZM 2100 or ZM 2124 to expand the number of the system output zones till 54 by linking up to 8 devices in daisy-chain wiring topology
- 6 zone management based on ZM 2000 dual-bus system architecture: primary and secondary buses. Interconnection terminals for power amplifiers to manage primary and secondary buses independently
- · GPI and GPO logic ports are available for interface purposes with third parties systems and for monitoring feedback.

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SPECIFICATIONS	ZE 2200
FREQUENCY RESPONSE (+1 / -3 dB)	50 Hz ÷ 20 kHz
AUX INPUT SENSITIVITY	1 V (+ 2 dBu)
SIGNAL/NOISE RATIO INPUT AUX	> 75 dB
IMPEDANCE INPUT AUX	10 kΩ (unbalanced)
INPUTS / OUTPUTS	6 a 100 V / 0 dB depending on the configuration
POWER SUPPLY	115 V / 230 V ac (50-60 Hz), 24 V
MAX POWER CONSUMPTION	15 W

# CONFERENCE SYSTEMS

Flexible, easy to use and install Suitable for any small hall and council chambers.



# MMU 3100 MASTER UNIT 5'200 g 1 mm

- Input to connect up to 80 microphone sets with volume and voice EQ controls
- Additional universal input on both XLR and removable screw terminals for lectern microphone or interview microphone or other sources with volume and voice EQ controls. Input can be set as mixed or with precedence on the system microphone consoles, controlled by an external command or voice activated; Phantom power available.
- Input and outputs connections to an external recorder/player device, PLAY / REC selector switches with LED indicators. Volume control and tone EQ on PLAY-OUT
- · Teleconference dedicated input and output
- · Sound reinforcement and recording system output
- Built-in power amplifier to feed the consoles speakers with volume selector.
- Built-in 80W power amplifier output with volume control for additional constant voltage sound reinforcement speakers
- Connection to link two MMU 3100 units to increase microphones sets to 160 units
- · 2U 19" standard rack, mounting ears provided

SPECIFICATIONS	MMU 3100
POWER SUPPLY	115-230V / 50-60 Hz
MAXIMUM POWER CONSUMPTION	240 W
DIMENSIONS (W X H X D)	442 x 88 x 230 mm
WEIGHT	4 Kg
DESK INPUT	
SENSITIVITY	-7 dBu (max. + 13 dBu)
IMPEDANCE	1 Ω
INGRESSO PLAY	
SENSITIVITY	-7 dBu (max. + 13 dBu)
IMPEDANCE	20 Ω
MIXER OUT	
MAXIMUM POWER LEVEL	+21 dBu
IMPEDANCE	100 Ω
RECORDING OUTPUT	
FREQUENCY RESPONSE (-3 dB)	35 Hz ÷ 20 kHz
S/N RATIO	≥85 dBA





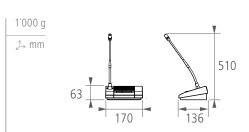
1'000 g		
mm	63 170	510

- · Delegate Microphone Set MMS 3404D
- PRO-quality cardioid microphone with LED ring mounted on 46cm gooseneck
- Push-to-lock switch for microphone activation in mixed mode, with LED indicator
- Hi quality transducer for sound reinforcement purpose, automatically disabled when microphone is active
- RJ 45 terminals for daisy-chain link to MMS 3405P chairman console through CAT5 FTP cable
- Robust shielded enclosure suitable for desktop or semi-flush mounting

SPECIFICA	TIONS	MMS 3404D
MICROPHONE	E CAPSULE	ELECTRET
TYPE		HYPERCARDIOID
SENSITIVITY		0.56 mV / Pa
FREQUENCY F	RESPONSE	70 Hz ÷ 18 kHz
SPEAKER POV	VER	1 W
CONNECTORS		RJ 45
WEIGHT		1 kg



	mounting
SPECIFICATIONS	MMS 3405P
MICROPHONE CAPSULE	ELECTRET
TYPE	HYPERCARDIOID
SENSITIVITY	0.56 mV / Pa
FREQUENCY RESPONSE	70 Hz ÷ 18 kHz
SPEAKER POWER	1 W
CONNECTORS	RJ 45
WEIGHT	1 kg



- · Chairman Microphone Set MMS 3405P
- PRO-quality cardioid microphone with LED ring mounted on 46cm gooseneck
- Push-to-lock switch for microphone activation in mixed mode, with LED indicator
- Push-to-talk switch for microphone activation in priority mode, with LED indicator
- Hi quality transducer for sound reinforcement purpose, automatically disabled when microphone is active
- RJ 45 terminal for the connection to MMU 3100 master unit through CAT5 FTP cable
- Two RJ 45 connectors to daisy-chain delegate consoles branches through CAT5 FTP cable
- Robust shielded enclosure suitable for desktop or semi-flush
  mounting

# **DMU 6100**

**MASTER UNIT** 

p/n 171.80.010



#### **SPECIFICATIONS**

**OPERATING VOLTAGE** 

MAX. CURRENT

MAXIMUM POWER CONSUMPTION

OPERATING TEMPERATURE

SIZE (L X A X P)

WEIGHT

#### MIC/LINE INPUTS

FREQUENCY RESPONCE (-3 DB)

HIGH-PASS FILTER

S/N RATIO

#### PLAY INPUT

FREQUENCY RESPONCE (-3 DB) S/N RATIO

#### MAIN OUT

**OUTPUT LEVEL** 

PRESENCE CONTROL

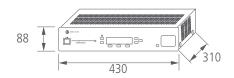
#### SYSTEM OUTPUT

FREQUENCY RESPONCE (-3 DB)

3/IN INATIO

#### 5'600 g

⊥ mm



- Two universal inputs for connecting any additional sources such as a wireless microphone or a lectern microphone or any other complementary device, even a mixer-preamplifier
- Two inputs can be configured in different ways; for instance they can be mixed with the system audio, have priority on system microphone sets, one mixed and one priority etc.
- Dedicated IN and OUT connections are available echo-free for the link to a teleconference system
- VOX operation or command operation are available
- The command switch can be programmed to work as FORCED-ON or FORCED-OFF always through configuration menu
- REC-PLAY input and outputs associated to a switch allow the connection of any recorder/player.
- 4 additional Auxiliary Outputs are available for the independent recording of the 2 universal inputs and each of the 2 lines of microphone sets

#### **DMU 6100**

100 ÷ 240 Vac (50 - 60 HZ)

1,7 A (230 V) / 3,5 A (115 V)

200 W

0 ÷ 50°C

430 X 88 X 310 mm

5,6 kg

50 Hz ÷ 20 kHz

12 dB / OCT (-3 dB AT 100 Hz)

 $\geq$  65 dBA (MIC) /  $\geq$  85 dBA (LINE)

50 Hz ÷ 20 kHz

≥85 dBA

0 dBu (THD <0.1%); MAX +20 dBu (THD 0,5%)

MAX 15 dB @ 2.1 kHz

35 Hz ÷ 20 kHz

≥85 dBA

# **DEC 6104**

p/n 171.80.034

**EXPANDER BOARD** 



- Up to 180 DMS 6410 microphone consoles on 6 lines (4 line outputs are on the DEC 6104 board)
- The further 120 consoles shall be powered by the DPS 6202 power supply unit
- $\cdot\ \ \mbox{USB}$  port to connect the system to a PC
- FORUM 6000 control software included
- RS 485 port (alternative to the USB port) for long distance control (up to 1.2 km) of the system through the PC software
- Anti-feedback processor, useful to avoid feedbacks due to loudspeakers too close to microphones, loudspeaker high volume and many open microphones at the same time. PLAY INPUT

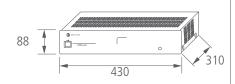
# **DPS 6202**

p/n 171.80.033

ADDITIONAL POWER SUPPLY UNIT



#### 5'650 g △ mm



- Strictly necessary for the console lines 3 to 6 linked to the DEC 6104 board (to power consoles from the 61 to 180)
- · Dual Switching power supply
- · Main switch with ON LED indicator on front panel
- · LINE LEDs indicate when console lines are correctly powered
- Power output on 7-pin XLR connector (connection cable to DEC 6104 provided)



1'000 g

# **DMS 6410**

p/n 171.80.011

MICROPHONE CONSOLE

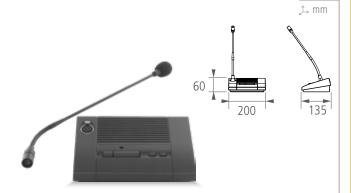


- Each console can be set to 1 of the 3 available modes: chairman (max. 3), delegate, interpreter (max. 2).
- Standard system: up to 60 consoles DMS 6410 (2 lines; 30 consoles per line connected in daisychain)
- Expanded system: up to 180 consoles DMS 6410 (6 lines; 30 consoles per line connected in daisychain.

# **DMS 6410X**

p/n 171.80.013 MICROPHONE CONSOLE

REMOVABLE GOOSENECK



- Standard system: up to 60 consoles DMS 6410 (2 lines; 30 consoles per line connected in daisychain)
- Expanded system: up to 180 consoles DMS 6410 (6 lines; 30 consoles per line connected in daisychain). The further 120 consoles can be added by installing the optional board DEC 6104 into the central unit DMU 6100 and connecting the external power supply unit DPS 6202
- 2 aux inputs, A and B, with XLR sockets, each configurable by means of DIP switches (PHANTOM, MIC / LINE, HIGH-PASS) and with a gain control and an enable / mute command
- · Audio input PLAY and audio output SYSTEM for recording
- · Audio input and output for teleconference
- Simultaneous / sequential translation (1 translated language)

SPECIFICATIONS	DMS 6410 - DMS 6410X
MICROPHONE TYPE	ELETTRETE, CARDIOIDE, (only for DMS 6410X) with gooseneck removable via xlr5 connector
FREQUENCY RESPONCE (-3 DB)	200 Hz ÷ 12 kHz
S/N RATIO	≥ 60 dBA
INTERNAL LIMITER	Up to + 32dB over 100% level
MIC AUTO-OFF SIGNAL THRESHOLD	-20 dB
VOLTAGE; CURRENT	48 V dc; nominale < 20 mA, max. 50 mA (internal lspk. : max. volume)
INTERNAL AMPLIFIER POWER	1 W (THD <1%)
DIMENSIONS (BASE ONLY; L, H, P)	200 mm, 135 mm, 63 mm
WEIGHT	1,09 kg (DMS 6410) / 1.26 kg (DMS 6410X)
GOOSENECK MIC. LENGTH	440 mm
INCLUDED CONNECTION CABLE	pole special cable with RJ connectors, 2.5 m long
JACK OUTPUTS	
MAX. POWER (HEADPHONES MODE)	60 mW su 16 Ω (<0,5% THD)
OUTPUT LEVEL (RECORDING MODE)	nominal:: - 4 dBu (0,2% THD), max. + 5 dBu
FREQUENCY RESPONSE (-3 DB)	170 Hz ÷ 16 kHz

# DTC 6012

p/n 171.80.037

#### DMS 6410X MICROPHONE CONSOLE TRANSPORT CASE

- · DMS 6410X microphone consoles can be stored in the case
- · Aluminum hi-composite construction with rugged chromium-plated metal reinforced angles
- · Separated microphne and cables compartments
- Soft inner protections against shocks for a safer transport
- Comfortable top handle



# MICROPHONES AND WIRELESS MICROPHONES

Optimised in the voice frequency range to guarantee maximum speech clarity.







MODEL	MC 5200	MD 7800
TYPE	UNI-DIRECTIONAL, BACK ELECTRET CONDENSER	Dynamic
POLAR PATTERN	Uni-directional	Supercardioid
FREQUENCY RESPONSE	50 ÷ 18000 Hz	60 ÷ 20000 Hz
SENSITIVITY (0 dB=1V/µbar, 1kHz)	- 58dB $\pm$ 3dB (0 dB=1V/ $\mu$ bar, 1kHz)	- 70 dB
PHANTOM PWR. SUPPLY	12 ÷ 48 V	-
CONNECTOR	5 poles XLR (m)	3 pole XLR (M)
ON/OFF SWITCH	Yes	Yes
USE	Speech (table top)	Speech, singing





MODEL	MC 4064	MC 5054
TYPE	Electret	Electret
POLAR PATTERN	Cardioid	Cardioid
FREQUENCY RESPONSE	50 ÷ 18.000 Hz	50 ÷ 14.000 Hz
SENSITIVITY (0 dB=1V/µbar, 1kHz)	- 58 dB	- 68 dB
PHANTOM PWR. SUPPLY	12 ÷ 52 V	9 ÷ 52 V
CONNECTOR	XLR 3 (M)	XLR 3 (M)
ON/OFF SWITCH	Yes	No
USE	Speech, conference	Speech, announcements









MODEL	BM 3001	BM 3003
TYPE	Electret	Electret
POLARN PATTERN	Cardioid	Cardioid
FREQUENCY RESPONSE	50 ÷ 18000 Hz	50 ÷ 18000 Hz
SENSITIVITY (0 dB=1V/µbar, 1kHz)	- 65 dB	- 65 dB
POWER SUPPLY	18 ÷ 48 V PHANTOM	115 - 230 V ac / 24 V dc
CONNECTORS	RJ 45	RJ 45
ON/OFF SWITCH	Yes	Yes
USE	Announcements	Announcements





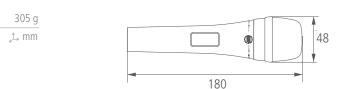
MODEL	BM 3022	BM 3014
TYPE	Electret	Dynamic
POLAR PATTERN	Cardioid	Cardioid
FREQUENCY RESPONSE	100 ÷ 12000 Hz	100 ÷ 12000 Hz
SENSITIVITY (0 dB=1V/µbar, 1kHz)	- 82 dB	- 80 dB
PHANTOM PWR. SUPPLY	115 - 230 V ac / 24 V dc	-
CONNECTOR	RJ 45	3 pole XLR (M)
ON/OFF SWITCH	Yes	Yes
USE	Announcements	Announcements

# MD 7800

p/n 141.15.013

#### PROFESSIONAL DYNAMIC MICROPHONE





- · Typical use: speech, singing
- · Professional supercardioid dynamic microphone
- · Anti-pop filter
- · ON/OFF switch with lock
- · Minimum handling noise
- 5 metre balanced and screened cable with 3 pole XLR connectors included
- · Mic. holder for stands and soft bag included

SPECIFICATIONS	MD 7800
TYPE	DYNAMIC, SUPERCARDIOID
IMPEDANCE	600 Ω ± 30% (1 kHz)
SENSITIVITY	- 70 dB $\pm$ 3 dB (0 dB=1V/ $\mu$ bar, 1kHz)
FREQUENCY RESPONSE	60 ÷ 20000 Hz
CONNECTORS	3 pole XLR (m)

# MC 5054

p/n 141.15.024

#### FLEXIBLE UNIVERSAL MICROPHONE

- $\cdot$  Flexible microphone, 445 mm length. Installation on microphone plug with XLR connector. Male 3 pin XLR output connector. Phantom power 9 V to 52 V.
- $\cdot\,$  Polyurethane anti wind foam. Electret, Cardioid.
- · Impedance: 200  $\Omega$  ± 30% (at 1.000 Hz).
- $\cdot$  Frequency response: 50  $\div$  18.000 Hz.
- · Sensitivity: -65 dB  $\pm$  3 dB (0 dB = 1 V/ $\mu$ bar 1.000 Hz)
- · Dimensions: diameter 19x540 mm.





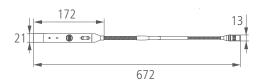


MC 4064

p/n 141.15.025

GOOSENECK MICROPHONE (DESK-TOP / ON FLOOR STAND)





- · Double joint gooseneck, 672 mm long
- · Installation on desks (with or without hole), lecterns, mic. floor stands
- It has two switches (PUSH, LOCK), a red ring lamp that is lit when the microphone is activated, a high-pass filter with a switch to cut frequencies below 100 Hz.
- · Phantom power supply (12  $\div$  52 V)
- 3 m screened and balanced cable with XLR connectors for linking to a mixer / amplifier, with 2 additional wires for command
- · Polyurethane foam wind screen

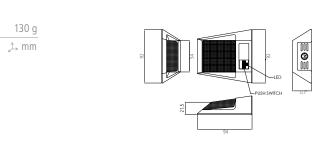
SPECIFICATIONS	MC 4064
TYPE	ELECTRET, CARDIOID
IMPEDANCE	600 Ω BALANCED
FREQUENCY RESPONSE	50 ÷ 18000 Hz
SENSITIVITY	- 58 dB $\pm$ 3 dB (0 dB=1V/ $\mu$ bar, 1kHz)
CONNECTOR	3 pole XLR (m)

MC 5002

p/n 141.15.026

**DESK-TOP MICROPHONE** 





- · Metal body and mesh
- · Red LED lit when the microphone is ON
- · Toggle switch for BOOST, FLAT and LOW CUT
- · Phantom power supply (12 ÷ 48 V dc)
- · 5 poles XLR connector
- Dimensions: 94 x 92 x 34mm
- · Colour: RAL 9003 white (MT 3200)

SPECIFICATIONS	MC 5200
TYPE	UNI-DIRECTIONAL, BACK ELECTRET CONDENSER
IMPEDANCE	3000hm ± 30% (at 1kHz)
FREQUENCY RESPONSE	50 ÷ 18000 Hz
SENSITIVITY	- $58dB \pm 3dB$ (0 $dB=1V/\mu bar$ , 1kHz)
CONNECTORS	5 poles XLR (m)

#### **UHF WIRELESS MICROPHONES**

TX 2006

p/n 142.50.007

UHF DIVERSITY SYSTEM - HAND HELD TX

PX 2106

p/n 142.50.009

UHF DIVERSITY SYSTEM - POCKET TX









Each receiver has 2 antennas for smart switching diversity control (the higher level radio signal is automatically selected), greater reliability and coverage, reduced risks of breakdowns and interferences. 16 different frequencies / channels are available. It is possible to use up to 6 channels simultaneously (when having 6 wireless microphone kits). Channels can be manually selected on all transmitters and receivers.

SPECIFICATION	TX 2006 - PX 2106
CHANNEL	SINGLE
TYPE	(PLL) UHF, 'DIVERSITY' RECEIVER
FREQUENCY BAND	UHF, 638 ÷ 662 MHZ
FREQUENCY RESPONSE	50 HZ ÷ 50 KHZ (± 3 DB)
FREQUENCY STABILITY	± 0.005 %
MODULATION MODE	FM (F3E)
DYNAMIC	> 100 DB
RX 2006 RECEIVER	
T.H.D.	< 1 %
AUDIO OUTPUT	280 MV @ ± 15 KHZ DEVIATION
S/N RATIO	> 90 DB
RF SENSITIVITY	- 100 DBM / 30 DB SINAD
POWER SUPPLY	THROUGH EXTERNAL 12 V DC (0.5A) ADAPTER
DIMENSIONS	130 MM (W), 44 MM (H), 201 MM (D)
NET WEIGH	0.37 KG
TRANSMITTER / HANDHELD MICROPHONE TX 2000 - POCKET PX 2100	
RF OUTPUT POWER	10 MW
TONE FREQUENCY	32,768 kHz
CURRENT ABSORPTION	< 150 MA
MAX. DEVIATION	± 35 kHz
PILE	2 x TIPO 'AA' (1,5 V; NON RECHARGEABLE)
TX 2000 TYPE	DYNAMIC MICROPHONE
PX 2100 TYPE	'LAVALIER' (TIE-CLIP) ELECTRET MICROPHONE
DIMENSIONS TX 2000	(L) 220 mm
DIMENSIONS PX 2100	65 mm (L), 111 mm (H), 31 mm (P)
NET WEIGH	(TX 2000) 0,16 Kg - (PX2100) 0,11 Kg

# HE 2006

p/n 141.15.023

'HEADSET' MICROPHONE

'Headset' type, reliable and light. Cardioid electret capsule.

