



PA systems

12	P.A. System amplifiers	89	Microphones for P.A. Systems
12	BASIC series	94	Portable P.A. Equipment
15	PREMIUM series	94	Equipment for vehicles
27	MASTER series	97	Megaphones
28	MAZ multizone series	100	Compact amplifiers
31	Loop induction amplifier	101	Personal amplifiers
32	Mixers/preamplifiers	105	Column speakers
32	For microphones	108	Horn speakers
33	For installations	108	RE series
35	Multizone	110	FE series
38	P.A. System power amplifiers	112	TI series
38	Monochannel	113	Horn speakers. RD series
40	Multichannel	114	Motors. RM series
43	IP Systems	115	Sirens. RS series
43	IP receiver	116	Sound projectors
44	IP transmitter	120	Loudspeakers
45	IP microphone	121	AMBIENT series
46	Evacuation Systems. EN 54 evacuation systems	122	4FIRE series
48	ZS-2000-EN series	123	Weatherproof PRISMA series
54	Zone systems	124	PRISMA series
54	ZS series	126	BS series
58	MZ series	128	BSP series
60	MPX series	129	Transducer speaker. TDO series
62	MPZ series	129	EN 54 evacuation loudspeakers
66	MXZ series	130	Ceiling and surface mount loudspeaker
68	Multizone series	144	Pendant speakers
70	Conference systems	146	Garden loudspeakers
70	200 series	147	Loudspeakers for assembly
72	500 series	148	Line transformers
74	Wireless 700 series	149	Attenuators
76	Language Distribution Systems	151	Impedance meters
78	Auxiliary equipment		
78	Players		
84	Audio processors		
86	Accessories		

PA SYSTEM AMPLIFIERS. BASIC SERIES

P. A. Amplifiers. Compact size for use in vehicles.



MA-15

15 W max.
10 W RMS



MA-25T

30 W max.
15 W RMS

CHARACTERISTICS	P. A. amplifier. Siren. Vehicle assembly.	P. A. amplifier. Vehicle and desktop assembly.
POWER	15 W maximum, 10 W RMS	30 W maximum, 15 W RMS
RESPONSE	50-15 000 Hz ± 3 dB	50-15 000 Hz ± 3 dB
DISTORTION	Harmonic: < 1% at 1 kHz	Harmonic: < 2% at 1 kHz
INPUTS	1 unbalanced mic., 6.3 mm jack 600-50 000 Ω 3 mV 1 mono auxiliary, 6.3 mm jack 10 000 Ω 750 mV	2 unbalanced mics., 6.3 mm jack 600-20 000 Ω 5 mV 1 mono auxiliary, 6.3 mm jack 10-50 000 Ω 750 mV
CONTROLS	Volume: mic. and aux	Tone: ± 10 dB 100-10 000 Hz Volume: Mics. 1-2 and aux
IMPEDANCE	4-16 Ω maximum output at 4 Ω , cable	4, 8 and 16 Ω and 100 V line, spring terminals
SIREN	2 types: high-low tone and fog	-
POWER SUPPLY	12 V DC (11 to 15 V DC), 16 W	230 V AC, 45 W and 12 V DC, 20 W
DIMENSIONS	155 x 74 x 150 mm depth	245 x 78 x 220 mm depth
WEIGHT	0.8 kg	3.5 kg
ACCESSORIES	Mount for vehicle assembly	Mount for vehicle assembly