It ensures an excellent isolation from environmental noise.

Typical use: dancers, singers, djs, aerobic instructors, presenters, actors, etc.

The optimal use of the microphone requires a distance between the capsule and mouth of about 25 mm.





TX 4016

UHF TRUE DIVERSITY SYSTEM - HAND HELD TX

PX 4116

p/n 142.50.010

UHF TRUE DIVERSITY SYSTEM - POCKET TX



Each receiver has 2 antennas for smart switching diversity control (the higher level radio signal is automatically selected), greater reliability and coverage, reduced risks of breakdowns and interferences. The operating frequency of the transmitter can be automatically searched thanks to the receiver auto-scan function. Of course, it is possible to match the transmitter channel to the receiver one manually. 120 channels are available (10 groups, each with 12 different frequencies). It is possible to use up to 16 channels simultaneously (when having 16 wireless microphone kits).

SPECIFICATION	TX 4016 - PX 4116
CHANNEL	SINGLE (OUT OF 144 FREQUENCIES)
TYPE	(PLL) UHF, 'DIVERSITY' RECEIVER
FREQUENCY BAND	UHF, 638 MHZ ÷ 662 MHZ
FREQUENCY RESPONSE	50 HZ ÷ 50 KHZ (± 3 DB)
FREQUENCY STABILITY	± 0.005 % (-10 ÷ 50°C)
T.H.D.	< 0.8% (1 KHZ)
MODULATION MODE	FM (F3E)
DYNAMIC	> 100 DB
RX 4016 RECEIVER	
BALANCED AUDIO OUTPUT	1 V, ± 35 KHZ DEVIATION
UNBALANCED AUDIO OUTPUT	750 MV, ± 35 KHZ DEVIATION
S/N RATIO	> 90 DB
RF SENSITIVITY	- 100 DBM / 30 DB SINAD
POWER SUPPLY	THROUGH EXTERNAL 15 V DC (0.5A) ADAPTER
DIMENSIONS	210 MM (W), 44 MM (H), 155 MM (D); (8.2" X 1.7" X 6.1")
NET WEIGHT	0.99 KG
TRANSMITTER / HANDHELD MICROPHONE TX 4000 - BODY PACK TRANSMITTER PX 4100	
RF OUTPUT POWER	1 - 3 - 10 mW
FREQUENCY RESPONSE	(TX 4000) 90 Hz ÷ 12 kHz (± 3 DB) (PX 4100) 50 Hz ÷ 15 kHz (± 3 dB)
TX 4000 TYPE	DYNAMIC, CARDIOID
PX 4100 TYPE	ELECTRET MICROPHONE
TONE FREQUENCY	30-33 kHz
MAX. DEVIATION	± 35 kHz
BATTERIES	2 x TIPO 'AA' (1,5 V; NON RECHARGEABLE)
DIMENSIONS TX 4000	277 mm (L), Ø 36.5 m
DIMENSIONS TX PX 4100	97 mm (L), 68 mm (H), 22 mm (P)
NET WEIGHT	(TX 4000) 0,25 Kg - (PX4100) 0,01 Kg

# HE 2006

CDECIFICATION

p/n 141.15.023

'HEADSET' MICROPHONE

'Headset' type, reliable and light. Cardioid electret capsule.

It ensures an excellent isolation from environmental noise.

Typical use: dancers, singers, djs, aerobic instructors, presenters, actors, etc.

The optimal use of the microphone requires a distance between the capsule and mouth of about 25 mm.



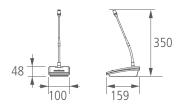
BM 3001

p/n 143.22.008

PAGING MICROPHONE







- · Plastic body with 300 mm gooseneck
- · PTT button with LED
- · Power supplied by 'Phantom' (18 ÷ 48 V dc)
- Ready for direct connection to amplifiers ES 3080, ES 3160-II, ES 3323-II, AM 2160, AM 2320, AM 2080, UP 2161, UP 2321, UP 2081.
- Chime activation on ES 3080, ES 3160-II, ES 3323-II, AM 2160, AM 2320, AM 2080
- · Polyurethane foam wind screen
- · 5 m connecting cable (with RJ 45 plugs) included

SPECIFICATIONS	BM 3001
ТҮРЕ	ELECTRET, CARDIOID
IMPEDANCE	470 Ω BALANCED
FREQUENCY RESPONSE	50 ÷ 18000 Hz
SENSITIVITY	- 65 dB $\pm$ 3 dB (0 dB=1V/ $\mu$ bar, 1kHz)
CONNECTORS	8 pole RJ 45

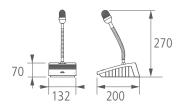
# BM 3014

PAGING MICROPHONE

p/n 143.20.135







- · Plastic body with 320 mm gooseneck
- · Pushbutton for momentary microphone activation
- $5~\mbox{m}$  screened and balanced cable with XLR connectors for linking to a mixer / amplifier, with 2 additional wires for command

SPECIFICATIONS	BM 3014
TYPE	DYNAMIC, CARDIOID
IMPEDANCE	500 Ω BALANCED
FREQUENCY RESPONSE	100 ÷ 12000 Hz
SENSITIVITY	- 71 dB $\pm$ 3 dB (0 dB=1V/ $\mu$ bar, 1kHz)
CONNECTORS	3 pole XLR



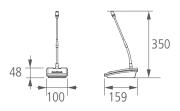
# BM 3003

p/n 143.22.012

3 ZONES PAGING MICROPHONE







- · Plastic body with 300 mm gooseneck
- · PTT button with LED, Zone buttons with LED
- Power supplied by 'Phantom' (18  $\div$  48 V dc) for the BM 3003 directly connect to the ES 3323
- · It can be directly connected to ES 3323 amplifiers
- External power supply AC AD2405 to be used on all BM 3003 connect to other BM 3003  $\,$
- · Lines of max. 12 BM 3003 paging microphones
- · Polyurethane foam wind screen
- · 5 m connecting cable (with RJ 45 plugs) included

SPECIFICATIONS	BM 3003
TYPE	ELECTRET, CARDIOID
IMPEDANCE	470 Ω BALANCED
FREQUENCY RESPONSE	50 ÷ 18000 Hz
SENSITIVITY	- 65 dB ± 3 dB (0 dB=1V/µbar, 1kHz)
CONNECTORS	2 x 8 pole RJ 45

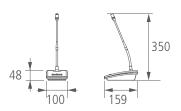
# BM 3022

p/n 143.22.013

PRE-AMPLIFIED DESK TOP MICROPHONE



600 g ∴ mm



- $\cdot$  Gooseneck microphone with hi-quality unidirectional  $% \left( \mathbf{r}\right) =\mathbf{r}^{\prime }$  electret capsule
- · Direct connection to power amplifiers input through CAT5 cable
- · Adjustable line output with RJ45 connector
- · Switchable automatic gain control (AGC)
- · Up to 30 BM 3022 paging microphones can be linked in a 'daisy-chain'
- · Selectable mixing, interlocking or priority mode among devices
- · When activating a microphone, the announcement can be preceded by a chime.

SPECIFICATIONS	BM 3022
TYPE	ELECTRET
IMPEDANCE	130 Ω BALANCED
FREQUENCY RESPONSE	200 ÷ 7000 Hz
SENSITIVITY	- 65 dB $\pm$ 3 dB (0 dB=1V/ $\mu$ bar, 1kHz)
CONNECTORS	2 x RJ 45 (IN - OUT)

# AC MIC DK

TABLE BASE FOR MICROPHONE MC 4064

p/n 133.60.247



- Standard connection 5/8
- · Diameter: 160 mm
- · Weight: 1 Kg

# **AC 503FS**

MC 5054 ADAPTOR FOR FLOOR MICROPHONE STAND

p/n 143.80.033



Universal extended metal stand. Female 3 pins XLR microphone connector. Installation with screws on a table, a bookstand or a microphone stand. Button for stable and unstable microphone insertion.

Screw thread 5/8" x 27 mm.

1,5 m cable (with 3 pin, male XLR) for amplifier connection

Dimensions: diameter 20,5 x 199,3 mm.

# OT 3500

TRANSFORMER FOR DISTRIBUTED SYSTEMS

p/n 171.20.056



Mumental insulation tranformer with removeable screw terminals. Can work with 0dB signals.

# **AC 501DK**

**DESKTOP MIC BASE XLR IN/OUT** 

p/n 143.80.035

AC 501DK is a desktop microphone base with input and output XLR connectors.

It offers three different functional modalities:

LOCK (bistable on/off button);

TALK (microphone open with button pressed only);

MUTE (mute active with button pressed).

# A 504-N

MIC SUPPORT

p/n 143.80.014



Microphone support (5/8" thread). Suitable for use with the MD 7600, MD 7800 microphones on AC S64FL, AC S62FL and AC S50DK supports.

# **AC 502LC**

MC 5054 ADAPTOR FOR PLATFORMS

p/n 143.80.034



Universal table metal support. Female 3 pin XLR connector. Installable on a bookstand with or without a cable hole. Welding terminal for cable. Dimensions: diameter 45x63 mm.

# IT 4000

INPUT TRANSFORMER 100V TO 0DB

p/n 133.60.341



Allows the connection of a 100V (or 70V) passive speakers line directly to the audio input (0 dBu) of an active speaker. Fixing of input and output cables on screw terminals. Metal box, colour black.





# A 507 MIC. SUPPORT

p/n 143.10.008



Universal quick-release clamp holder for holding cylindrical, conical, and polyhedron shaped microphones.

Clamp opening: from 15 to 38 mm. Suitable for use with TX 1000 / TX 1600 / TX 516 wireless mic. on AC S64FL, AC S62FL and AC S50DK supports.

5 m microphone cable with XLR connectors.



# AC S50DK

DESKTOP STAND

p/n 143.80.011



Desk top microphone stand with die-cast base, suitable for 5/8" or 3/8" thread. Tilting telescopic rod, adjustable from 38 cm to 58 cm. Weight: 2 Kg. Height: min/max 38cm/58cm. Base dimensions 16x18cm

# AC S76FL

FLOOR STAND p/n 143.80.027

CA 5XX

MIC. CABLE

p/n 143.40.017



Floor microphone stand with folding base, suitable for 5/8" thread. Joints and legs in die-cast aluminium. Steel telescopic rod, adjustable from 96 cm to 156 cm. Tilting steel boom-arm, adjustable from 46 cm to 86 cm. Damping base with 58 cm limited opening diameter. Weight: 3.2 Kg. Length once folded: 102 cm

# AC XLR-3M3F

**CONNECTORS** 

p/n 133.60.102



#### XLR Connectors KIT:

- 3 XLR Female connector with nickel body and silver contacts
- 3 XLR Male connector with nickel body and silver contacts

# AC AD 2405

24 V ADAPTOR

p/n 143.80.022



Power adaptor for 24 V DC paging microphones

- input 230V AC
- output 24 V DC 500 mA

# AR 1620

**RACK MOUNTING ACCESSORY** 

p/n 173.60.031



1U 19" rack kit suitable for 1 or 2 receivers (models: RX 1000 or RX 1600).

# A 53

ADAPTER FROM 3/8 TO 5/8

p/n 143.80.029



S50DK AC microphone holder adapter

- Kit of 10 pieces

# MP 300

#### OPERATOR/USER INTERCOM SYSTEM KIT

#### p/n 121.70.094

- $\cdot$  MP 300 system allows conversations between an operator and users /clients when these are separated by a safety glass that reduces the sound transmission
- Operaties in full-duplex mode, automatic or mixed-switching depending on the ambient noise in the room / hall served.
- · On request, each single component can be purchased separately

MODEL	P/N	DESCRIPTION	QUANTITY
MP 341	124.01.005	Control unit / amplifier	1
MP 321	124.01.008	Operator microphone console with activation keys	1
MP 302	124.01.007	User microphone	1
MP 301	124.01.006	Loudspeaker	4



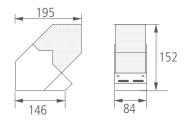
SPECIFICATIONS	MP 300
MICROPHONES	ELECTRET, UNIDIRECTIONAL
AMPLIFIER POWER	2 W (per each line)
ADDITIONAL LOUDSPEAKER OUTPUT	1 W - 8 Ω
POWER SUPPLY (AC)	230 / 115 V (50 / 60 Hz)
POWER SUPPLY (DC)	12 V

# MP 321

**OPERATOR MICROPHONE** 

p/n 124.01.008



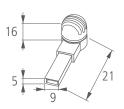


- Electret microphone with unidirectional polarn pattern, housed into an anthracite grey die-cast aluminium alloy and protected by a painted stainless steel grille
- Equipped with 2 push-buttons to activate the operator-user line and the user-operator line respectively
- · A LED indicates which line is activated
- · It can be remote controlled (e.g. through a pedal switch)



# MP 302

**USER MICROPHONE** 

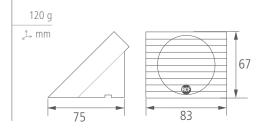


p/n 124.01.007

- Electret microphone having high sensitivity and an unidirectional polar pattern, suitable for clear voice reproduction even in very noisy rooms / halls
- · Its compact white plastic enclosure has a very sleek contemporary design
- · MP 302 has a slot (close to the audio cable output) for the insertion of a standard wiring duct
- · It can be easily attached on safety glasses through bi-adhesive tape
- 5 m balanced and screened cable for connection to the MP 341 control unit / amplifier

# MP 301

LOUDSPEAKERS

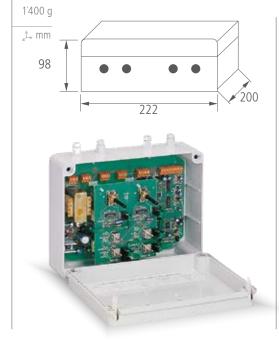


p/n 124.01.006

- · MP 301 loudspeakers shall be installed near the microphones of the operator and users
- · White plastic body
- · 70 mm loudspeaker suitable for voice reproduction
- · Loudspeakers can be fixed by using biadhesive tape (included)
- 5m loudspeaker cables for connection to the MP 341 control unit / amplifier

# MP 341

CONTROL UNIT / AMPLIFIER



p/n 12401005

- · It is the system main unit that manages audio signals coming from microphones.
- 4 switches inside (with LEDs) allow to select one of the 4 operating modes, according to the noise level at the operator's microphone and at the users' microphone.
- A switch for each line makes it possible to select either the 'direct' function (the line is always activated) or the 'switched' mode (the line is momentary activated when speaking). If both lines are set to the 'switched' mode, only one can be activated at a time.
- The other 2 switches enable the 'forced volume' function of each line, useful whenever it is necessary to increase (+ 10 dB) the audio level
- It is possible to adjust the listening volume of each position independently, as well as the trigger threshold level of each microphone (factory preset)
- · Its plastic enclusure can be wall mounted

# **AUDIO SOURCES**

CD players, Radio receivers, message players for every hi-fidelity listening need.



RD 2016

p/n 171.70.168

MP3 AUDIO FILES DIGITAL RECORDER/PLAYER

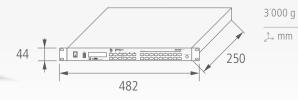


- · MP3 stereo player/recorder
- · Supports SD cards and USB flash drives
- · 32 GB Maximum supported memory
- · Can play/record one file at a time
- · A sequence of 64 file can be programmed

- · Fixed MP3 recording format: 192 kbps
- · 1 AUX INPUT with parallel AUX OUTPUT
- · Disabled front buttons
- · IR remote control included
- $\cdot \quad \text{SD Card not included} \\$

#### **REAR VIEW**





SPECIFICATIONS	RD 2016
AUDIO OUTPUT LEVEL	+2 dBu ± 2 dB
DISTORTION (THD+N)	< 0,2 %
SIGNAL/NOISE RATIO	> 70 dB
CHANNEL SEPARATION	> 60 dB
NUMBER OF MESSAGES	16 (7 remotely activable)
MESSAGES LENGTH	Depending on the device capability
POWER SUPPLY	12 V c.c., 0,5 A (100 ÷ 240 V c.a. 50/60 Hz, 0,2 A power supply included)
OUTPUT CONNECTORS	RCA (L&R)





# MS 1033

p/n 171.70.108

CD-USB MP3 PLAYER WITH FM RADIO TUNER



- · Double sound source with two independent sections and outputs (Tuner CD/Mp3)
- CD player to reproduce audio tracks and MP3 files from a compact disc (CD, CD-R, CD-R/W) or from the USB drive ("Flash" memory-stick with only MP3 files) The USB port is available on both front and back panels to provide maximum flexibility
- $\cdot$  The SD card port is available on front panels
- · LCD backlit display gives information on the CD and MP3 files
- · I/R remote control for CD and Tuner included
- $\cdot~$  FM radio tuner (87.5 108 MHz) with possibility to memorize your 30 favourite radio stations
- · Stereo / Mono selector for applications where stereo signals are not needed
- · LCD backlit display shows the frequency and stations that are in the memory

#### **REAR VIEW** 3'600 g ⊥ mm 482 **SPECIFICATIONS** MS 1033 AUDIO OUTPUT LEVEL $+4 \text{ dBu} \pm 2 \text{ dBu} (1.2 \text{ V} \pm 0.2 \text{ V})$ 20 ÷ 20.000 Hz (CD); 100 ÷ 12.000 Hz (RADIO) FREQUENCY RESPONSE DISTORTION (THD+N) < 0.1% (CD); < 0.8% (RADIO) FREQUENCY RANGE 87.5 ÷ 108 MHz (FM) SIGNAL TO NOISE RATIO > 70 dB (CD); > 60 dB (RADIO) CHANNEL SPLIT ≥ 60 dB (CD); ≥ 30 dB (RADIO) SENSITIVITY SUPPLY VOLTAGE 220 ÷ 240 V / 110 ÷ 120 V (50 / 60 Hz) **OUTPUT CONNECTORS** RCA (L&R RADIO); RCA (L&R CD USB/MP3); RCA (L&R MIXED)

# AMPLIFIERS AND PREAMPLIFIERS

For constant voltage systems or professional audio applications.









MODEL	ES 3323-II	ES 3160-II	ES 3080		
OUTPUT RMS POWER	320 W	160 W	80 W		
OUTPUT	4 $\Omega$ (2 W max), 100 V, 70 V	4 Ω, 100 V, 70 V	4 Ω, 100 V, 70 V		
FREQUENCY RESPONSE	50 ÷ 18.000 Hz	50 ÷ 18.000 Hz	50 ÷ 18.000 Hz		
DISTORTION @ 1 kHz	< 0.3%	< 0.3%	< 0.3%		
SIGNAL TO NOISE RATIO	> 65 dB	> 65 dB	> 60 dB		
INPUT SENSITIVITY	(MIC) -60 dBu; (AUX) -80 dBu	(MIC) -60 dBu; (AUX) -80 dBu	(MIC) -62 dBu; (AUX) -18 ÷ +20 dBu		
INPUT IMPEDANCE	(MIC) 10 KΩ; (AUX) 20 KΩ	(MIC) 10 KΩ; (AUX) 20 KΩ	(MIC) 10 KΩ; (AUX) 20 KΩ		
INPUT CONNECTORS	1 x XLR, 2 x RJ45, 4 Term., 1 RCA	1 x XLR, 2 x RJ45, 4 Term., 1 RCA	1 x XLR, 1 x RJ45, 2 Term, 1 RCA		
OUTPUT CONNECTORS	4 x RCA, Screw terminal	4 x RCA, Screw terminal	2 x RCA (mono)		







MODEL	AM 2080	AM 2160 - AM 2320	UP 2321
OUTPUT RMS POWER	80 W	160 W / 320 W	160 W / 320 W
OUTPUT	4 Ω, 100 V, 70 V	4 Ω, 100 V, 70 V	4 Ω, 100 V, 70 V
FREQUENCY RESPONSE	50 ÷ 18.000 Hz	50 ÷ 18.000 Hz	50 ÷ 18.000 Hz
DISTORTION @ 1 kHz	< 0.3%	< 0.3%	< 0.3%
SIGNAL TO NOISE RATIO	> 60 dB	> 60 dB	> 80 dB
INPUT SENSITIVITY	(MIC) -62 dBu; (LINE) 0 dBu	(MIC) -58 dBu; (LINE) 0 dBu	(MIC) -58 dBu; (LINE) 0 dBu
INPUT IMPEDANCE	(MIC) 10 KΩ; (AUX) 20 KΩ	(MIC) 10 KΩ; (AUX) 20 KΩ	(MIC) 10 KΩ; (AUX) 20 KΩ
INPUT CONNECTORS	1 x XLR, 2 x RJ45, 4 Term.	1 x XLR, 2 x RJ45, 4 Term., 4 RCA	1 x XLR, 1 x RJ45, 1 Screw terminal
OUTPUT CONNECTORS	4 x RCA, Screw terminal	4 x RCA, Screw terminal	1 x RCA, Screw terminal







		and the	- Control Control
MODEL	UP 8501	UP 8502	UP 8504
OUTPUT RMS POWER	1 X 500 W	2 X 250 W	4 X 125 W
OUTPUT	100 V, 70 V	100 V, 70 V	100 V, 70 V
FREQUENCY RESPONSE	20 Hz ÷ 20 kHz	20 Hz ÷ 20 kHz	20 Hz ÷ 20 kHz
DISTORTION @ 1 kHz	< 0.3%	< 0.3%	< 0.3%
SIGNAL TO NOISE RATIO	> 86 dB	> 86 dB	> 86
INPUT SENSITIVITY	0 DBU (775 MV, MAX. 7 V)	0 DBU (775 MV, MAX. 7 V)	0 DBU (775 MV, MAX. 7 V)
INPUT IMPEDANCE	10 ΚΩ	10 ΚΩ	10 ΚΩ
INPUT CONNECTORS	Screw terminal	Screw terminal	Screw terminal
OUTPUT CONNECTORS	Screw terminal	Screw terminal	Screw terminal

#### DIGITAL RECEIVER AMPLIFIERS

# ES 3323 II

p/n 121.35.105

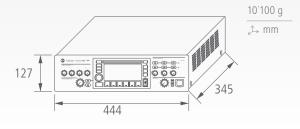
320 W, 3-ZONE MIXER AMPLIFIER, CD/USB/BLUETOOTH MP3 PLAYER



- · CD-USB/MP3 Player / FM tuner / Mixer Amplifier
- · Bluetooth connection with external devices
- · IR Remote control for CD USB/MP3 player & tuner functions
- Full digital technology amplifier 320 W RMS, 100V-70V
- Low impedance (min. 4 O) 2 W output for a monitor loudspeaker is available
- 4 universal inputs with phantom facility, Presence Control and perchannel High-Pass filters
- RJ45 connectors on input 2 and 3 for connection to BM3001 and BM 3003 microphone
- Screw terminal connections, additional XLR and RJ45 input connections available
- · Configurable Priority settings, VOX facility on input 1
- · Selectable aux input for music source with volume and tone controls
- USB port on front panel allows reproduction of MP3 files from a memory stick
- · Music On Hold and PRE outputs
- $\cdot\,$  The 3 PAGING buttons to select zones to be paged by either the channel 1 or 4
- · GENERAL call button is available
- The 3 MUSIC buttons turn the music on in the respective zones
- Digital Chime and Siren built-in generator, activation through dry contact
- · Status / Priority / Audio Level LED indications
- Link to a external amplifier (i.e. RCF UP 2321) to keep the music in the zones that are not paged

#### **REAR VIEW**





SPECIFICATIONS	ES 3323 II
OUTPUT POWER	320 W
FREQUENCY RESPONSE	50 - 18.000 Hz (± 3 dB)
DISTORTION (THD+N)	< 0,3% @ 1 kHz
SPEAKER OUTPUTS	100 V, 70 V, 4 Ω (MONITOR MAX 2 W)
AUXILIARY OUTPUTS	600 Ω, -1 dBu (690 mV)
SIGNAL TO NOISE RATIO	> 65 dB (INPUTS 1-4); > 75 dB (AUX IN); > 85 dB (MAIN IN)
INPUT SENSITIVITY	(MIC) -58 dBu (1 mV); (MIC PHANTOM) -28 dBu (30 mV); (AUX) -11 $\div$ +10 dBu (0.2 $\div$ 2.5 V)
INPUT IMPEDANCE	(MIC) 10 K $\Omega$ ; (AUX) 20 K $\Omega$ (MIC) 10 k $\Omega$ ; (MIC PHANTOM) 6.5 k $\Omega$ ; (LINE): 10 k $\Omega$ ; (AUX): 20 k $\Omega$
SUPPLY VOLTAGE	220 ÷ 240 V / 110 ÷ 120 V (50 / 60 Hz) INTERNAL SETTING
POWER CONSUMPTION	600 W
INPUT CONNECTORS	1 x XLR, 2 x RJ 45, 4 x TERMINAL, 2 x RCA stereo
OUTPUT CONNECTORS	4 x RCA (MUSIC ON HOLD, PRE-OUT, INTERNAL PROGRAM), SCREW TERMINALS FOR CONSTANT VOLTAGE LINES

BM 3003

p/n 143.22.012

3 ZONES PAGING MICROPHONE

The paging microphone allows to make selective calls to 3 zones and is the ideal complement of the ES 3323 mixer amplifier (through CAT 5 cable and RJ 45 connector)



AR 3000

**RACK SUPPORT** 

Rack mounting support, 3U.



p/n 133.60.101



# ES 3160 II

p/n 121.35.104

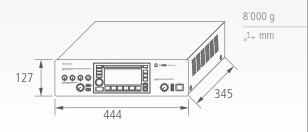
160W AMPLIFIER, CD-USB-BLUETOOTH/MP3



- · Mixer amplifier, CD-USB/MP3 player FM tuner
- · Bluetooth connection with external devices
- · IR remote control for CD USB/MP3 player and tuner functions
- $\cdot~$  Full digital technology 160 W RMS amplifier, 70 100 V / 4  $\Omega$  outputs
- 4 universal inputs for removable screw-terminals and with phantom power supply, high-pass filters facility and a common presence control
- · RJ45 ports on inputs 2 and 3 for connections of BM 3001 paging microphones
- · Configurable priority settings, VOX facility on input 1
- · Aux input with volume and tone controls for an external music source
- USB port on front panel allows reproduction of MP3 files from a flash-drive
- · Music On Hold and PRE outputs
- · Chime and siren internal generator, activation through dry contacts
- · Status / Priority / Audio Level LED indications

#### **REAR VIEW**





SPECIFICATIONS	ES 3160 II
OUTPUT POWER	160 W
FREQUENCY RESPONSE	50 ÷ 18.000 Hz (± 3 dB)
DISTORTION (THD+N)	< 0.3% @ 1 kHz
SPEAKER OUTPUTS	100 V, 70 V, 4 Ω
AUXILIARY OUTPUTS	600 Ω, -1 dBu (690 mV)
SIGNAL TO NOISE RATIO	> 65 dB (INGRESSO 1-4); > 75 dB (AUX IN); > 85 dB (MAIN IN)
INPUT SENSITIVITY	(MIC) -58 dBu (1 mV); (MIC PHANTOM) -28 dBu (30 mV); (AUX) -11 ÷ +10 dBu (0.2 ÷ 2.5 V)
INPUT IMPEDANCE	(MIC) 10 K $\Omega$ ; (AUX) 20 K $\Omega$ (MIC) 10 k $\Omega$ ; (MIC) 10 k $\Omega$ ; (AUX): 20 k $\Omega$
SUPPLY VOLTAGE	220 ÷ 240 V / 110 ÷ 120 V (50 / 60 Hz) INTERNAL SETTING
POWER CONSUMPTION	350 W
INPUT CONNECTORS	1 x XLR, 2 x RJ 45, 4 x TERMINAL, 2 x RCA stereo
OUTPUT CONNECTORS	4 x RCA (MUSIC ON HOLD, PRE-OUT, INTERNAL PROGRAM), SCREW TERMINALS FOR CONSTANT VOLTAGE LINES

# BM 3001

p/n 143.22.008

MICROPHONE CONSOLE

Dedicated microphone console with Cat5 connection cable and RJ45 connector.



AR 3000

RACK SUPPORT

Rack mounting support, 3U.

p/n 133.60.101



#### POWER AND DIGITAL RECEIVER AMPLIFIERS

# ES 3080

p/n 121.35.107

MIXER-AMPLIFIER WITH AUDIO SOURCE





- Audio source with 80W power amplifier.
- MP3 player controlled from the front panel.
- MP3 inputs: USB flash, SD card, AUX jack 3.5mm.
- Bluetooth connection with external devices
- 2 universal inputs on removable screw-terminals and 1 AUX input.
- Configurable priority settings, VOX facility on input 1
- Auxiliary output MUSIC ON HOLD to send the audio signal to external amplifiers or telephone switchboards.
- PRE OUT connector for additional power amplifiers.
- HI-PASS control (inputs 1 and 2)
- Auxiliary input on RCA connector and front panel are equipped with independent tone controls (bass and treble) and gain.
- Status LEDs on the front panel (ON, PROT) giving a complete feedback on amplifier and power supply status.
- LEDs on the front panel (PRIOR) indicating the priority circuit activity and the audio signal level (SIG/PK).
- Integrated alert sound generator configurable as single or double tone.
- Rack mount kit for 2 units amplifiers included

OUTPUT POWER       80 W         FREQUENCY RESPONSE       50 - 18.000 Hz (± 3 dB)         DISTORTION (THD+N)       < 0,3% @ 1 kHz         SPEAKER OUTPUTS       100 V, 70 V, 4 Ω         SIGNAL TO NOISE RATIO       > 60 dB (INPUTS 1-2); > 80 dB (AUX IN)
DISTORTION (THD+N)       < 0,3% @ 1 kHz         SPEAKER OUTPUTS       100 V, 70 V, 4 Ω
SPEAKER OUTPUTS $100 \text{ V}, 70 \text{ V}, 4 \Omega$
SIGNAL TO NOISE RATIO > 60 dB (INPUTS 1-2); > 80 dB (AUX IN)
INPUT SENSITIVITY (MIC PHANTOM) -28 dBu (30 mV); (AUX) -18 $\div$ +20 dBu (0.1 $\div$ 7 V)
INPUT IMPEDANCE (MIC) 10 k $\Omega$ ; (MIC PHANTOM) 10 k $\Omega$ ; (AUX) 20 K $\Omega$
SUPPLY VOLTAGE 220 ÷ 240 V / 110 ÷ 120 V (50 / 60 Hz) INTERNAL SETTING / 80 W
INPUT CONNECTORS 1 x XLR, 1 x RJ 45 FOR BM 3001, 2 x TERMINAL, 1 x RCA

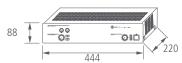
# AM 2080

p/n 121.35.062

INTEGRATED AMPLIFIER







- $\,\cdot\,\,$  80 W mixer-amplifier, with 2 mic-line audio inputs on removable connectors and 2 aux inputs for music sources
- Input 1 also has an XLR XLR socket
- The input 1 has a signal detection circuit ('VOX') providing automatic priority operation
- Inputs 1 and 2 can access the priority through an external command
- The inputs 2 also has an RJ 45 port for quick connection of an RCF BM 3001 paging microphone (through CAT5 cable)
- The 2 mic-line inputs have a high-pass filter that are useful to improve speech intelligibility
- · 2 Aux inputs with tone controls, selectable on the front panel
- A 'MUSIC ON HOLD' aux output allows to send the music to additional amplifiers, mixers, phone systems
- A 'PRE OUT' aux output to send the signal to additional amplifiers
- Digital Chime built-in generator
- The amplifier output is available either for low impedance loudspeakers (min. 4  $\Omega$ ) or 100 - 70 V constant voltage line (for loudspeakers having 100 - 70 V
- Front panel LEDs indicate the device state (ON, PROT), priority circuit enabled (PRIOR) and the signal level / peak (SIG/PK)

SPECIFICATIONS	AM 2080
OUTPUT POWER	80 W
FREQUENCY RESPONSE	50 - 18.000 Hz (± 3 dB)
DISTORTION (THD+N)	< 0,3% @ 1 kHz
SPEAKER OUTPUTS	100 V, 70 V, 4 Ω
SIGNAL TO NOISE RATIO	> 60 dB (INPUTS 1-2); > 80 dB (AUX IN)
INPUT SENSITIVITY	(MIC) -62 dBu (1 mV); (MIC PHANTOM) -28 dBu (30 mV); (AUX) -18 $\div$ +20 dBu (0.1 $\div$ 7 V)
INPUT IMPEDANCE	(MIC) 10 kΩ; (MIC PHANTOM) 10 kΩ; (AUX) 20 KΩ
SUPPLY VOLTAGE	220 ÷ 240 V / 110 ÷ 120 V (50 / 60 Hz) INTERNAL SETTING
INPUT CONNECTORS	1 x XLR, 1 x RJ 45, 2 x TERMINAL, 2 x DOUBLE RCA (AUX)



# AM 2160 AM 2320

p/n 121.35.058

p/n 121.35.059

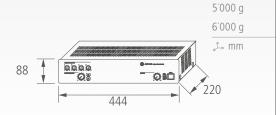
**INTEGRATED AMPLIFIERS** 



- · Full digital technology Mixer Amplifier 160 W RMS
- $\cdot~100\,V$  70 V and 4 Ohm outputs
- 4 universal inputs with phantom facility on screw terminal connections
- · Presence Control and per-channel High-Pass filters
- · XLR connector on input 1
- RJ45 connectors on input 2 and 3 for connection to BM3001 microphone
- · Configurable Priority settings, VOX facility on input 1
- Selectable aux inputs with two keys on the front panel for music source
- · Priority activation through dry contact on all 4 inputs
- 2 Aux inputs with tone controls, selectable with two keys on the front panel
- · Music On Hold and PRE outputs
- · Digital Chime and Siren built-in generator
- · 24V/0.5A priority relay output
- · Status / Priority / Audio Level LED indications

#### **REAR VIEW**





SPECIFICATIONS	AM 2160 - AM 2320
OUTPUT POWER	160 W (AM 2160) - 320 W (AM 2320)
FREQUENCY RESPONSE	50 Hz ÷ 18.000 kHz
DISTORTION (THD+N)	< 0.3% @ 1 kHz
SPEAKER OUTPUTS	100 V, 70 V, 4 Ω
AUXILIARY OUTPUTS	600 Ω, - 1 dBu (690 mV)
SIGNAL TO NOISE RATIO	> 60 dB (INPUTS 1-4); > 80 dB (AUX IN)
INPUT SENSITIVITY	(MIC) -58 dBu (1 mV); (MIC PHANTOM) -21 dBu (70 mV); (LINE) 0 dBu (775 mV); (AUX) $-6 \div +13$ dBu (0.39 $\div$ 3.5 V)
INPUT IMPEDANCE	(MIC) 10 k $\Omega$ ; (MIC PHANTOM) 5 k $\Omega$ ; (LINE): 10 k $\Omega$ ; (AUX): 20 k $\Omega$
SUPPLY VOLTAGE	230 V / 115 (50 / 60 Hz) - INTERNAL SETTING
POWER CONSUMPTION	240 W (AM 2160) - 440 W (AM 2320)
INPUT CONNECTORS	1 x XLR, 2 x RJ 45, 4 x SCREW TERMINALS, 2 x DOUBLE RCA (AUX)
OUTPUT CONNECTORS	2 x RCA (MUSIC ON HOLD, PRE-OUT), SCREW TERMINALS FOR SPEAKERS

# BM 3001

p/n 143.22.008

MICROPHONE CONSOLE

Dedicated microphone console with Cat5 connection cable and RJ45 connector.

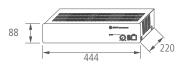


**UP 2321** 

p/n 121.35.061

**POWER AMPLIFIERS** 



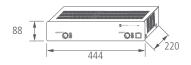


- · Versatile amplifier for music and announcements
- · Power: 320 W
- Main input with selectable phantom power on removable connector XLR or RJ45 (for a quick connection with BM3001 through CAT5FTP cable
- AUX input for audio sources (CD players, radios, etc.) through RCA connector
- $\cdot$   $\,$  Tone controllers and gain on AUX input
- · Main input with priority option on the auxiliary one
- Main input with presence control and high-pass filter to enhance voice intelligibility
- Available output for low impedance speakers (4 Ohm min) or for constant voltage 100 70  $\mbox{V}$
- LED indicators on the front panel to monitor the amp status (ON, PROT, OVERLOAD) the selected priority (PRIOR) and signal level (SIG / PK)
- · Rack mount kit for 2U amps included

UP 2162
POWER AMPLIFIERS

p/n 121.35.065





- · Power: 160 W
- Each amplifier features 2 audio inputs to "line" level, one of these with priority function
- · Each amplifier has its own volume and tone controls
- Light indicators for the system status (ON), protection (PROT), priority circuit activation (PRIOR) and peak/audio signal level (SIG/ PK) of the corresponding amplifier
- Two outputs for each amplifier, available to low impeance (4  $\Omega)$  or constant voltage 100 70 V
- · 19" rack mount kit

SPECIFICATIONS	UP 2161 - UP 2321	UP 2082 - UP 2162
OUTPUT POWER	160 W (UP 2161) - 320 W (UP 2321)	2 x 80 W - 2 x 160 W
FREQUENCY RESPONSE	50 Hz ÷ 18.000 kHz	50 - 16.000 Hz (± 3 dB)
DISTORTION (THD+N)	< 0.3% @ 1 kHz	< 0,3% @ 1 kHz
SPEAKER OUTPUT	100 V, 70 V, 4 Ω	100 V, 70 V, 4 Ω
SIGNAL/NOISE RATIO	> 60 dB (INPUTS 1-4); > 80 dB (AUX IN)	600 Ω, -1 dBu (690 mV)
INPUT SENSITIVITY	(MIC) -58 dBu (1 mV); (MIC PHANTOM) -21 dBu (70 mV); (LINE) 0 dBu (775 mV); (AUX) - 6 $\div$ +13 dBu (0.39 $\div$ 3.5 V)	> 80 dB
INPUT IMPEDANCE	(MIC) 10 k $\Omega$ ; (MIC PHANTOM) 5 k $\Omega$ ; (LINE): 10 k $\Omega$ ; (AUX): 20 k $\Omega$	IN 1: −12 dBu, IN 2: −32 ÷ −12 dBu
POWER SUPPLY	230 V / 115 (50 / 60 Hz) - INTERNAL SETTING	IN 1: 20 kΩ, IN 2: 20 kΩ (stereo: 10 kΩ)
ABSORBED POWER	240 W (UP 2161) - 440 W (UP 2321)	115-230V (internal setting) / 50-60 Hz
INPUT CONNECTORS	1 x XLR, 1 x RJ 45, 1 x SCREW TERMINALS, 1 x DOUBLE RCA (AUX)	350 W - 700 W
OUTPUT CONNECTORS	SCREW TERMINALS	2 x SCREW TERMINALS