P. A. amplifiers, compact and high power for use in vehicles.



FS-70

60 W max.
40 W RMS



FS-75U

60 W max.
40 W RMS

USB

MP3

MPEG

CHARACTERISTICS	P. A. Amplifier. Siren. Priority paging. Vehicle assembly.	P. A. Amplifier. USB/MP3 player. Siren. Priority paging Vehicle assembly.
POWER	60 W maximum, 40 W RMS	60 W maximum, 40 W RMS
RESPONSE	80-12,000 Hz	80-12 000 Hz
DISTORTION	Harmonic: < 3% at 1 kHz	Harmonic: < 3% at 1 kHz
INPUTS	1 unbalanced mic., 6.3 mm jack 10,000 Ω 4 mV 1 stereo auxiliary, 6.3 mm jack and 2 x RCA 10,000 Ω 100 mV	1 unbalanced mic., 6.3 mm jack 10 000 Ω 4mV 1 stereo auxiliary, 6.3 mm jack and 2 x RCA 10 000 Ω 100mV.
CONTROLS	Volume: Mic. and aux	Volume: Mic., auxiliary and USB/MP3 player.
PRIORITY	Mic. and siren over aux input level priority, selectable	Mic. and siren over USB/MP3 player and auxiliary through the signal level, selectable.
IMPEDANCE	4-8 Ω , screw terminals	4-8 Ω , screw terminals
SIREN	2 types: high-low and long-short tone	2 types. High-low and long-short tones
POWER SUPPLY	12 V DC, 10 A	12 V DC, 10 A
DIMENSIONS	187 x 65 x 190 mm depth	187 x 65 x 190 mm depth
WEIGHT	1.9 kg	1.9 kg
ACCESSORIES	Mount for vehicle assembly Power cable and speakers	Mount for vehicle assembly included Power supply and speaker output cable

P. A. amplifiers with normal or remote control USB/MP3 player, compact size. For desk-top, vehicle, or emergency PA, museums, exhibitions, etc.



MA-35U/MA-35U-E



MA-35U



MA-35U-E

MA-35U

30 W max.
15 W RMS

USB

MP3

MPEG

MA-35U-E

30 W max.
15 W RMS

USB

MP3

MPEG

CHARACTERISTICS	P. A. amplifier. USB/MP3 player. Vehicle and desktop assembly	P. A. amplifier. USB/MP3 player. Emergency or message reproduction mode and automatic playback function through button/relay or amplifier power switch. PLEASE ENQUIRE. Vehicle and desktop assembly
POWER	30 W maximum, 15 W RMS	30 W maximum, 15 W RMS
RESPONSE	50-15,000 Hz ± 3 dB	50-15,000 Hz ± 3 dB
DISTORTION	Harmonic: < 2% at 1 kHz	Harmonic: < 2% at 1 kHz
INPUTS	2 unbalanced mics., 6.3 mm jack 600-20,000 Ω 5 mV 1 mono auxiliary, 6.3 mm jack 10-50,000 Ω 750 mV	2 unbalanced mics., 6.3 mm mono jack 600-20,000 Ω 5 mV 1 auxiliary, 6.3 mm mono jack 10-50,000 Ω 750 mV
CONTROLS	Volume: mic 1 and 2, aux and USB/MP3 player	Volume: Mic 1-2, aux and USB/MP3 player
PLAYER	USB/MP3 player with background music function. When turned on, automatically plays music in random order Available with standard reproduction function PLEASE ENQUIRE	USB/MP3 player with message reproduction mode and automatic reproduction function with push button. Available with emergency or message reproduction mode and automatic reproduction function with push button or amplifier power switch. PLEASE ENQUIRE
IMPEDANCE	4, 8 and 16 Ω and 100 V line, spring terminals	4, 8 and 16 Ω and 100 V line, spring terminals
POWER SUPPLY	230/115 V AC, 45 W and 12 V DC, 20 W	230/115 V AC, 45 W and 12 V DC, 20 W
DIMENSIONS	245 x 78 x 220 mm depth	245 x 78 x 220 mm depth
WEIGHT	3.6 kg	3.6 kg
ACCESSORIES	Mount for vehicle assembly	Mount for vehicle assembly

PA SYSTEM AMPLIFIERS. BASIC SERIES

P.A. amplifier with CD/USB/MP3 player, compact size. Suitable for shops, P.A. systems and split audio.