CE

UP 8501 UP 8502 UP 8504

p/n 121.35.070

p/n 121.35.077

p/n 121.35.079

DIGITAL POWER AMPLIFIER







· Class D amplifier and double switching AC-DC power supply,

CERTIFIED

CPR: 1438-CPR-0241

EN 54-16

- · Pro audio performance
- · Selectable 70 100 V output per channel
- · Double input per channel
- · Active full protections on amplifier and power supply

transformer-less galvanic insulated speaker output

- · Stand-by, priority and fault remote commands
- · Activity and status indicators
- Several status LEDs on front panel give a complete feedback on amplifier status
- · Volume knobs on front panel with disablement facility
- · Light-weight 1 U 19" rack enclosure
- $\cdot\,$  EN 54-16 certified for voice alarm applications, when interconnected with RCF DXT 7000 system
- · All connectors are removable screw terminals

#### **REAR VIEW**

UP 8501





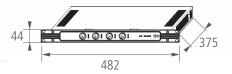
UP 8502





UP 8504





SPECIFICATIONS	UP 8501	UP 8502	UP 8504	
OUTPUT POWER	1 X 500 W	2 X 250 W	4 X 125 W	
FREQUENCY RESPONCE	40 HZ ÷ 16 kHz	40 HZ ÷ 16 kHz	40 HZ ÷ 16 kHz	
DISTORTION (THD+N)	MAX. 0.3%	MAX. 0.3%	MAX. 0.3%	
SPEAKER OUTPUT	100 V, 70 V	100 V, 70 V	100 V, 70 V	
SIGNAL/NOISE RATIO	86 dB	86 dB	86 dB	
INPUT SENSITIVITY	IN 1: 0 dBu (775 mV, max. 7 V), IN 2: 0 $\div$ $-$ 20 dBu (775 $\div$ 78 mV, max. 7 V), IN TEST: 0 dBu (775 mV)			
INPUT IMPEDANCE	70V: 10 Ω, 100W: 20 Ω	70V: 20 Ω, 100W: 40 Ω	70V: 40 Ω, 100W: 80 Ω	
POWER SUPPLY	Mains: 115 – 230V c.a. ±10%, 50 – 60 Hz (internal voltage selector) Batteries : 48 V c.c. ±10%			
ABSORBED POWER	650 W	650 W	650 W	
INPUT CONNECTORS	REMOVABLE SCREW TERMINALS	REMOVABLE SCREW TERMINALS	REMOVABLE SCREW TERMINALS	
OUTPUT CONNECTORS	REMOVABLE SCREW TERMINALS	REMOVABLE SCREW TERMINALS	REMOVABLE SCREW TERMINALS	

# AM 1125

p/n 121.35.082

120W 4-INPUTS MIXER AMPLIFIER





- 4 XLR input AM 1125 / 3XLR input AM 1064
- · VOX facility and Phantom power supply on input 1
- · Audio input 3 also with dual RCA connector
- · Aux input on dual RCA connector
- · DUCKING Control to adjust the Aux in level
- Audio output (with RCA connector) that sends the same signal routed to the internal amplifier
- Audio input (with RCA connector) to connect an external device directly to the internal power amplifier
- · AM 1125 Input for the secondary 24 V dc power supply (batteries)
- Amplifier output to loudspeakers, available as 100 / 70 V constant voltage line and Low impedance (min. 4  $\Omega)$

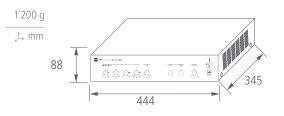
SPECIFICATIONS	AM 1125		
OUTPUT POWER	120 W		
FREQUENCY RESPONSE	50÷15.000 Hz		
MAX CONSUMPTION	100V (83Ω) - 70V (42Ω) - 4Ω		
MAX. OUTPUT POWER	240 W		
INPUT SENSITIVITY	MIC: 1.5 mV (– 54 dBu) dBu   LINE & AUX: 200 mV (– 12 dBu) dBu		
INPUT CONNECTORS	XLR or Dual RCA		
OUTPUT CONNECTORS	Dual RCA		

# AM 1064

p/n 121.35.081

60W 3-INPUTS MIXER AMPLIFIER





- $\cdot$  4 XLR input AM 1125 / 3XLR input AM 1064
- $\cdot\ \ \mbox{VOX}$  facility and Phantom power supply on input 1
- · Audio input 3 also with dual RCA connector
- · Aux input on dual RCA connector
- · DUCKING Control to adjust the Aux in level
- Audio output (with RCA connector) that sends the same signal routed to the internal amplifier
- Audio input (with RCA connector) to connect an external device directly to the internal power amplifier
- · AM 1125 Input for the secondary 24 V dc power supply (batteries)
- Amplifier output to loudspeakers, available as 100 / 70 V constant voltage line and Low impedance (min. 4  $\Omega$ )

SPECIFICATIONS	AM 1064
OUTPUT POWER	60 W
FREQUENCY RESPONSE	50÷15.000 Hz
MAX CONSUMPTION	100V (166Ω)
MAX. OUTPUT POWER	120 W
INPUT SENSITIVITY	MIC: 1.5 mV (- 54 dBu) dBu   LINE & AUX: 200 mV (- 12 dBu) dBu
INPUT CONNECTORS	XLR or Dual RCA
OUTPUT CONNECTORS	Dual RCA

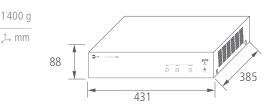


UP 4240

p/n 121.35.073

**POWER AMPLIFIERS** 





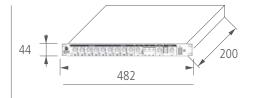
- · 240 W power amplifier
- · Suitable for the distribution of music and announcements
- Amplifier output available both for 100 / 70 V constant voltage lines and low impedance loudspeakers (min. 4 0)
- · Input for the secondary 24 V DC power supply
- $\cdot\,\,$  MASTER volume and tones BASS and TREBLE control on front panel
- · Main power plug with fuse
- · Main power voltage selector 230V / 115V
- · LEDs indicating audio signal level on front panel

SPECIFICATIONS	UP 4240
OUTPUT POWER	240 W
FREQUENCY RESPONSE	MIC: 60 Hz $\div$ 15 kHz LINE: 50 Hz $\div$ 18 kHz AUX: 50 Hz $\div$ 20 kHz
MAX CONSUMPTION	100V (42Ω) - 70V (21Ω) - 4Ω
MAX. OUTPUT POWER	MAX. 720 W
INPUT SENSITIVITY	LINE: 1 V (+ 2 dBu)
INPUT IMPEDANCE	10 KΩ (balanced)

# PR 4093

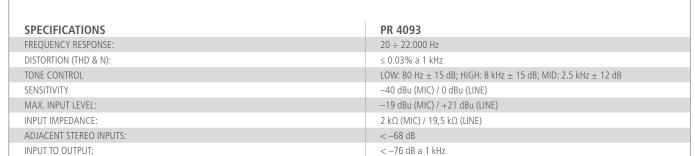
p/n 171.00.003

PRE-AMPLIFIER 9 INPUT 2 OUTPUT



3'600 g

- · MP3 stereo player/recorder
- $\cdot$   $\,$  Supports SD cards and USB flash drives
- · 32 GB Maximum supported memory
- · Can play/record one file at a time
- · A sequence of 64 file can be programmed
- · Fixed MP3 recording format: 192 kbps
- 1 AUX INPUT with parallel AUX OUTPUT
- Disabled front buttons
- · IR remote control included

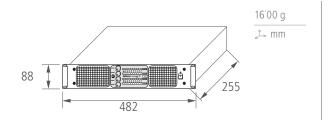


# QPS 9600

p/n 121.35.102

4 X 2400 HIGH POWER PRO AMPLIFIER





- · 240 W power amplifier
- · Suitable for the distribution of music and announcements
- $\cdot~$  Amplifier output available both for 100 / 70 V constant voltage lines and low impedance loudspeakers (min. 4 O)
- · Input for the secondary 24 V DC power supply
- · MASTER volume and tones BASS and TREBLE control on front panel
- · Main power plug with fuse
- · Main power voltage selector 230V / 115V
- · LEDs indicating audio signal level on front panel

SPECIFICATIONS	QPS 9600
AMPLIFIER CLASS	HD
POWER OUTPUT RMS - STEREO	4x2400 W @ 2Ω   4x2200 W @ 4Ω   4x1300 W @ 8Ω
POWER OUTPUT RMS - BRIDGED	2x4800 W @ 4Ω   2x4400 W @ 8Ω
FREQUENCY RESPONCE	20÷25.000 Hz
THD (@ 1 KHZ)	0.05 % (nominal power, 4 $\Omega$ )
SIGNAL / NOISE RATIO	110 dB
GAIN	23 – 44 dB (3 dB step)
INPUT IMPEDANCE	20 kΩ (bil.), 10 kΩ (unbal.)
PROTECTIVE CIRCUITS	Temp., DC, RFI, short circuit
COOLING	Temperature-controlled fan
CROSSTALK (@ 1 KHZ)	> 70 dB
INPUT CONNECTORS	XLR female
POWER SUPPLY / OPERATION VOLTAGE	110 / 230 V, 50 / 60 Hz

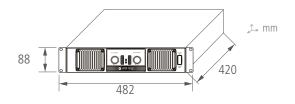
# HPS 1500 HPS 2500

p/n 121.35.055

p/n 121.35.054

2 X 1100 POWER PRO AMPLIFIER





- · HPS 2500 is a 2 channel power amplifier that delivers up to 2 x 1100 W RMS @ 4  $\Omega$  (2200 W RMS bridged @ 8  $\Omega$ ).
- XLR inputs for patching in signals as well as Speakon ports for connecting speaker systems are provided for the maximum flexibility.
- $\cdot\;$  A forced air cooling system maintains a low operating temperature.

SPECIFICATIONS	HPS 1500	HPS 2500	
AMPLIFIER CLASS	Н	Н	
POWER OUTPUT RMS - STEREO	2 x 750 W @ 4 Ω 2 x 450 W @ 8 Ω	2 x 1400 W @ 2 Ω 2 x 1100 W @ 4 Ω 2 x 700 W @ 8 Ω	
POWER OUTPUT RMS - BRIDGED	1500 W @ 8 Ω	2800 W @ 4 Ω 2200 W @ 8 Ω	
FREQUENCY RESPONCE	20 Hz ÷ 20 kHz		
THD (@ 1 KHZ)	0.05 %, 1 dB below clip		
SIGNAL / NOISE RATIO	106 dB		
GAIN	26 – 32 dB		
INPUT IMPEDANCE	20 kΩ (bil), 10 kΩ (sbil.)		
PROTECTIVE CIRCUITS	Temp., DC, RFI, short circuit		
COOLING	Temperature-controlled fan		
CROSSTALK (@ 1 KHZ)	> 70 dB		
INPUT CONNECTORS	XLR female		
POWER SUPPLY / OPERATION VOLTAGE	220 ÷ 240 V (50 / 60 Hz)		
WEIGHT	17 kg	19 kg	



IPS 700 IPS 1700 IPS 2700 IPS 3700

p/n 121.35.087

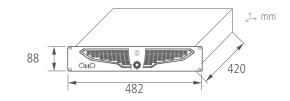
p/n 121.35.089

p/n 121.35.091

p/n 121.35.093

POWER PRO AMPLIFIER





2-channel power amplifiers that provide power:

- IPS 700: delivers up to 2 x 300 W RMS @ 4  $\Omega$  (600 W RMS bridged @ 8  $\Omega$ )
- IPS 1700: delivers up to 2 x 450 W RMS @ 4  $\Omega$  (900 W RMS bridged @ 8  $\Omega)$
- IPS 2700 delivers up to 2 x 1100 W RMS @ 4  $\Omega$  (2200 W RMS bridged @ 8  $\Omega).$
- IPS 3700 delivers up to 2 x 1500 W RMS @ 4  $\Omega$  (3000 W RMS bridged @ 8  $\Omega).$
- Thanks to its high efficiency class H design and high speed DC fans, the IPS series can withstand the hardest heat conditions ensuring great reliability.

SPECIFICATIONS	IPS 700	IPS 1700	IPS 2700	IPS 3700
AMPLIFIER CLASS	AB	Н	Н	Н
POWER OUTPUT (W) STEREO PER CHANNEL @ OHM	2 x 300 W @ 4 Ω 2 x 150 W @ 8 Ω	2 x 450 W @ 4 Ω 2 x 330 W @ 8 Ω	2 x 1100 W @ 4 Ω 2 x 700 W @ 8 Ω	2 x 1500 W @ 4 Ω 2 x 1200 W @ 8 Ω
BRIDGED POWER	600 W @ 8 Ω	900 W @ 8 Ω	2200 W @ 8 Ω	3000 W @ 8 Ω
FREQUENCY RESPONSE	20 Hz ÷ 20 kHz			
THD @ 1 KHZ	< 0.5% (@ 1kHz) < 1% (@ 1kHz)			
SIGNAL / NOISE RATIO	> 100dB (@ 1kHz, 0dBu input)			
IMPEDANCE	20 kΩ			
PROTECTIONS	DC, internal fault, input overload, RF interference, unmatched load, output short-circuit, thermal drift, power supply over-current			
COOLING	Internal heat sinks and forced ventilation			
CROSSTALK	> 75dB (@ 1kHz)			
INPUT CONNECTORS	XLR female			
POWER SUPPLY / OPERATION VOLTAGE	230V~ / 50-60 Hz			
WEIGHT	9,5 kg	11,2 kg	12,2 kg	16,6 kg

# **DPS 604X**

p/n 121.00.008

4 CHANNEL CLASS D POWER AMPLIFIER WITH CROSSOVER





Class D power amplifier designed for professional use in installed sound systems. It has 4 inputs and 4 outputs that could be combined in different configurations: a DIP switch on the rear panel allows to choose among 8 operational modes, and easily adapt the system to the specific installation.

- · Fast response and low distortion.
- Extensive protective circuits ensure high reliability and operating safety.
- · Level control for each channel on the front panel.
- $\cdot$  Signal and peak LED for each channel.

SPECIFICATIONS	DPS 604X
AMPLIFIER CLASS	D
RMS OUTPUT POWER (SINGLE CHANNELS)	$4$ x 80 W @ 8 $\Omega$ $4$ x 150 W @ 4 $\Omega$ $4$ x 230 W @ 2 $\Omega$
RATED OUTPUT POWER (BRIDGED OUTPUTS)	2 x 300 W @ 8 Ω 2 x 400 W @ 4 Ω
FREQUENCY RESPONCE	20 Hz ÷ 33 kHz
SIGNAL / NOISE RATIO	> 95 dB
IMPEDANCE	20 kΩ (balanced) - 10 kΩ (unbalanced)
PROTECTIONS	Short circuit, open circuit, thermal drift, ultrasonic, RF protection, reactive or mismatched loads, internal fuses.
CROSSTALK (@ 1 KHZ)	< 70 dB
CONNECTORS	Euroblock
OPERATING VOLTAGE	230V~ / 50-60 Hz

# FLUSH MOUNTED AND WALL SPEAKERS

The best solutions for wall or flush installations in false ceiling or panels.















MODEL	PL 50EN	PLP 50EN	PL 68EN	PL 70EN	PL 82EN	PL 40
TYPE	Ceiling speaker					
INSTALLATION	Flush mounted					
COLOUR	White	White	White	White	White	White
SPEAKER	5"	5"	6" dual-cone	6" dual-cone	8" + 0.75"	3,5"
POWER NOM. / PROGRAM	6-3-1,5-0,75 W	6-3-1,5-0,75 W	6 W RMS / 12 W	6 W RMS / 12 W	20 - 10 - 15 W	8 W RMS / 16 W
INPUT	100 V, 70 V					
FREQUENCY RESPONSE	130 Hz ÷ 15 kHz	130 Hz ÷ 15 kHz	230 Hz ÷ 20 kHz	230 Hz ÷ 20 kHz	130 Hz ÷ 20 kHz	90 Hz ÷ 20 kHz
MAX. SOUND PRESSURE	100 dB	101 dB	102 dB	99 dB	106 dB	100 dB
ANGLE OF COVERAGE	160°	165°	126°	131°	160°	120°
PROTECTION / CONFORMS	FN 54-24	_				













MODEL	PL 50	PL 60	PL 6X	PL 8X	MF 33EN	WMF 33EN
TYPE	Ceiling speaker	Universal				
INSTALLATION	Flush mounted	Wall				
COLOUR	White	White	White	White	Black	Black
SPEAKER	6"	6" dual-cone	6" + 1"	8" + 1"	2 x 3" + 1"	2 x 3" + 1"
POWER NOM. / PROGRAM	6 – 3 W	6 W RMS / 12 W	12 W RMS / 24 W	20 W RMS / 40 W	40 W RMS / 160 W	40 W RMS / 160 W
INPUT	100 V	100 V, 70 V	100 V, 70 V	100 V, 70 V	100 V, 70 V	100 V, 70 V
FREQUENCY RESPONSE	100 Hz ÷ 20 kHz	90 Hz ÷ 20 kHz	70 Hz ÷ 20 kHz	60 Hz ÷ 20 kHz	80 Hz ÷ 20 kHz	80 Hz ÷ 20 kHz
MAX. SOUND PRESSURE	98 dB	107 dB	106 dB	109 dB	104 dB	104 dB
ANGLE OF COVERAGE	150°	90°	100°	80°	100° (Horiz) 160° (Ver)	100° (Horiz) 160° (Ver)
PROTECTION / CONFORMS	-	-	-	-	EN 54-24	EN 54-24

















MODEL	BS 8	BS 2620	BS 5EN	DUP 5EN	DU 60EN	DU 50EN
TYPE	Suspended	Suspended	Suspended	Universal	Universal	Universal
INSTALLATION	Suspended	Suspended	Suspended	Wall	Wall or flush mounted	Wall or flush mounted
COLOUR	White	White	White	White	White	White
SPEAKER	8"	6" dual-cone	5" coassiale + 1"	5.5"	5" dual-cone	5"
POWER NOM. / PROGRAM	20 W RMS / 40 W	20 W RMS / 40 W	20-10-5-2,5/40 W	10 W RMS / 20 W	6-3-1,5-0,75 W	6 W RMS / 12 W
INPUT	100 V	100 V	100 V	100 V, 70 V, 25 V	100 V ( /70 V)	100 V, 70 V
FREQUENCY RESPONSE	160 Hz ÷ 12.5 kHz	100 Hz ÷ 20 kHz	80 Hz ÷ 20 kHz	130 Hz ÷ 17 kHz	100 Hz ÷ 20 kHz	190 Hz ÷ 18 kHz
MAX. SOUND PRESSURE	106 dB	106 dB	101 dB	100 dB	100 dB	100 dB
ANGLE OF COVERAGE	360°	180°	170°	180°	180°	175°
PROTECTION / CONFORMS	-	IP 55	IP 65 - EN 54-24	IP 65	EN 54-24	EN 54-24











MODEL	DM 61	DM 41	DU 100X	DU 31AT	GS 60
TYPE	Compact two-way	Compact two-way	Universale 2 vie	Universal two-way	For garden
INSTALLATION	Wall	Wall	Wall or flush mounted	Wall, Flush-mounted	Externale
COLOUR	White Ivory	White Ivory	White	White Ivory	Green
SPEAKER	6" + 1"	3,5" + 1"	4"+ 1"	4" + 1"	5.5" + 1.3"
POWER NOM. / PROGRAM	25 W RMS / 50 W	15 W RMS / 30 W	10 W RMS / 20 W	8-4-2 W (100V) - 8 (25V)	32-16-8-4-2-1 W (100 V)
INPUT	100 V, 70 V	100 V, 70 V	100 V, 70 V, 25 V	100V, 70V, 25V	$100$ / $70$ V (cons. voltage) / $8~\Omega$
FREQUENCY RESPONSE	70 Hz ÷ 20 kHz	100 Hz ÷ 20 kHz	100 Hz ÷ 18 kHz	100 Hz ÷ 17 kHz	60 Hz ÷ 20 kHz
MAX. SOUND PRESSURE	106 dB	102 dB	103 dB	91 dB	111 dB
ANGLE OF COVERAGE	120° (Horiz) 140° (Ver)	180° (Horiz) 170° (Ver)	195° (Horiz) 165° (Ver)	180°	360°
PROTECTION / CONFORMS	IP 55	IP 55	-	-	IP 56

# PL 50EN

p/n 131.00.007

CERTIFIED EN 54-24 CPR: 0068-CPR-051/2017

CERTIFIED EN 54-24

CPR: 1488-CPR-0486/W

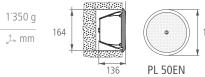
CEILING SPEAKER WITH FIRE DOME

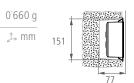
# PLP 50EN

p/n 131.00.008

CEILING SPEAKER WITH PLASTIC FIRE DOME









 $\cdot$  5" fullrange transducer.