CD

USB

MP3

MPEG

MA-18CDU

27 W max.
18 W RMS

CHARACTERISTICS	P.A. Amplifier. CD/USB/MP3 player. Priority paging Vehicle and desktop assembly.
POWER	27 W maximum, 18 W RMS
RESPONSE	80-18 000 Hz
DISTORTION	Harmonic: < 0.5 %
INPUTS	2 unbalanced mics., 6.3 mm jack 300-600 Ω 4 mV, selectable 1 auxiliary/phono, 2 x RCA 10 000 Ω 500 mV and 47 000 Ω 2.4 mV 1 amp in, RCA 10 000 Ω 1 V
OUTPUTS	1 pre out, RCA 600 Ω 1 V
CONTROLS	Tone: Bass or treble Volume: Mic. 1-2, auxiliary/phono and CD/USB/MP3 player
PLAYER	CD/USB/MP3 player. CD reader mechanism with slot in loading
PRIORITY	Mic. 1 depending on signal level.
IMPEDANCE	4, 8 and 16 Ω and 100 V line, screw terminals
POWER SUPPLY	230 V AC, 36 W and 12 V DC, 2.5 A
DIMENSIONS	280 x 85 x 280 mm depth
WEIGHT	4.5 kg

Highly reliable P. A. amplifiers. Suitable for commercial, P. A. and split audio installations.



FS-2020

30 W max.
20 W RMS



FS-2035

40 W max.
30 W RMS

CHARACTERISTICS	P. A. Amplifier Vehicle and desktop assembly	P. A. Amplifier. Priority paging.
POWER	30 W maximum, 20 W RMS	40 W maximum, 30 W RMS
RESPONSE	100-20 000 Hz ± 3 dB	70-20 000 Hz ± 3 dB
DISTORTION	Harmonic: < 3% at 1 kHz	Harmonic: < 3% at 1 kHz
INPUTS	2 unbalanced mics., 6.3 mm jack 600 Ω 2.5 mV 1 auxiliary/phono, RCA 10 000 Ω 150 mV and 47 000 Ω 2.4 mV, selectable	2 unbalanced mics., 6.3 mm jack 600 Ω 1.8 mV 1 auxiliary/phono, 2 x RCA 10 000 Ω 130 mV and 47 000 Ω 2.4 mV, selectable
CONTROLS	Tone: ± 15 dB at 100-10 000 Hz Volume: mic. 1 and 2, aux/phone and general volume	Tone: Bass: ± 12 dB at 150 Hz Mids: ± 12 dB at 1000 Hz Trebles: ± 12 dB at 6000 Hz Volume: Mic. 1-2, auxiliary/phono and general volume
PRIORITY	-	Mic. 1 through contact closure
IMPEDANCE	4, 8 and 16 Ω and 100 V line, screw terminals	4, 8 and 16 Ω and 100 V line, screw terminals
POWER SUPPLY	230 V AC, 51 W and 12 V DC, 20 W	230 V CA, 60 W
DIMENSIONS	320 x 84 x 230 mm depth	320 x 84 x 230 mm depth
WEIGHT	3.8 kg	4.4 kg
ACCESSORIES	Mounts for vehicle assembly	Mounts for installation

PA SYSTEM AMPLIFIERS. PREMIUM SERIES

FONESTAR

P.A. Amplifiers with excellent features. Suitable for shops, P.A. systems and split audio.