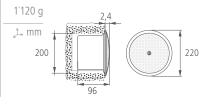
- · Power selectable (100 V): 6 W 3 W 1.5 W.
- 93 dB sensitivity.
- · Colour white RAL 9016.
- · In/out ceramic terminal block.
- · Thermal fuse protection.

SPECIFICATIONS	PL 50EN	PLP 50EN
POWER SELECTION	6 - 3 - 1,5 W (100 V)	6 - 3 - 1,5 W (100 V)
CONSTANT VOLTAGE	100 V, 70 V	100 V, 70 V
FREQUENCY RESPONCE	130 Hz ÷ 15 kHz (-10dB)	130 Hz ÷ 15 kHz (-10dB)
SENSITIVITY (1 m / 1 W)	92 dB	93 dB
MAX SPL	100 dB (1 m)	101 dB (1 m)
COVERAGE ANGLE	160°	165°

# PL 68EN

CEILING SPEAKER WITH FIRE DOME





p/n 131.33.082

· 6" fullrange transducer.

- Power selectable (100 V): 6 W 3 W 1.5 W.
- · 94 dB sensitivity.
- · Colour white RAL 9003.
- · Steel frame, grille and back can.
- · In/out ceramic terminal block.
- · Thermal fuse protection.

SPECIFICATIONS	PL 68EN
POWER SELECTION	6 - 3 - 1,5 W (100 V)
CONSTANT VOLTAGE	100 V, 70 V
FREQUENCY RESPONCE	230 Hz ÷ 20 kHz (-10dB)
SENSITIVITY (1 m / 1 W)	94 dB
MAX SPL	102 dB (1 m)
COVERAGE ANGLE	126°

# PL 70EN

CEILING SPEAKER WITH FIRE DOME



p/n 131.33.065

CERTIFIED EN 54-24 CPR: 1488-CPR-0487/W

- · 6" fullrange transducer.
- Power selectable (100 V): 6 W 3 W 1.5 W 0.75 W.
- · 93 dB sensitivity.
- · Colour white RAL 9003.
- · Steel frame, grille and back can.
- · In/out ceramic terminal block.
- · Thermal fuse protection.

SPECIFICATIONS	PL 70EN
POWER SELECTION	6 - 3 - 1,5 - 0.75 W (100 V)
CONSTANT VOLTAGE	100 V, 70 V
FREQUENCY RESPONCE	230 Hz ÷ 20 kHz (-10dB)
SENSITIVITY (1 m / 1 W)	93 dB
MAX SPL	99 dB (1 m)
COVERAGE ANGLE	131°



# PL 82EN

p/n 131.00.009

# CPR: 0068-CPR-051/2017

#### 2 WAYS CEILING SPEAKER WITH FIRE DOME



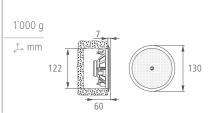
1 <sup>.</sup> 800 g	25		
mm 236	145	• 272	2

- · 8" coaxial woofer with 0.75" dome tweeter.
- Power selectable (100 V): 20 W − 10 W − 5 W.
- · 94 dB sensitivity.
- · Colour white RAL 9016.
- · Steel frame, grille and back can.
- · In/out ceramic terminal block.
- · Thermal fuse protection.

SPECIFICATIONS	PL 82EN
POWER SELECTION	20 - 10 - 5 W (100 V)
CONSTANT VOLTAGE	100 V, 70 V
FREQUENCY RESPONCE	130 Hz ÷ 20 kHz (-10dB)
SENSITIVITY (1 m / 1 W)	94 dB
MAX SPL	106 dB (1 m)
COVERAGE ANGLE	160°

# PL 40 CEILING SPEAKERS





#### p/n 131.33.045

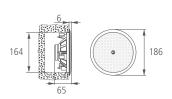
- · Recommended for speech and background-music reproduction
- · IP 44 protection
- · Low impedance (8 $\Omega$ ) or 100V
- · 3.5" full range speaker
- · Three hooks mounting system (no screws or other attachment elements)
- · Built-in multi-tapped transformer for constant voltage connection
- · Body in self-extinguishing (UL 94V-0) plastic and front metal grille RAL 9003 White

SPECIFICATIONS	PL 40
POWER SELECTION	8 - 6 - 4 - 2 W (100 V)
CONSTANT VOLTAGE	100 V, 70 V
FREQUENCY RESPONCE	90 Hz ÷ 20 kHz (-10dB)
SENSITIVITY (1 m / 1 W)	88 dB
MAX SPL	100 dB (1 m)
COVERAGE ANGLE	120°

# PL 50 CEILING SPEAKERS



5	00 g
î.	mm



#### p/n 131.33.060 (only available in 12 pieces per package)

- · Suitable for paging and background music applications
- · 6" wide band loudspeaker
- · Sound pressure level at music power: 91 dB @ 1W/1m
- · Built-in multi-tap line transformer, 100V and 70V constant voltage connection
- · Body in self-extinguishing plastic, white colour
- · Spring-type mounting system

SPECIFICATIONS	PL 50
POWER SELECTION	6 – 3 W
CONSTANT VOLTAGE	100 V
FREQUENCY RESPONCE	100 Hz ÷ 20 kHz (-10dB)
SENSITIVITY (1 m / 1 W)	90 dB
MAX SPL	98 dB (1 m)
COVERAGE ANGLE	150°

# **PL 60**

#### HIGH EFFICIENCY CEILING SPEAKER







#### p/n 131.10.214

- · For paging and background music
- · 6" dual cone wide band loudspeaker
- · Sound pressure level at music power: 102 dB/1 m
- · Low impedance (4 $\Omega$ ) or 100V
- · Built-in multi-tapped transformer for 100/70V constant voltage connection
- · Body in self-extinguishing plastic UL-94-V0 and front metal grille RAL 9010 White
- · Optional accessory: A 1360 base for surface mount installation (p/n 133.20.107)

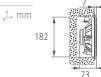
SPECIFICATIONS	PL 60
POWER SELECTION	6 - 3 W (100 V)
CONSTANT VOLTAGE	100 V, 70 V
FREQUENCY RESPONCE	90 Hz ÷ 20 kHz (-10dB)
SENSITIVITY (1 m / 1 W)	91 dB
MAX SPL	107 dB (1 m)
COVERAGE ANGLE	90°

# PL 6X

#### COAXIAL CEILING SPEAKER



780 g





#### p/n 131.33.042

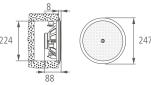
- Two way speaker system with dome tweeter recommended for speech and background-music reproduction
- · 6" woofer with coaxial tweeter
- · Low impedance (8 $\Omega$ ) or 100V
- · Built-in multi-tapped transformer for 100/70V constant voltage connection
- · Three hooks mounting system (no screws or other attachment elements)
- · Body in self-extinguishing (UL 94V-0) plastic and front metal grille RAL 9003 White

SPECIFICATIONS	PL 6X
POWER SELECTION	12 - 6 - 3 - 1.5 W (100 V)
CONSTANT VOLTAGE	100 V, 70 V
FREQUENCY RESPONCE	70 ÷ 20 kHz (-10dB)
SENSITIVITY (1 m / 1 W)	92 dB
MAX SPL	106 Hz dB (1 m)
COVERAGE ANGLE	100°

# PL 8X COAXIAL CEILING SPEAKER



1'230 g



#### p/n 131.33.043

- $\cdot\;$  Two way speaker system with dome tweeter for hi level speech and background-music
- · 8" woofer with coaxial tweeter
- Low impedance (8Ω) or 100V
- · Built-in multi-tapped transformer for 100/70V constant voltage connection
- · Body in self-extinguishing plastic (UL 94V-0) and front metal grille RAL 9003 White
- · IP 44 protection

SPECIFICATIONS	PL 8X
POWER SELECTION	20 - 10 - 5 - 2,5 W (100 V)
CONSTANT VOLTAGE	100 V, 70 V
FREQUENCY RESPONCE	60 Hz ÷ 20 kHz (-10dB)
SENSITIVITY (1 m / 1 W)	93 dB
MAX SPL	109 dB (1 m)
COVERAGE ANGLE	80°



# TWO-WAY CEILING SPEAKER 3.4 kg \$\frac{94 \text{ mm}}{2.39} \text{ mm} 516 \text{ mm} / 20.31" \$\frac{1}{20.31} \text{ mm} \text{ mm}

#### p/n 131.00.043

MF 33EN is a two-way ceiling speaker designed for recess installation into ceilings or panels. It is especially suitable for broadcasting background music into commercial spaces, but also alarm messages thanks to the highly intelligible voice reproduction. It features a plastic cabinet with steel magnetic grille, extremely easy to install. A thermal fuse protects the integrity of the line in case of heat affecting the speaker. The terminal connection blocks, for input and output flameproof cables, are made of ceramic material.

- · 2 x 3" fullrange transducers with 1" dome tweeter
- · Power selectable (100 V): 40 W 20 W 10 W 5 W 2.5 W
- · 88 dB sensitivity
- · Colour black RAL 9005
- · Plastic body and steel grille
- · In/out ceramic terminal block
- · Thermal fuse protection

SPECIFICATIONS	MF 33EN
POWER SELECTION	40 W - 20 W - 10 W - 5 W - 2.5 W (100 V)
CONSTANT VOLTAGE	100 V, 70 V
FREQUENCY RESPONCE	80 Hz ÷ 20 kHz (-10dB)
SENSITIVITY (1 m / 1 W)	88 dB
MAX SPL	104 dB (1 m)
COVERAGE ANGLE	100° (Horiz) 160° (Ver)

# WMF 33EN

TWO-WAY WALL MOUNT SPEAKER

437 mm / 11



5 kg △ mm

92 mm 3.62" 399 mm / 15.71" p/n 131.00.046

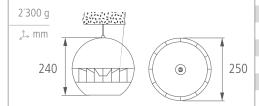
WMF 33EN is a two-way wall mount speaker designed for both horizontal and vertical installation. It is especially suitable for broadcasting background music into commercial spaces, but also alarm messages thanks to the highly intelligible voice reproduction. It features a plastic cabinet with steel magnetic grille, extremely easy to install thanks to the smart support. A thermal fuse protects the integrity of the line in case of heat affecting the speaker. The terminal connection blocks, for input and output flameproof cables, are made of ceramic material.

- $\cdot~2$  x 3" fullrange transducers with 1" dome tweeter
- $\cdot~$  Power selectable (100 V): 40 W 20 W 10 W 5 W 2.5 W
- · 88 dB sensitivity
- · Colour black RAL 9005
- · Plastic body and steel grille
- · In/out ceramic terminal block
- · Thermal fuse protection
- · Connections integrated in the wall support

SPECIFICATIONS	WMF 33EN
POWER SELECTION	40 W - 20 W - 10 W - 5 W - 2.5 W (100 V)
CONSTANT VOLTAGE	100 V, 70 V
FREQUENCY RESPONCE	80 Hz ÷ 20 kHz (-10dB)
SENSITIVITY (1 m / 1 W)	88 dB
MAX SPL	104 dB (1 m)
COVERAGE ANGLE	100° (Horiz) 160° (Ver)

# BS 8 PENDENT BALL SPEAKER





#### p/n 131.33.054

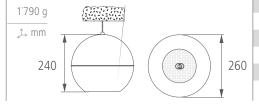
- · Pendent speaker
- · For paging and background music
- · 8" diameter dual cone wide band speaker
- · Plastic body White RAL 9010
- · Built-in transformer for 100V constant voltage connection
- · 5-metre suspension and connection cable included

SPECIFICATIONS	BS 8
POWER SELECTION	20-10-5 W (100 V)
CONSTANT VOLTAGE	100 V
FREQUENCY RESPONCE	160 Hz ÷ 12.5 kHz (-10dB)
SENSITIVITY (1 m / 1 W)	93 dB
MAX SPL	106 dB (1 m)
COVERAGE ANGLE	360°

# BS 2620

HIGH PERFORMANCE
PENDENT BALL SPEAKER





#### p/n131.10.006

- · For paging and background music
- · 6" diameter dual cone wide band speaker
- · 5-metre suspension and connection cable included
- · Weather-resistant construction (IP55) for use both indoors and outdoors
- · Body in self-extinguishing plastic UL94VO, UV ray protected
- · Music power/RMS: 40/20W
- · Colour RAL 9010 white

SPECIFICATIONS	BS 2620
POWER SELECTION	20 - 10 - 5 - 2,5 W (100 V)
CONSTANT VOLTAGE	100 V
FREQUENCY RESPONCE	100 Hz ÷ 20 kHz (-10dB)
SENSITIVITY (1 m / 1 W)	93 dB
MAX SPL	106 dB (1 m)
COVERAGE ANGLE	180°

# BS 5EN

COMPLIANT SUSPENDED SOUND PROJECTOR



#### p/n 131.33.078



- 5" coaxial speaker for alarm voice messages broadcasting and high quality background music.
- · ABS cabinet with steel mesh grille
- · It can be installed both indoors and outdoors (IP 65 protection grade)
- Equipped with transformer for 100 V (/ 70 V) constant voltage lines
- · Internal power setting
- · Ceramic screw terminal for connection
- · Internal thermal fuse
- · 5 meters cable

SPECIFICATIONS	BS 5-EN
POWER SELECTION	20 - 10 - 5 - 2,5 W (100 V)
CONSTANT VOLTAGE	100 V, 70 V
FREQUENCY RESPONCE	80 Hz ÷ 20 kHz (-10dB)
SENSITIVITY (1 m / 1 W)	88 dB
MAX SPL	101 dB (1 m)
COVERAGE ANGLE	170°



# **DUP 5EN** UNIVERSAL WALL MOUNT PLASTIC SPEAKER 1'150 g ⊥ mm 166 EP. 267

#### p/n 131.00.019

CPR: 0068-CPPR-085/2017

- · 5.5" fullrange transducer.
- Power selectable (100 V): 6 W 3 W 1.5 W.
- 92 dB sensitivity.
- · Colour white RAL 9016.
- · Plastic body and steel grille.
- · In/out ceramic terminal block.
- · Thermal fuse protection.

SPECIFICATIONS	DUP 5EN
POWER SELECTION	6 - 3 - 1,5 W (100 V)
CONSTANT VOLTAGE	100 V, 70 V
FREQUENCY RESPONCE	130 Hz ÷ 17 kHz (-10dB)
SENSITIVITY (1 m / 1 W)	92 dB
MAX SPL	100 dB (1 m)
COVERAGE ANGLE	180°

CERTIFIED

CPR: 1488-CPR-0488/W

# DU 60EN

WALL/CEILING UNIVERSAL STEEL SPEAKER



1'610 g △ mm





#### p/n 131.33.083

- · 5" fullrange transducer.
- Power selectable (100 V): 6 W 3 W 1.5 W 0.75 W.
- · 94 dB sensitivity.
- · Colour white RAL 9016.
- · Steel body and grille.
- · In/out ceramic terminal block.
- Thermal fuse protection.

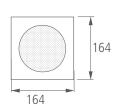
SPECIFICATIONS	DU 60EN
POWER SELECTION	6 - 3 - 1,5 - 0,75 W
CONSTANT VOLTAGE	100 V, 70 V
FREQUENCY RESPONCE	100 Hz ÷ 20 kHz (–10 dB)
SENSITIVITY (1 m / 1 W)	94 dB
MAX SPL	100 dB
COVERAGE ANGLE	180°

# DU 50EN

WALL/CEILING UNIVERSAL STEEL SPEAKER







#### p/n 131.33.064

- · 5" fullrange transducer.
- Power selectable (100 V): 6 W 3 W 1.5 W 0.75 W.
- · 91 dB sensitivity.
- · Colour white RAL 9010.
- · Steel body and grille.
- · In/out ceramic terminal block.
- · Thermal fuse protection.

SPECIFICATIONS	DU 50EN
POWER SELECTION	6 - 3 - 1,5 - 0,75 W (100 V)
CONSTANT VOLTAGE	100 V, 70 V
FREQUENCY RESPONCE	190 Hz ÷ 18 kHz (-10dB)
SENSITIVITY (1 m / 1 W)	91 dB
MAX SPL	100 dB (1 m)
COVERAGE ANGLE	175°









# DM 61 COMPACT TWO-WAY SPEAKER 3'980 g 177 200 216

#### p/n 130.00.050

- · Woofer 6" with mylar dome tweeter
- · Built-in multitap transformer for constant voltage system
- · Body in self-extinguishing composite material
- · IP55 protection, suitable for outdoor use
- · Adjustable mounting accessory included
- · Program/rated power: 50/25W
- Each model can be connected to either a 100 V constant voltage line or a low impedance amplifier output

SPECIFICATIONS	DM 61
POWER SELECTION	25 - 12.5 - 7.5 - 5 - 2.5 W (100 V)
CONSTANT VOLTAGE	100 V, 70 V
FREQUENCY RESPONCE	70 ÷ 20 kHz (-10dB)
SENSITIVITY (1 m / 1 W)	89 dB
MAX SPL	106 dB (1 m)
COVERAGE ANGLE	120° (HORIZ.); 140° (VERT.)

# DM 41 DM 41 B Black

COMPACT TWO-WAY SPEAKER



1'700 g ♪ mm





#### p/n 130.00.049

#### p/n 130.00.387

- · 3.5" woofer with mylar dome 1" tweeter
- · Built-in multitap transformer for constant voltage system
- Body in self-extinguishing composite material
- · IP55 protection, suitable for outdoor use
- · Adjustable mounting accessory included
- · Music power/RMS: 30 W / 15 W
- Each model can be connected to either a 100 V constant voltage line or a low impedance amplifier output

SPECIFICATIONS	DM 41
POWER SELECTION	15 – 7.5 – 5 – 2.5 – 1.25 W (100 V) SELEZ.
CONSTANT VOLTAGE	100 V, 70 V
FREQUENCY RESPONCE	100 ÷ 20 kHz (-10dB)
SENSITIVITY (1 m / 1 W)	87 dB
MAX SPL	102 dB (1 m)
COVERAGE ANGLE	180° (HORIZ.); 170° (VERT.)

# DU 100X COAXIAL SPEAKER UNIVERSAL

#### p/n 130.00.105

- · Ideal for paging and background music, wall or ceiling installation
- · Dual-cone extended range loudspeaker, 4" diameter
- · Plastic body with shock-proof metal grid
- · Built-in multi-tapped transformer for 100/70V constant voltage connection
- · Body in ABS and metal grille RAL 9003 White
- · Power selection

SPECIFICATIONS	DU 100X
POWER SELECTION	10 - 5 - 2.5 - 1.2 - 0.6 W (100 V)
CONSTANT VOLTAGE	100 V, 70 V, 25 V
FREQUENCY RESPONCE	100 Hz ÷ 18 kHz (-10dB)
SENSITIVITY (1 m / 1 W)	93 dB
MAX SPL	103 dB (1 m)
COVERAGE ANGLE	195° (HORIZ.); 165° (VERT.)