REC **USB** **SD** **MP3** **MPEG** **RADIO**

MA-30

45 W max.
30 W RMS

MA-30RGU

45 W max.
30 W RMS

CHARACTERISTICS	P.A. Amplifier. Priority paging. Vehicle and desktop assembly.	P.A. Amplifier. USB/SD/MP3 player/recorder. Digital FM tuner. Priority paging. Vehicle and desktop assembly.
POWER	45 W maximum, 30 W RMS	45 W maximum, 30 W RMS
RESPONSE	80-18 000 Hz ± 3 dB	80-18 000 Hz ± 3 dB
DISTORTION	Harmonic: < 0.5% at 1 KHz	Harmonic: < 0.5% at 1 KHz
INPUTS	2 unbalanced mics., 6.3 mm jack 600 Ω 2 mV 1 auxiliary/phono, 2 x RCA 10 000 Ω 500 mV and 47 000 Ω 2.4 mV, selectable 1 amp in, RCA 10 000 Ω 1 V	2 unbalanced mics., 6.3 mm jack 600 Ω 2 mV 1 auxiliary/phono, 2 x RCA 10 000 Ω 500 mV and 47 000 Ω 2.4 mV, selectable 1 amp in, RCA 10 000 Ω 1 V
OUTPUTS	1 pre out, RCA 600 Ω 1 V	1 pre out, RCA 600 Ω 1 V
CONTROLS	Tone: Bass: ± 10 dB Treble: ± 10 dB Volume: Mic 1 and 2, auxiliary/phono and general volume	Tone: Bass: ± 10 dB Treble: ± 10 dB Volume: Mic 1 and 2, auxiliary/phono, general volume and USB/SD/MP3 player/recorder
PLAYER	-	USB/SD/MP3 player/recorder
TUNER	-	Digital FM with pre-tuned channels and auto-scan
PRIORITY	Mic. 1 depending on signal level	Mic. 1 depending on signal level
IMPEDANCE	4 Ω and 100, 70 and 25 V lines, screw terminals	4 Ω and 100, 70 and 25 V lines, screw terminal blocks
POWER SUPPLY	230/115 V AC, 60 W and 12 V DC, 45 W	230/115 V AC, 60 W and 12 V DC, 45 W
DIMENSIONS	280 x 85 x 230 mm depth	280 x 85 x 230 mm depth
WEIGHT	4.5 kg	4.5 kg

RELATED PRODUCTS



FDM-625

Desktop microphone.
Page 90.



PF-19T

Sound projector with 100, 70 and 50 V line transformer, 20 W
Page 117.

PA SYSTEM AMPLIFIERS. PREMIUM SERIES

Compact P.A. amplifier, excellent features and reliability, with USB/SD/MP3 player and digital FM radio tuner. Suitable for commercial installations with background music.



USB

SD

MP3

MPEG

RADIO

USB

SD

MP3

MPEG

RADIO

MA-45RU

N!

45 W RMS

MA-61RU

N!

60 W RMS

CHARACTERISTICS	P.A. Amplifier. USB/SD/MP3 player. Digital FM radio tuner. Phantom power supply. Paging priority.	PA amplifier. USB/SD/MP3 player. Digital FM radio tuner. Phantom power. Priority paging.
POWER	45 W RMS	60 W RMS
RESPONSE	Microphones: 80-18 000 Hz Auxiliary: 50-20 000 Hz	Microphones: 80-18 000 Hz Auxiliary: 50-20 000 Hz
DISTORTION	Harmonic: < 1%	Harmonic: < 1%
S/N RATIO	Microphones: > 65 dB Auxiliaries: > 75 dB	Microphones: > 60 dB Auxiliaries: > 70 dB
INPUTS	3 balanced mics./lines, combo (XLR and 6.3 mm jack), 3 mV and 150 mV switchable 1 auxiliary, 2 x RCA, 200 mV 1 tel. input, euroblock, 80 mV	2 balanced mics/line, XLR, 3 mV and 150 mV switchable 1 auxiliary, 2 x RCA and 3.5 mm jack, 200 mV
OUTPUTS	1 line out, 2 x RCA, 1 V	1 line out, 2 x RCA, 1 V
CONTROLS	Tone: Bass: ±10 dB Treble: ±10 dB Volume: inputs 1 to 3, aux, general volume and USB/SD/MP3/FM player	Tone: Bass: ±10 dB Treble: ±10 dB Volume: inputs 1 to 2, aux/mp3, general volume and USB/SD/MP3/FM player
PLAYER	USB/SD/MP3 player and digital FM tuner with pretuned channels and auto scan	USB/SD/MP3 player and digital FM tuner with pretuned channels and auto scan
PHANTOM	18 V in mics. 1 to 3, selectable	24 V in mics 1 to 2, selectable
PRIORITY	Tel.input through signal level Mic.1 through signal level, selectable	Mic 1 and 2 through signal level
IMPEDANCE	4 and 8 Ω and 100 and 70 V lines, screw terminals	4 Ω and 100 and 70 V lines, screw terminals
POWER SUPPLY	230/115 V AC and 24 V DC, 113 W	230/115 V AC, 83 W
DIMENSIONS	210 x 89 x 295 mm depth. 2 U 19" rack	320 x 75 x 190 mm depth.
WEIGHT	4.9 kg	4.1 kg
ACCESSORIES	FM aerial	-
OPTIONAL	MA-3N: mounts for assembly in 19" rack	-