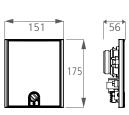


# **DU 31AT**

FLUSH MOUNT WALL SPEAKER WITH POWER SELECTOR



600 g



#### p/n 130.00.220

- · For paging and background music for several type of installation
- · 2 way wall speaker with flexible design with wide band 4" woofer and 1" tweeter
- Includes a transformer for the connection to (100 70 25 V) constant voltage lines and a 25 V socket makes it possible to connect multiple speakers in parallel to a constant impedance line
- Wattage taps (8 W, 4 W, 2W, 1W, 0,5W at 100 V) is selectable by means of a Rotary switch, accessible from the front panel
- · Universal wall mounting on standard European flush mounting boxes.
- · Body in plastic, RAL 9002 White Ivory

SPECIFICATIONS	DU 31AT
POWER SELECTION	8 - 4 -2 W (100 V) - 8 W (25 V)
CONSTANT VOLTAGE	100 V, 70 V, 25 V
FREQUENCY RESPONCE	100 - 17 kHz (-10dB)
SENSITIVITY (1 m / 1 W)	82 dB
MAX SPL	91 dB (1 m)
COVERAGE ANGLE	180°

# A 1331 SURFACE MOUNT FOR DU 31 / DU 31AT



DU 31AT Table mounting support with tilt 15°



DU31 and A1331 wall mounting support with tilt 0°





DU31 and A1331 wall mounting support with tilt 15°

#### p/n 133.60.123

- $\cdot \;\;$  Quickly and easily installed on any flat surface
- · Body in plastic, RAL 9002 White Ivory



DU31 and A1331 flag mount support unidirectional



2 x DU31 and 2 x A1331 flag mount support bi-directional

## GS 60 GARDEN SPEAKER



4195 g \_\_\_\_\_ mm



#### p/n 131.33.084

- · Body made of linear low-density polyethylene
- · Coaxial transducer with 5,25"woofer and 1,20" tweeter
- · Suitable for installation on different surfaces
- · Can be used in constant voltage lines 100V / 70V or in low impedance (8 ohm)
- · Protection grade IP56

SPECIFICATIONS	GS 60
POWER SELECTION	32 - 16 - 8 - 4 - 2 - 1 W (100V)
CONSTANT VOLTAGE	100 V, 70 V
FREQUENCY RESPONCE	60 Hz ÷ 20 kHz
SENSITIVITY (1 m / 1 W)	90 dB
MAX SPL	111 dB
COVERAGE ANGLE	360°

# SOUND PROJECTORS, MONITORS AND COLUMN SPEAKERS

Maximum speech intelligibility for every public ambience and for any kind of application.















MODEL	DP 4EN	DP 1420EN	BD 2412EN	DP 5EN	BD 5EN	DP 4
TYPE	Projector	Proiettore Allum.	Projector Bidirec.	Projector	Projector Bidirec.	Projector
INSTALLATION	Wall o Flush Mounted					
COLOUR	Grey	Grey	Grey	White	White	Grey
SPEAKER	4"	5"	2 x 5"	5"	2 x 5"	5"
POWER NOM. / PROGRAM	10 W RMS / 40 W	20 W RMS / 40 W	10 W RMS / 20 W			
INPUT	100 V	100 V, 70 V,	100 V			
FREQUENCY RESPONSE	180 Hz ÷ 16 kHz	160 Hz ÷ 20 kHz	130 Hz ÷ 20 kHz	80 Hz ÷ 20 kHz	150 Hz ÷ 18 kHz	180 Hz ÷ 16 kHz
MAX. SOUND PRESSURE	101 dB	105 dB	101 dB	101 dB	99 dB	101 dB
ANGLE OF COVERAGE	180°	155°	130°*	210°*	210°*	210°
PROTECTION / CONFORMS	IP 55, EN 54-24	IP 66, EN 54-24	IP 66, EN 54-24	IP 65, EN 54-24	IP 65, EN 54-24	IP 55







MODEL	CS 6520EN	CS 6940EN	CS 3082
TYPE	Column speaker two-way	Column speaker two-way	Column speaker two-way
INSTALLATION	Wall	Wall	Wall
COLOUR	White	White	White
SPEAKER	4 x 3.15" + 0.8"	8 x 3" + 0.75"	8 x 2" + 2 x 1"
POWER NOM. / PROGRAM	20 W RMS / 40 W	40 W RMS / 80 W	30 W RMS / 60 W
INPUT	100 V, 70 V	100 V, 70 V	100 V, 70 V
FREQUENCY RESPONSE	140 Hz ÷ 20 kHz	140 Hz ÷ 20 kHz	200 Hz - 20 kHz
MAX. SOUND PRESSURE	105 dB	109 dB	106 dB
ANGLE OF COVERAGE	185° (Horiz) 47° (Ver)	194° (Horiz) 30° (Ver)	180° (Horiz) 30° (Ver)
PROTECTION / CONFORMS	IP 66, EN 54-24	IP 66, EN 54-24	-















MODEL	MR 52EN	MR 40T	MR 50T	MQ 100L	MQ 90S
TYPE	Compact two-way	Compact two-way	Compact two-way	Column speaker Three-way	Subwoofer
INSTALLATION	Wall	Wall	Wall	Wall	Universal
COLOUR	White/Black	White/Black	White/Black	White/Black	Black
SPEAKER	5" + 1"	4" + 1"	5" + 1"	2 x 3.5" + 2 x 3.5" + 2x0.75"	8"
POWER NOM. / PROGRAM	30W - 15W - 7.5W - 3.75W	40 W IEC	60 W IEC	80 W RMS / 160 W	60 W RMS / 120 W
INPUT	100 V, 70 V	100 V, 70 V	100 V, 70 V	100 V, 70 V - 16 Ω	100 V, 70 V - 16 Ω
FREQUENCY RESPONSE	80 Hz ÷ 20 kHz	70 Hz ÷ 20 kHz	60 Hz ÷ 20 kHz	130 Hz ÷ 20 kHz	70 Hz ÷ 200 Hz
MAX. SOUND PRESSURE	103 dB	108 dB	110 dB	112 dB	107 dB
ANGLE OF COVERAGE	180°	100° (Horiz) 110° (Ver)	100° (Horiz) 110° (Ver)	180° (Horiz) 60° (Ver)	-
PROTECTION / CONFORMS	EN 54-24	-	-	-	-













MODEL	MQ 30P	MQ 50	MQ 50C	MQ 50i	MQ 60H	MQ 80P
TYPE	Compact two-way	Compact two-way	Ceiling two-way	Flush Mounted two-way	Compact two-way	Projector two-way
INSTALLATION	Projector	Wall	Ceiling	Wall	Wall	Projector
COLOUR	White/Black	White/Black	White	White	White/Black	White/Black
SPEAKER	3.5" + 0.75"	5" + 0.75"	5" + 1"	5" + 0.75"	5" + 2 x 1"	5" + 1"
POWER NOM. / PROGRAM	12 W RMS / 24 W	60 W RMS / 120 W	60 W RMS / 120 W	60 W RMS / 120 W	60 W RMS / 120 W	60 W RMS / 120 W
INPUT	100 V, 70 V - 16 Ω	100 V, 70 V - 16 Ω	100 V, 70 V - 16 Ω	100 V, 70 V - 16 Ω	100 V, 70 V - 16 Ω	100 V, 70 V - 8 Ω
FREQUENCY RESPONSE	150 Hz ÷ 20 kHz	70 Hz ÷ 20 kHz	70 Hz ÷ 20 kHz	180 Hz ÷ 20 kHz	100 Hz ÷ 19 kHz	100 Hz ÷ 20 kHz
MAX. SOUND PRESSURE	102 dB	110dB	112 dB	108 dB	109 dB	114 dB
ANGLE OF COVERAGE	120°	120° (Horiz) 100° (Ver)	120°	120° (Horiz) 100° (Ver)	180° (Horiz) 100° (Ver)	90° (Horiz ) 60° (Ver)
PROTECTION / CONFORMS	-	-	-	-	-	IP 55

# DP 4EN UNIDIRECTIONAL SOUND PROJECTOR 1'300 g A mm 146

#### p/n 131.00.021



- · 4" fullrange transducer.
- Power selectable (100 V): 10 W 5 W 2.5 W.
- · 91 dB sensitivity.
- · Colour grey RAL 7035.
- · Flameproof ABS body, aluminum grille and bracket.
- · In/out ceramic terminal block.
- · Thermal fuse protection.
- · Protection grade IP55.

SPECIFICATIONS	DP 4EN
POWER SELECTION	10 - 5 - 2.5 W (100 V)
CONSTANT VOLTAGE	100 V
FREQUENCY RESPONCE	180 ÷ 16 kHz (-10dB)
SENSITIVITY (1 m / 1 W)	91 dB
MAX SPL	101 dB (1 m / POWER MAX)
COVERAGE ANGLE	180°

# DP 1420EN ALUMINIUM SOUND PROJECTOR 2'730 g 155 200 146

#### p/n 131.33.071



- · 5" fullrange transducer.
- Power selectable (100 V): 20 W 10 W 5 W 2.5 W 1.25 W.
- · 92 dB sensitivity.
- · Colour grey RAL 7035.
- · Aluminium body, grille and bracket.
- · In/out ceramic terminal block.
- · Thermal fuse protection.
- · Protection grade IP66.

SPECIFICATIONS	DP 1420EN
POWER SELECTION	20 - 10 - 5 - 2.5 - 1.25 W (100 V)
CONSTANT VOLTAGE	100 V, 70 V
FREQUENCY RESPONCE	160 ÷ 20 kHz (-10dB)
SENSITIVITY (1 m / 1 W)	92 dB
MAX SPL	105 dB (1 m)
COVERAGE ANGLE	155°

# **BD 2412EN**

p/n 131.33.074

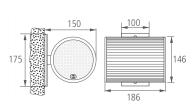
CPR: 1488-CPR-0641/W

#### ALUMINIUM BIDIRECTIONAL SOUND PROJECTOR



3'200 g

⊥ mm



- · 2 x 5" fullrange transducers.
- · Power selectable (100 V): 20 W 10 W 5 W.
- · 88 dB sensitivity.
- · Colour grey RAL 7035.
- · Aluminum body, grille and bracket.
- · In/out ceramic terminal block.
- · Thermal fuse protection.
- · Protection grade IP66.

SPECIFICATIONS	BD 2412EN
POWER SELECTION	20 - 10 - 5 W (100 V)
CONSTANT VOLTAGE	100 V, 70 V
FREQUENCY RESPONCE	130 ÷ 20 kHz (-10dB)
SENSITIVITY (1 m / 1 W)	88 dB
MAX SPL	101 dB (1 m)
COVERAGE ANGLE	130° (per ogni altoparlante)



# DP 5EN

#### MONODIRECTIONAL PROJECTOR



#### p/n 131.33.076



- · 5" fullrange transducer.
- Power selectable (100 V): 20 W 10 W 5 W 2.5 W.
- · 88 dB sensitivity.
- · Colour white RAL 9016.
- · Flameproof ABS body, steel grille.
- · In/out ceramic terminal block.
- · Thermal fuse protection.
- · Protection grade IP65.

SPECIFICATIONS	DP 5-EN
POWER SELECTION	20 W - 10 W - 5 W - 2.5 W (100 V) W RMS
CONSTANT VOLTAGE	100 V, 70 V
FREQUENCY RESPONCE	80 ÷ 20 kHz (-10dB)
SENSITIVITY (1 m / 1 W)	88 dB
MAX SPL	101 dB (1 m)
COVERAGE ANGLE	210°

# BD 5EN

#### **BIDIRECTIONAL PROJECTOR**



#### p/n 131.33.077

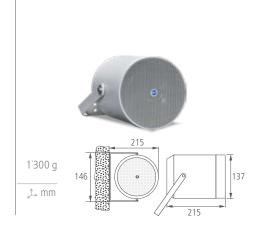
- CPR: 0068-CPR-058/2014
- · 2 x 5" fullrange transducers.
- Power selectable (100 V): 20 W 10 W 5 W 2.5 W.
- · 86 dB sensitivity.
- · Colour white RAL 9016.
- · Flameproof ABS body, steel grille.
- · In/out ceramic terminal block.
- · Thermal fuse protection.
- · Protection grade IP65.

SPECIFICATIONS	BD 5-EN
POWER SELECTION	20 W - 10 W - 5 W - 2.5 W (100 V) W RMS
CONSTANT VOLTAGE	100 V, 70 V
FREQUENCY RESPONCE	150 ÷ 18 kHz (-10dB)
SENSITIVITY (1 m / 1 W)	86 dB
MAX SPL	99 dB (1 m)
COVERAGE ANGLE	210° in entrambe le direzioni

### DP 4

#### p/n 130.00.106

#### INDOOR/OUTDOOR SOUND PROJECTOR



- · Ideal for paging and background music
- $\cdot~$  IP55 protection, suitable for outdoor use
- $\cdot$  5" diameter extended range twin-cone loudspeaker
- Built-in multi-tapped transformer for connection constant voltage 100V
- · Equipped with aluminium "U" bracket

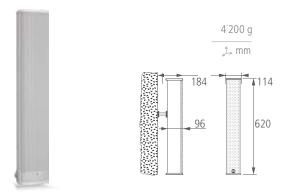
SPECIFICATIONS	DP 4
POWER SELECTION	10 - 5 W (100 V)
CONSTANT VOLTAGE	100 V
FREQUENCY RESPONCE	180 ÷ 16 kHz (-10dB)
SENSITIVITY (1 m / 1 W)	91 dB
MAX SPL	101 dB (1 m / POWER MAX)
COVERAGE ANGLE	210°

# **CS 6520EN**

**COLUMN SPEAKER TWO-WAY** 

p/n 131.33.079





- $\cdot~4$  x 3" fullrange transducers with 0.75" dome tweeter.
- · Power selectable (100 V): 20 W − 10 W − 5 W − 2.5 W − 1.25 W.
- · 93 dB sensitivity.
- · Colour white RAL 9003.
- Aluminium body, grille and bracket.
- In/out ceramic terminal block.
- Thermal fuse protection.
- Protection grade IP66.

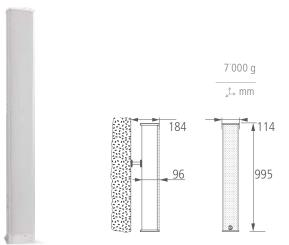
# **CS 6940EN**

p/n 131.05.006

CERTIFIED EN 54-24 CPR: 1488-CPR-0490/W



**COLUMN SPEAKER TWO-WAY** 

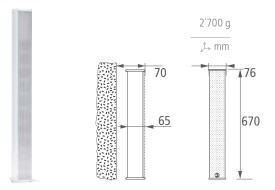


- · 8 x 3" fullrange transducers with 0.75" dome tweeter.
- Power selectable (100 V): 40 W 20 W 10 W 5 W 2.5 W.
- · 95 dB sensitivity.
- · Colour white RAL 9003.
- · Aluminium body, grille and bracket.
- · In/out ceramic terminal block.
- · Thermal fuse protection.
- · Protection grade IP66.

CS 3082

p/n 130.00.232

COLUMN SPEAKER SLIM LINE



- · Ideal for speech reproduction, shape designed to enable corner installation
- · Music power/RMS: 60/30W
- · Eight 2" diameter extended range speakers and two tweeter 1"
- · Body in extruded aluminium bake-painted RAL 9016 White and front metal grille RAL 9016 White, includes accessory for wall mounting
- Built-in multi-tapped transformer (30 20 10 W) for 100 V constant voltage connection
- 16-ohm input that can be selected on the terminal block
- Audio connection on screw terminal block

SPECIFICATIONS	CS 6520EN	CS 6940EN	CS 3082
POWER SELECTION	20 - 10 - 5 - 2.5 -1.25 W (100 V)	40 - 20 - 10 - 5 - 2.5 W (100 V)	30 W - 20 W - 10 W
CONSTANT VOLTAGE	100 V, 70 V	100 V, 70 V	100 V
FREQUENCY RESPONCE	140 ÷ 20 kHz (-10dB)	140 ÷ 20 kHz (-10dB)	200 - 20 kHz
SENSITIVITY (1 m / 1 W)	93 dB	95 dB	91 dB
MAX SPL	105 dB (1 m)	109 dB (1 m)	106 dB (1 m / POWER MAX)
COVERAGE ANGLE	185° (ORIZ ): 47° (VERT)	194° (HORIZ ): 30° (VERT)	180° (HORIZ ): 30° (VERT)

# **AC WM-CS**

p/n 133.60.206

**COUPLE OF SWIVEL BRACKETS** 

· Swivel brackets for the installation of CS 3082 speaker





# MR 52EN B MR 52EN W

■ Black p/n 131.00.011

☐White p/n 131.00.010

CERTIFIED EN 54-24 CPR: 1488-CPR-0591/W



3'000 g

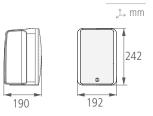
4600 g

♪ mm

2 WAYS BASS REFLEX MONITOR SPEAKERS



- · 5" woofer with 1" dome tweeter.
- Power selectable (100 V): 30 W 15 W 7.5 W 3.75 W.
- · 89 dB sensitivity
- · Colour white RAL 9016 or black RAL 9005.
- · Flameproof ABS body, steel grille.
- · In/out ceramic terminal block.
- Thermal fuse protection.



# **MR 40T MR 40T W**

TWO-WAY BASS REFLEX SPEAKER



#### ■ Black p/n 131.00.035

☐ White p/n 131.00.037



- · 108 dB max SPL
- · 70 ÷ 20000 Hz frequency range
- · 110° x 100° coverage angles
- 1 x 4" woofer (1" v.c.)
- 1 x 1" dome tweeter (0.8" v.c.)
- Body in self-extinguishing plastic
- · Wall mount accessory included
- · M6 inserts available for optional U bracket
- · 4 pole EUROBLOCK connector (audio input and parallel link output)



TWO-WAY BASS REFLEX SPEAKER



#### ■ Black p/n 131.00.039

☐ White p/n 131.00.041

- · 60W AES power handling
- · 110 dB max SPL
- · 60 ÷ 20000 Hz frequency range
- · 110° x 100° coverage angles
- 1 x 5" woofer (1" v.c.)
- 1 x 1" dome tweeter (0.8" v.c.)
- · Body in self-extinguishing plastic
- · Wall mount accessory included
- · M6 inserts available for optional U bracket
- 4 pole EUROBLOCK connector (audio input and parallel link output)



SPECIFICATIONS	MR 52EN	MR 40T	MR 40T
POWER SELECTION	30 - 15 - 7.5 - 3.75 W (100 V)	20 - 10 - 5 - 2.5 W (100 V)	20 - 10 - 5 - 2.5 W (100 V)
CONSTANT VOLTAGE	8 Ω	8 Ω	8 Ω
FREQUENCY RESPONCE	80 ÷ 20 kHz (-10dB)	70 Hz ÷ 20 kHz (-10dB)	60 Hz ÷ 20 kHz (-10dB)
SENSITIVITY (1 m / 1 W)	89 dB	86 dB	87 dB
MAX SPL	103 dB (1 m)	105 dB (1 m)	107 dB (1 m)
COVERAGE ANGLE	180°	110° (HORIZ.); 100° (VERT.)	110° (HORIZ.); 100° (VERT.)

# MA 4 - MA 4W

WALL MOUNT BRACKET

MA 5 - MA 5W

WALL MOUNT BRACKET

■ MA 4 Black p/n 133.60.367 ☐ MA 4W White p/n 133.60.368

Bracket for mounting one MR 40T speaker on the wall

MA 5 Black p/n 133.60.369 ☐ MA 5W White p/n 133.60.370

Bracket for mounting one MR 50T series speaker on the wall



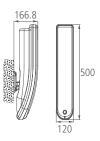
# MQ 100L W MQ 100L B

□ Bianco p/n 130.00.187

■ Nero p/n 130.00.186

3 WAY COLUMN LOUDSPEAKER







- 3 way column array speaker system providing natural high intelligibility hi-fidelity sound of both speech and music
- · Body is made of self-extinguishing (HB level) high density polystyrene
- The wide horizontal coverage angle (180°) and the 60° asymmetrical vertical dispersion allow the correct sound reproduction and feedback reduction
- MQ 100L is equipped with: 2 rubber surround 3.5" woofers, 2 fabric surround 3.5" mid-woofers, 2 cloth coated 0.75" dome tweeters
- Mounting accessories are included. These have been studied to keep the column as close as possible to the wall and simplify its installation
- The pre-oriented vertical acoustic axis allows to cover already the majority of the installations.
- · Provided with accessories to orient the speaker down of extra 5° and 10°
- Built-in multi-tapped transformer (40 20 10 5 W) for 100 V constant voltage connection
- · 16-ohm input that can be selected by switch with MAX power 60 W

# SPECIFICATIONS MQ 100L-W - MQ 100L-B POWER SELECTION 40 - 20 - 10 - 5 W (100 V) CONSTANT VOLTAGE 100 V, 70 V FREQUENCY RESPONCE 130 - 20 kHz (-10dB) SENSITIVITY (1 m / 1 W) 93 dB MAX SPL 112 dB (1 m / POWER MAX) COVERAGE ANGLE 180° (HORIZONTAL); 60° (VERTICAL)

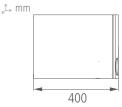
# MQ 90S B

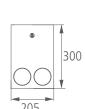
p/n 130.00.097

COMPACT SUBWOOFER



8'000 g







- Compact band-pass 8" subwoofer, expecially designed to be used with MonitorQ series speakers
- · Well suitable also for other RCF speakers such as PL40, PL6X, DU 100X, DP 2X
- The cabinet material is PVC covered with a scratch resistant surface and Painted Front Medium density
- Built-in multi-tapped transformer (60 30 7.5 W) for 100 V constant voltage connection
- 16-ohm input that can be selected by switch with MAX power 160 W / 80 W Bypass
- · Internal Crossover filter at 200 Hz frequency 12 dB/oct
- As the subwoofer range is non-directional, the unit can be installed in a semi-hidden position
- Connection through a removable Euroblock plug that allows the parallel connection of other loudspeakers.

SPECIFICATIONS	MQ 90S B
POWER SELECTION	60 - 30 - 15 - 7.5 W (100 V)
CONSTANT VOLTAGE	100 V, 70 V
FREQUENCY RESPONCE	70 - 200 Hz (-10dB)
SENSITIVITY (1 m / 1 W)	89 dB
MAX SPL	107 dB (1 m / POWER MAX)
COVERAGE ANGLE	EUROBLOCK



# MQ 30P W MQ 30P B

2 WAY MINIATURE SPEAKER

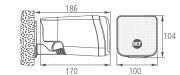
10 30P B | ■BI

□White p/n 130.00.058

■ Black p/n 130.00.068









- · Orientable mini-speaker firhigh quality reproduction
- · Two way coaxial speaker: LF 3,5" tweeter 0,75" dome
- · Power/RMS: 24/12 W Bypass
- · Constant voltage: 70,7 100 V
- · Impedance: [Bypass] 16 Ω
- · Crossover frequencies: 5400 Hz, 6/6 dB/oct
- · Built-in High-Pass fi lter at 150 Hz for integration with a subwoofer
- · Cabinet: Hi-density polystyrene HB grade
- · Connectors: Euroblock, removable for easy installation

SPECIFICATIONS	MQ 30P
POWER SELECTION	12 - 6 W (100 V)
CONSTANT VOLTAGE	100 V, 70 V
FREQUENCY RESPONCE	150 ÷ 20 kHz (-10dB)
SENSITIVITY (1 m / 1 W)	88 dB
MAX SPL	102 dB (1 m)
COVERAGE ANGLE	120°

# MQ 50 W MQ 50 B

2 WAY COMPACT SPEAKER

□White p/n 130.00.056

■ Black p/n 130.00.070









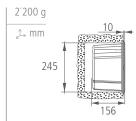


- $\cdot\ \ \,$  Two way Bass refl ex speaker for music reproduction
- · Speaker: woofer 5" tweeter 0,75" dome
- · Power/RMS: 120/60 W Bypass
- · Impedance: [Bypass] 16  $\Omega$
- · Crossover frequencies: 4500 Hz, 12/12 dB/oct
- · Protection: Dynamic on woofer and tweeter
- · Cabinet: Hi-density polystyrene HB grade
- · Connectors: Euroblock, removable for easy installation

SPECIFICATIONS	MQ 50
POWER SELECTION	30 - 20 - 10 - 5 W (100 V)
CONSTANT VOLTAGE	100 V, 70 V
FREQUENCY RESPONCE	70 ÷ 20 kHz (-10dB)
SENSITIVITY (1 m / 1 W)	89 dB
MAX SPL	110 dB (1 m)
COVERAGE ANGLE	120° (HORIZONTAL); 100° (VERTICAL)

## MQ 50C W 2 WAY CEILING SPEAKER

☐ White p/n 130.00.081





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- Compact design, light weight and limited depth makes the RCF MQ50C 2-way ceiling monitor loudspeakers ideal for use in any PA systems and background/ foreground music systems where the good sound is required.
- Speaker: woofer 5" neodymium magnet tweeter 1" dome neodymium magnet
- · Power/RMS: 120/60W Bypass
- · Impedance: [Bypass] 16  $\Omega$
- · [70,7V]: 15W 10W 5W 2.5 W
- · Crossover frequencies: 3000 Hz, 12/12 dB/oct High pass fi lter at 150 Hz
- · Angle of coverage: 120° horizontal x 120° vertical
- · Cabinet: Plastic material self-extinguishing, Tuned Alu-dome

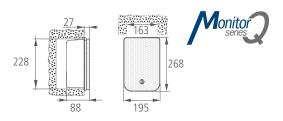
#### **SPECIFICATIONS**

SPECIFICATIONS	MQ 50C
POWER SELECTION	30 - 20 - 10 - 5 W (100 V)
CONSTANT VOLTAGE	100 V, 70 V
FREQUENCY RESPONCE	70 ÷ 20 kHz (-10dB)
SENSITIVITY (1 m / 1 W)	91 dB
MAX SPL	112 dB (1 m)
COVERAGE ANGLE	120°

### MQ 50i W 2 WAY IN WALL SPEAKER

☐ White p/n 130.00.139







- · In-wall speaker system for music reproduction
- · Two way bass refl ex construction for fl ush mount
- Speaker: woofer 5" neodymium magnet tweeter 0.75" dome tweeter
- · Power: max. 60W (bypass)
- · Impedance: [Bypass] 16 Ω
- · [70,7V]: 15W 10W 5W 2.5 W
- · Crossover frequency: 3000 Hz, 12/12 dB/oct
- · Cabinet: Plastic material self-extinguishing, Tuned Alu-dome
- · Connectors: Euroblock
- · Suitable for standard Multibox enclosure, 2 modules

SPECIFICATIONS	MQ 50i
POWER SELECTION	30 - 20 - 10 - 5 W (100 V)
CONSTANT VOLTAGE	100 V, 70 V
FREQUENCY RESPONCE	180 ÷ 20 kHz (-10dB)
SENSITIVITY (1 m / 1 W)	90 dB
MAX SPL	108 dB (1 m)
COVERAGE ANGLE	120° (HORIZONTAL); 100° (VERTICAL)



# MQ 60H W **MQ 60H B**

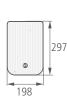
2 WAY WALL MOUNT SPEAKER

☐ White p/n 130.00.060

Black p/n 130.00.072









- The MQ 60H is a wall mount monitor speaker designed to guarantee uniform coverage of a large area in order to limit the number of speakers and therefore the installation points.
- · Two way Bass reflex speaker for music reproduction
- · Speaker composed by 5" woofer 5" and 2 x 1" dome tweeter
- · Max output power 120 W
- $\cdot$  Bypass configuration input 16  $\Omega,$  output power 60 W RMS
- 30W 20W 10W 5W output power for 100 V line
- 15W 10W 5W 2,5W output power for 70 V line
- 2600 Hz crossover frequencies with attenuation 12/12 dB/oct
- Dynamic Protection on woofer and tweeter

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#### POWER SELECTION 30 - 20 - 10 - 5 W (100 V) CONSTANT VOLTAGE FREOUENCY RESPONCE

SENSITIVITY (1 m / 1 W) MAX SPL

**SPECIFICATIONS** 

COVERAGE ANGLE

88 dB 109 dB (1 m)

**MQ 60H** 

100 V, 70 V

100 ÷ 19 kHz (-10dB)

3'000 g

♪ mm

180° (HORIZONTAL); 100° (VERTICAL)

# MQ 60H Link W MQ 60H Link B

**ACCESSORIES** 

☐ White p/n 133.60.080

■ Black p/n 133.60.081



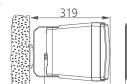
- AC MQ 60H LINK accessories, available in black or White can be used to support 2 MQ 60H speakers to form an omni directional high quality speaker array (360°) dispersion over a horizontal surface which is controlled over a vertical surface.
- MQ 60H Link is made in fibre-glass loaded nylon and it is provided with the slide-insupports for the direct mounting of the two MQ 60H speaker systems.
- Central fixing ring for the safe suspension of the speaker assembly through a chain or a steel-wire.

# **MQ 80P W MQ 80P B**

2 WAY INDOOR OUTDOOR SPEAKER

☐ White p/n 130.00.096

Black p/n 130.00.094



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- Speaker: woofer 5" horn-loaded, 1" horn-loaded compression driver with phase-plug loaded on CD horn
- · Power/RMS: 120/60 W Bypass
- · Impedance: [Bypass] 8 Ω
- · [70,7V]: 15W 10W 5W 2,5W
- · Tuning frequency: 100 Hz
- · Crossover frequency: 3000 Hz Crossover: Notch/6 dB/oct
- Cabinet: self-extinguishing high-density polystyrene, UV stabilized
- IP 55, suitable for outdoor use
- Suitable for cluster installation (2x, 3x) for a wide and uniform coverage

SPECIFICATIONS	
POWER SELECTION	
CONSTANT VOLTAGE	

SPECIFICATIONS	MQ 80P
POWER SELECTION	30 - 20 - 10 - 5 W (100 V)
CONSTANT VOLTAGE	100 V, 70 V
FREQUENCY RESPONCE	100 ÷ 20 kHz (-10dB)
SENSITIVITY (1 m / 1 W)	94 dB
MAX SPL	114 dB (1 m)
COVERAGE ANGLE	90° (HORIZONTAL): 60° (VERTICAL)

# HORN SPEAKERS

Designed to be weather resistant and to withstand high sound pressure levels outdoor or in large environments.











MODEL	HD 21EN	MH 61EN	HD 6045EN	HD 1110
TYPE	Round	Rectangular	Rectangular	Round
MATERIAL	ABS	ABS	Fiberglass	ABS
SPEAKER	1.5" Comp. Driver	1.5" C. Driver + 6.5" Woofer	2" Comp. Driver	1.5" Comp. Driver
POWER NOM. / PROGRAM	30 W RMS	60 W RMS	200 W RMS / 300 W	20 W RMS / 30 W
INPUT	100 V - 70 V	100 V - 70 V	100 V - 70 V - 25 V	8Ω
FREQUENCY RESPONSE	340 Hz ÷ 9 kHz	100 Hz ÷ 20 kHz	200 Hz ÷ 10 kHz	900 Hz ÷ 13 kHz
MAX. SOUND PRESSURE	117 dB	115 dB	124 dB	114 dB
ANGLE OF COVERAGE	135°	70° (Horiz) 90° (Ver)	60° (Horiz) 50° (Ver)	175°
PROTECTION / CONFORMS	IP 66, EN 54-24	IP 66, EN 54-24	IP 65, EN 54-24	IP 65









MODEL	HD 210TY	HD 310T	HD 410T	HD 3216T
TYPE	Round	Round	Round	Rectangular
MATERIAL	Aluminium	Aluminium	Aluminium	ABS
SPEAKER	1.3" Comp. Driver	1.5" Comp. Driver	2" Comp. Driver	1.5" Comp. Driver
POWER NOM. / PROGRAM	20 W RMS	30 W RMS	50 W RMS	25 W RMS
INPUT	100 V - 70 V	100 V - 70 V	100 V - 70 V	100 V - 70 V
FREQUENCY RESPONSE	300 Hz ÷ 9 kHz	240 Hz ÷ 10 kHz	180 Hz ÷ 7 kHz	250 Hz ÷ 10 kHz
MAX. SOUND PRESSURE	123 dB	123 dB	130 dB	122 dB
ANGLE OF COVERAGE	70°	80°	90°	130° (Horiz) 60° (Ver)
PROTECTION / CONFORMS	IP 66	IP 66	IP 66	IP 66



#### HD 21EN PLASTIC HORN SPEAKER WITH DRIVER



2'000 g △ Ø 211 x 280 mm

# **MH 61EN** 2 WAY PLASTIC HORN SPEAKER



7'000 g △ 332 x 418 x 391 mm

# **HD 6045EN** LONG-THROW MULTI CELL HORN SPEAKER



10.500 g △ 620 x 475 x 564 mm

#### p/n 131.33.075

CERTIFIED EN 54-24 CPR: 1488-CPR-0652/W

- · 1.5" compression driver.
- Power selectable (100 V): 30 W 15 W 7.5 W 3.75 W.
- · 104 dB sensitivity.
- · Colour grey RAL 7035.
- · Plastic body.
- · In/out ceramic terminal block.
- · Thermal fuse protection.
- · Protection grade IP66.

SPECIFICATIONS	HD 21EN
POWER SELECTION	30 - 15 - 7,5 - 3,75 W (100 V)
CONSTANT VOLTAGE	100 V; 70V
FREQUENCY RESPONCE	340 Hz ÷ 9 kHz
SENSITIVITY (1 m / 1 W)	104 dB
MAX SPL	117 dB
COVERAGE ANGLE	135°

#### p/n 131.00.042

CERTIFIED EN 54-24 CPR: 1488-CPR-0672/W

CPR: 0068-CPR-030/2015 CERTIFIED EN 54-24



- · Woofer da 6.5" con tweeter da 1".
- · Potenza selezionabile (100 V): 60 W 30 W 15 W 7.5 W.
- · 99 dB di sensibilità.
- · Colore grigio RAL 7035.
- · Corpo in plastica.
- · Connettore ceramico per ingresso e uscita.
- · Fusibile termico di protezione.
- Grado di protezione IP66.

SPECIFICATIONS	MH 61EN
POWER SELECTION	30 - 15 - 7.5 W
CONSTANT VOLTAGE	100 V; 70V
FREQUENCY RESPONCE	100 ÷ 20 kHz
SENSITIVITY (1 m / 1 W)	99 dB
MAX SPL	115 dB
COVERAGE ANGLE	70° (HORIZONTAL); 90° (VERTICAL)

#### p/n 131.33.085

- · 4 x 2" compression drivers.
- · Rated power (100 V): 200 W.
- · 101 dB sensitivity.
- · Colour white RAL 9003.
- · Fiberglass body.
- · In/out ceramic terminal block.
- · Thermal fuse protection.
- · Protection grade IP65.

3	
SPECIFICATIONS	HD 6045EN
POWER SELECTION	200 W (100 W con linea 70 V)
CONSTANT VOLTAGE	100 V ( / 70 V)
FREQUENCY RESPONCE	200 Hz ÷ 10 kHz (–10 dB)
SENSITIVITY (1 m / 1 W)	101 dB SPL
MAX SPL	124 dB
COVERAGE ANGLE	60° (HORIZONTAL); 50° (VERTICAL)

# HD 1110

#### p/n 131.33.030

#### PLASTIC HORN SPEAKER WITH DRIVER

420 g

△ Ø 93 x 110 mm



- · For alarm and paging systems in places with a high level of background noise
- · High-pass filter for protection of the driver against low frequencies out of range
- · Body in plastic, RAL 7035 grey
- · Suitable for outdoor use
- · Attachment steel bracket included

SPECIFICATIONS	HD 1110
POWER SELECTION	20 W RMS - 30 W MAX
CONSTANT VOLTAGE	8 Ω
FREQUENCY RESPONCE	900 ÷ 13 kHz (-10dB)
SENSITIVITY (1 m / 1 W)	101 dB
MAX SPL	114 dB (1 m)
COVERAGE ANGLE	175°

# **HD 210TY**

#### p/n 131.00.018

#### ALUMINIUM HORN SPEAKER WITH DRIVER

2'410 g

△ Ø 210 x 290 mm



- Compact speaker with high directivity and efficiency for intelligible speech reproduction
- IP 66 double insulation construction, suitable for outdoor use for temperature between -25°C and +70°C
- · High-pass filter for protection of the driver against low frequencies out of range
- · Driver impedance 8  $\Omega$
- $\cdot\;$  Rear cover in UV stabilised self-extinguishing ABS, RAL 7035 grey
- · Stainless steel attachment bracket included

SPECIFICATIONS	HD 210TY
POWER SELECTION	20 - 10 - 5 - 2,5 W (100 V)
CONSTANT VOLTAGE	100 V; 70 V
FREQUENCY RESPONCE	300 ÷ 9 kHz (-10dB)
SENSITIVITY (1 m / 1 W)	108 dB
MAX SPL	123 dB (1 m)
COVERAGE ANGLE	70°

# **HD 310T**

#### p/n 131.30.001

#### ALUMINIUM HORN SPEAKER WITH DRIVER

#### 3'100 g

△ Ø 310 x 315 mm



- High efficiency speaker ideal for speech reproduction
- · Weather-resistant construction IP 66 Rating, suitable for outdoor use for temperatures between -25°C and +70°C
- · High-pass filter for protection of the driver against low frequencies out of range
- · Driver impedance 8 Ω
- · Stainless steel attachment bracket included
- · Rear cover in UV stabilised self-extinguishing ABS, RAL 7035 grey

SPECIFICATIONS	HD 310T
POWER SELECTION	30 - 20 - 15 - 10 - 5 - 2.5 W (100 V)
CONSTANT VOLTAGE	100 V; 70 V
FREQUENCY RESPONCE	240 ÷ 10 kHz (-10dB)
SENSITIVITY (1 m / 1 W)	108 dB
MAX SPL	123 dB (1 m)
COVERAGE ANGLE	80°



# **HD 410T**

# ALUMINIUM HORN SPEAKER WITH DRIVER AND TRANSFORMER



3'570 g

△ Ø 430 x 393 mm

#### p/n 131.33.041

- · High efficiency speaker ideal for speech reproduction
- Weather-resistant construction IP 66 Rating, suitable for outdoor use for temperatures between -25°C and +70°C
- · High-pass filter for protection of the driver against low frequencies out of range
- · Driver impedance 16  $\Omega$
- · Stainless steel attachment bracket included
- · Rear cover in UV stabilised self-extinguishing ABS, RAL 7035 grey

SPECIFICATIONS	HD 410T
POWER SELECTION	50 - 30 - 25 - 15 - 7.5 W (100 V)
CONSTANT VOLTAGE	100 V; 70 V
FREQUENCY RESPONCE	180 ÷ 7 kHz (-10dB)
SENSITIVITY (1 m / 1 W)	112 dB
MAX SPL	130 dB (1 m)
COVERAGE ANGLE	90°

# HD 3216T

# PLASTIC HORN SPEAKER WITH DRIVER AND TRANSFORMER



1'870 g

\_\_\_\_ 315x 170 x 322 mm

p/n 131.33.037

- · Compact speaker with high directivity and efficiency for intelligible speech reproduction
- · Driver impedance 8  $\Omega$
- · Selector accessible on rear cover
- · IP 66 double insulation construction for temperatures between -25°C and +70°C
- · High-pass filter for protection of the driver against low frequencies out of range
- · Body in UV stabilised self-extinguishing ABS, RAL 7035 grey
- · Stainless steel attachment bracket included

SPECIFICATIONS	HD 3216T
POWER SELECTION	25-20-15-10-5 W
CONSTANT VOLTAGE	100 V; 70V
FREQUENCY RESPONCE	250 ÷ 10 kHz
SENSITIVITY (1 m / 1 W)	108 dB
MAX SPL	122 dB
COVERAGE ANGLE	130° (HORIZONTAL); 60° (VERTICAL)

# D 5076

#### **DRIVER UNIT**

- · Musical power/RMS: 75/50W
- · 1 3/8" W 18 N threaded horn attachment
- · Pressure die-cast compression chamber
- · Driver impedance 16  $\Omega$
- · Dimensions Ø 98 x 75 mm, weight 1.7 Kg
- Optional TD 507 line transformer





# TD 507

p/n 133.30.006

#### 50 V MULTI-TAPPED TRANSFORMER

- · 50V Multi-tapped line transformer
- Suitable for connecting the D 5076 driver to 100/70V constant voltage lines
- Output power can be selected from four different values: 50-25-12-6W



# ATTENUATORS, **AUDIO TRANSFORMERS**

- Installed on whichever supporting frame for home / office electrical systems by drilling a hole in a blank key and fixing its control circuit

  3 knobs are included in 3 different colours: white, silver, anthracite

# TD 10 10 W UNIVERSAL LINE TRANSFORMER

p/n 133.60.045



SPECIFICATIONS	TD 10
OUTPUT POWER 4 $\Omega$	1,2 - 2,5 - 5 - 10 W
OUTPUT POWER 8 $\Omega$	0,6 - 1,2 - 2,5 - 5 - 10 W
FREQUENCY RESPONSE	50÷18'000 Hz
DIMENSIONS	86 x 53 x 59 mm
WEIGHT	500 g

# TD 30 30 W UNIVERSAL LINE TRANSFORMER

p/n 133.60.046



SPECIFICATIONS	TD 30
OUTPUT POWER 4 Ω	15 - 30 W
OUTPUT POWER 8 $\Omega$	7,5 - 15 - 30 W
FREQUENCY RESPONSE	50÷18′000 Hz
DIMENSIONS	87 x 53 x 68 mm
WEIGHT	700 a

# TD 60 60 W UNIVERSAL LINE TRANSFORMER

p/n 133.60.047



SPECIFICATIONS	TD 60
OUTPUT POWER 4 $\Omega$	15 - 30 - 60 W
OUTPUT POWER 8 $\Omega$	7,5 - 15 - 30 - 60 W
FREQUENCY RESPONSE	50÷18'000 Hz
DIMENSIONS	77 x 77 x 79 mm
WEIGHT	1200 g

# TD 120 120 W UNIVERSAL LINE TRANSFORMER p/n 133.60.048



SPECIFICATIONS	TD 120
OUTPUT POWER 4 Ω	30 - 60 - 120 W
OUTPUT POWER 8 Ω	15 - 30 - 60 - 120 W
FREQUENCY RESPONSE	50÷18'000 Hz
DIMENSIONS	85 x 85 x 90 mm
WEIGHT	1900 a

# TD 240 240 W UNIVERSAL LINE TRANSFORMER p/n 133.60.049



SPECIFICATIONS	TD 240
OUTPUT POWER 4 $\Omega$	60 - 120 - 240 W
OUTPUT POWER 8 Ω	30 - 60 - 120 - 240 W
FREQUENCY RESPONSE	50÷18′000 Hz
DIMENSIONS	98 x 89 x 100 mm
WEIGHT	3100 g



# AT 10Z CONSTANT IMPEDANCE ATTENUATOR



- Constant impedance attenuator for speakers with minimum impedance 4 Ω
- Universal mounting on any standard European electrical wall plate.
- 5 selectable positions + OFF volume control

# $AT\ 20T\ {\scriptstyle 20\,W\,/\,100\,V\,TRANSFORMER\,ATTENUATOR}$



- Attenuator for constant voltage systems, max 20W
- Universal mounting on any standard European electrical wall plate.
- 5 selectable positions + OFF volume control
- Bypass relay or 3-wire control system for alarm/ evac applications

# $AT\ 40T\ 40\,\text{W}\,/\,100\,\text{V}\,\text{TRANSFORMER}\,\text{ATTENUATOR}$



- · Attenuator for constant voltage systems, max 20W
- Universal mounting on any standard European electrical wall plate.
- 5 selectable positions + OFF volume control
- Bypass relay or 3-wire control system for alarm/ evac applications

p/n 131.60.032

SPECIFICATIONS	AT 10Z
IN/OUT IMPEDANCE	4 Ω
MAX. POWER	10 W
ATTENUATION	0 dB - 6 dB - 12 dB - 18 dB - 24 dB - OFF
MAX. DEPTH	50 mm

#### p/n 131.60.033

SPECIFICATIONS	AT 20T
INPUT VOLTAGE	100 V
MAX. POWER	20 W
ATTENUATION	0 dB - 3 dB - 6 dB - 9 dB - 12 dB - OFF
MAX. DEPTH	50 mm

#### p/n 131.60.035

SPECIFICATIONS	AT 40T
INPUT VOLTAGE	100 V
MAX. POWER	40 W
ATTENUATION	0 dB - 3 dB - 6 dB - 9 dB - 12 dB - OFF
MAX. DEPTH	58 mm

# CT 61 6 POSITION 1 WAY ROTARY SWITCHER



- 5 selectable position + OFF volume control
- To be used with TL 128 autotransformer
- Bypass relay or 3-wire control system for alarm/evac applications

#### p/n 131.60.036

MAX TENSIONE 100 V MAX. POWER 120 W	SPECIFICATIONS	CT 61
12011	MAX TENSIONE	100 V
	MAX. POWER	120 W
MAX. DEPTH 58 mm	MAX. DEPTH	58 mm

# TL 128 120 W LINE TRANSFORMER

1<sup>-</sup>140 g \_\_\_ 68 x 72 x 85 mm



- The TL 128 transformer can be used in audio systems with constant voltage lines (usually 100 or 70V) to regulate the power of one or more acoustic speakers that have line transformers with a combined power of a maximum of 120 W
- It can be combined with a switch (up to 8 positions), in order to form a volume control that fades at 3 dB intervals

#### p/n 133.60.050

SPECIFICATIONS	TL 128
INPUT VOLTAGE	100 - 70 - 50 - 35 - 25 - 18 - 12 V
MAX. POWER	120 W
MINIMUM LOAD IMPEDANCE	83,3 - 41,7 - 20,8 - 10,4 - 5,2 - 2,6 - 1,3 Ω
FREQUENCY RESPONCE	60 ; 18.000 Hz (± 3 dB)

# CP 52 5 POSITION 2 WAY ROTARY SWITCHER



- · 5 Line selector for 100V system, load max 120W
- · Bypass relay for emergency calls on line 1

#### p/n 131.60.034

SPECIFICATIONS	CP 52
MAX TENSIONE D'INGRESSO/USCITA	100 V
MAX. POWER	120 W
MAX DEPTH	58 mm

# RACK COMPONENTS

For the optimum management of the system configurations











MODEL	CR 2609	CR 2615 FV	CR 2628	CR 2642
Part number	17170179	17170129	17170081	17170082
Туре	9 U	15 U	28 U	42 U
Base dimensions	600 x 500 mm	600 x 600 mm	600 x 600 mm	600 x 600 mm
Height	470 mm	800 mm	1600 mm	2000 mm
Weight	24 Kg	30 Kg	54 Kg	68 Kg
Max load	25 Kg mountable on rack	100 Kg	320 Kg	350 Kg
Ventilation system	Natural ventilation on sides	Thermostat controlled	Thermostat controlled	Thermostat controlled
Thermal dissipation 25 °c	100 W	3130 W	3280 W	3320 W
Thermal dissipation 35 °c	150 W	2070 W	2160 W	2180 W
Included accessories	-	4 wheels with braking system	-	-
Model door	(included)	AK 2615V	AK 2628V	AK 2642V
Part number door	-	-17100008	-17100009	-17100010



## CR 2609

p/n 171.70.179

9 UNITS RACK ENCLOSURE STANDARD 19" WITH TRANSPARENT DOOR



- · Steel constructed structure
- · Glass front door
- · Removable rear panel
- · Equipped assembled
- · Dimensions: (B x P x H) 600 x 500 x 470 mm
- · Color RAL 7035

## CR 2600

**RACK ENCLOSURES** 



- The CR 2600 series rack enclouseres are designed to hold all RCF 19" rack standard components.
- They are constructed in compliance with the IEC 297-2 dimensional standard, and the depth is 600 mm for all models.
- The structure is made of steel painted RAL 7035 light grey. The rack enclosures are bake-painted at high temperature using epoxy powders to make the structure unalterable over time and resistant to scratching, abrasion, and atmospheric agents.
- The protection level is IP 30. The CR 2600 SERIES rack enclosures are composed of a basic structure that is assembled simply and quickly by fitting and securing four steel uprights to the upper and lower panels.
- The lower door and side panels are fitted following the wiring operations to facilitate the insertion and connection of the components. The lower panel, which forms the base of the rack, has openings for the passage of external connection cables (speaker lines, power supply, data, etc.) that are sized and shaped to guarantee the electrical safety of the structure. The earthing of the rack complies with current safety regulations.
- For the optimisation of the internal wiring, supports are supplied to gather the cable and attach them in an orderly fashion. The packing materials can be reused for transport the enclosure once it has been wired.
- · Front doors are also available, which are useful for to protect the components installed in the rack.

# PAER p/n 171.30.149

- · Front ventilation panels
- · RAL 9005 Nero

PU 2 p/n 171.70.146



- · 2U Closure Panel
- · RAL 9005 Nero

#### PU 3 p/n 171.70.147



- · 3U Closure Panel
- · RAL 9005 Nero

#### PU 4 p/n 171.70.148



- · 4U Closure Panel
- · RAL 9005 Nero

#### IM 2220

p/n 133.60.089

PORTABLE IMPEDANCE TESTER



- The IM 2220 is a portable instrument, easy to use for measuring the impedance of the constant voltage speaker lines or of a single loudspeaker.
- The test range is quite wide thanks to the three measure fields (20 Ohm, 200 Ohm, 2000 Ohm). It is suitable for both commercial audio and domestic use.
- The IM 2220 is easy to use, comfortable and safe, thanks to the large control knob, to the large display and the high insulation
- · Meets IEC-1010 (EN 61010); CAT III 100V
- · Display 3 ½ digit LCD
- · Data HOLD indication
- Automatic switch-off of the pilot tone after 20s unless the LOCK key is pressed
- Automatic switch-off of the device after 15 minutes without being used

SPECIFICATIONS	IM 2220
SIGNAL TEST FREQUENCY	1 kHz
ACCURACY	± 2%
OPERATING TEMPERATURE	0 ÷ 40°C (32 ÷ 104 °F)
POWER SUPPLY	9 V c.c (6 x 1.5 V AA, ALCALINE)
DIMENSIONS	168 x 110 x 62 mm
WEIGHT	0,5 Kg

### RR 2601

p/n 173.60.038

#### **RACK WHEELS KIT**

- · Wheels for RCF rack cabinets CR 2628 and CR 2642.
- $\cdot$  The kit includes 2 wheels with brake and 2 swivel wheels. Wheel diameter: 80 mm
- · The maximum applicable load does not change when wheels are mounted.



## AR 1050

p/n 173.60.039

#### **RACK SUPPORTS**

· 1 U accessory for installation in RCF CR2600 series racks



#### BH 1042

p/n 173.60.040

#### **BATTERY HOLDER**

· Universal battery holder for RCF series "CR2600"



## AC 1503

p/n 133.60.112

#### CERAMIC TERMINAL WITH THERMAL FUSE

 Accessory with ceramic terminal and a thermal fuse to connect a loudspeaker in sound systems for emergency purposes.





#### **CJ 428E**

p/n 143.80.021

#### FIRE RESISTANT DATA CABLE

Shielded fire resistant cable suitable for the transmission of signals and commands for voice alarm systems, when maximum safety against fire is required. Made of 4 pairs of annealed copper conductors with 0.8 sqmm section. For fixed indoor installations in normal or humid environments. Red external sheath. Sold in coils of 200 m.



## CJ 428CAT p/n 123.99.047

#### CAT5 FTP FIRE RESISTANT DATA CABLE

Shielded CAT5 FTP fire resistant cable suitable for the transmission of signals and commands for voice alarm systems, when maximum safety against fire is required. Made of 4 pairs of twisted annealed copper conductors with 0.63 sgmm (AWG22) section. For fixed indoor installations in normal or humid environments. Red external sheath. Sold in coils of 200 m.



## CV 215 CV 225

p/n 143.80.031

p/n 143.80.032





The CV Series cables are suitable for the transmission of electrical signals and commands for those applications where maximum security is required in situations of fire alarm. They ensure the transmission of the signal to emergency speakers even when exposed to flames, allowing the safe evacuation of the environments where they are installed. The CV Series cable are suitable for fixed installation indoors in wet or normal environments, and temporarily outside. They can be installed on platforms, pipes, conduits and similar systems.

## CA 2-2-C

p/n 123.99.043

#### SPEAKER CABLE

· Shielded bipolar cable



## **CA 2-C**

p/n 123.99.042

#### SPEAKER CABLE

· Shielded bipolar cable



## AR 2605

p/n 173.60.027

#### FRAME WITH POWER SOCKETS

- 5-socket frame, Schuko and Italian standard, on back-rack support 2U.
- · 16A total capacity; cable included
- · Portion of Omega bar for installing 5 Omega standard modules



# MOBILE AMPLIFICATION

Portable systems for all the situations in which mobility is important.



# MG 90

**10W MEGAPHONE** 

p/n 131.33.081



- · Extra strong plastic material, highly resistant to dust and humidity
- · High intelligibility and speech clarity thanks to the microphone optimization.
- · Built-in amplifier and dynamic unit
- · Designed to be used even in critical situations
- · 500 meters indicative range
- $\,\cdot\,\,$  Activating button and volume located on the megaphone grip
- · Power supply: 6 "AA" batteries (not included)
- · Black body and grip, transparent pavilion

SPECIFICATIONS	MG 90
NOMINAL POWER	10 W
POWER SUPPLY	6 Batteries AA (UM-3) (9V DC)
TIME OF USE	10 ore (talking)
BEAM OF USE	0.45 Km (quiet ambient), 0.25 Km (city)
DIMENSIONS	185 mm / 310 mm (diameter)
WEIGHT	0,9 Kg (without batteries)

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## STANDARD VALUES OF SOUND PRESSURE LEVEL FOR CEILING-MOUNT LOUDSPEAKERS WITH INSTALLATION HEIGHTS OF 3 • 3,5 • 4 M

no lan	MODEL	INSTALLA	ATION HEIGHT OF LOUDS	PEAKERS
p/n	INIODEL	3,0 METRES	3,5 METRES	4,0 METRES
131.10.062	HS 1026	6 m <sup>2</sup>	12 m <sup>2</sup>	20 m <sup>2</sup>
131.33.045	PL 40	10 m <sup>2</sup>	20 m <sup>2</sup>	30 m <sup>2</sup>
31.33.060	PL 50	12 m <sup>2</sup>	24 m <sup>2</sup>	36 m <sup>2</sup>
131.10.214	PL 60	14 m <sup>2</sup>	26 m <sup>2</sup>	41 m <sup>2</sup>
131.33.042	PL 6X	20 m <sup>2</sup>	38 m <sup>2</sup>	56 m <sup>2</sup>
131.33.043	PL 8X	22 m <sup>2</sup>	44 m <sup>2</sup>	66 m <sup>2</sup>
130.00.081	MQ 50C	25 m <sup>2</sup>	47 m <sup>2</sup>	73 m <sup>2</sup>
131.33.064	DU 50EN	10 m <sup>2</sup>	18 m <sup>2</sup>	28 m <sup>2</sup>
131.33.078	BS 5EN	10 m <sup>2</sup>	18 m <sup>2</sup>	28 m <sup>2</sup>
131.33.065	PL 70EN	16 m <sup>2</sup>	30 m <sup>2</sup>	46 m <sup>2</sup>
131.33.082	PL 68EN	16 m <sup>2</sup>	28 m <sup>2</sup>	43 m <sup>2</sup>
131.00.009	PL 82EN	21 m <sup>2</sup>	38 m <sup>2</sup>	59 m <sup>2</sup>

The values are calculated for environments with average ambient noise and without specific reverberation characteristics.

Especially wide area paging systems that are used as emergency voice alarm communication systems in accordance with ISO 7240-19 may require a calculation of the sound pressure level depending on the effective ambient noise.

## ALPHABETICAL INDEX

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AC 502LC	143.80.034	28	CA 2-2-C	123.99.043	75	HD 210TY	131.00.018	68	MQ 30P B	130.00.068	63	PU 4	171.70.148	73
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AC 7212	171.70.152	9	CA 5XX	143.40.017	29	HD 310T	131.30.001	68	MQ 50 B	130.00.070	63	PX 4116	142.50.010	2!
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AC XLR-3M3F	133.60.102	29	CR 2628	171.70.081	72	HPS 1500	121.35.055	44	MQ 60H Link	133.60.080	65	RR 2601	173.60.038	74
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AT 20T	131.60.033	71	DM 61	130.00.050	54	LT 7208EN	171.70.156	9	MT 7308EN	171.70.159	8	UP 2162	121.35.065	40
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21.35.059	AM 2320	39	130.00.139	MQ 50i W	64	131.33.082	PL 68EN	48	143.22.008	BM 3001	37	171.70.151	RO 7102	9
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121.35.073	UP 4240	43	130.00.387	DM 41-B	54	131.60.033	AT 20T	71	143.22.014	BM 7608DFM	11	171.70.159	MT 7308EN	8
21.35.077	UP 8502	41	131.00.007	PL 50EN	48	131.60.034	CP 52	71	143.22.015	BM 7608	10	171.70.166	ZM 2100	14
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24.01.005		31	131.33.037		69	133.60.341		28	143.80.035		28	635.31.167		10
24.01.006		31	131.33.041		69	133.60.367		61	143.80.036		13	0331311107		
24.01.007		31	131.33.042		50	133.60.368		61		BM 3804 FM	13			
24.01.008		30	131.33.043		50	133.60.369		61	151.10.017		69			
30.00.049		54	131.33.045		49	133.60.370		61	163.60.344		13			
			131.33.045					22			43			
30.00.050		54			52	141.15.013			171.00.003					
	MQ 50 W	63	131.33.060		49	141.15.023		24	171.00.006		11			
	MQ 30P W	63	131.33.064		53	141.15.023		25	171.20.056		28			
	MQ 60H W	65	131.33.065		48	141.15.024		22	171.30.149		73			
30.00.068	MQ 30P B	63	131.33.071	DP 1420EN	58	141.15.025	MC 4064	23	171.70.081	CR 2628	72			

Note		

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#### HEADQUARTERS:

RCF S.p.A. Italy tel. +39 0522 274 411 e-mail: info@rcf.it

RCF UK Int. +44 (0) 1702 800846 e-mail: info@rcfaudio.co.uk

> RCF France tel. +33 6 24 15 81 76 e-mail: france@rcf.it

RCF Germany tel. +49 2203 925370 e-mail: germany@rcf.it

RCF Spain tel. +34 91 817 42 66 e-mail: info@rcfaudio.es

RCF Benelux tel. +49 (0) 2203 9253724 e-mail: benelux@rcf.it

RCF USA Inc. tel. +1 732-9026100 e-mail: info@rcf-usa.com