P.A. amplifier with 6 auxiliary input selector and microphone with priority.
Suitable for shops with several audio sources and priority paging.



MAX-62

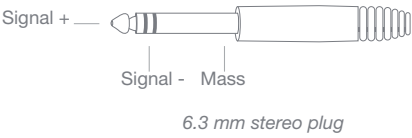
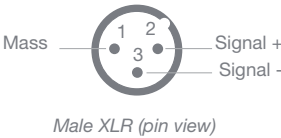
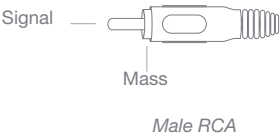
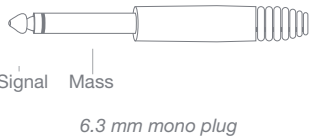
90 W max.
60 W RMS

CHARACTERISTICS	P.A. Amplifier. Phantom power supply. Priority paging. 6 auxiliary input selector.
POWER	90 W maximum, 60 W RMS
RESPONSE	50-15 000 Hz
INPUTS	1 balanced mic. combo (XLR and 6.3 mm jack), 600 Ω 1 mV 6 auxiliaries, 2 x RCA, 47,000 Ω 1 V 1 amp in, RCA, 47,000 Ω 1 V
OUTPUTS	1 auxiliary, 2 x RCA, 4,700 Ω 1 V 1 pre out, RCA 600 Ω 1 V
CONTROLS	Tones: Bass:±10 dB to 100 Hz Treble: ±10 dB to 10,000 Hz Volume: Mic. and aux 1 to 6 on back panel, general volume Earth disconnection GND lift
PHANTOM	16 V in mic. 1, selectable
PRIORITY	Mic. 1 input level priority, selectable
IMPEDANCE	8 Ω and 100 V line, screw terminals
POWER SUPPLY	230 V AC, 160 W
DIMENSIONS	425 x 85 x 275 mm depth. 2U 19" rack
WEIGHT	6.2 kg
ACCESSORIES	Mounts for assembly in 19" rack

BALANCED AND UNBALANCED SIGNALS

Unbalanced connections are used for short distances or with little electric noise. Unbalanced inputs have 2-contact connectors for the audio signal and mass, for example, 6.3 mm mono plug or RCA.

Balanced connections are used for long distances and behave well with electric noise. Balanced inputs have 3-contact connectors for the audio signal [+signal], audio signal in counterphase [- signal] and mass, for example, XLR or 6.3 mm stereo plug.



PA SYSTEM AMPLIFIERS. PREMIUM SERIES

P. A. amplifiers with excellent features and a variety of inputs and outputs.

Suitable for shops, P. A. systems and split audio.



REC USB SD MP3 MPEG

MA-66

90 W max.
60 W RMS

CHARACTERISTICS	P.A. Amplifier. Phantom power supply. Priority paging.	P. A. amplifier. USB/SD/MP3 recorder/player. Phantom power. Priority paging.
POWER	90 W maximum, 60 W RMS	90 W maximum, 60 W RMS
RESPONSE	80-16,000 Hz ± 3 dB	80-16,000 Hz ± 3 dB
DISTORTION	Harmonic: < 1 % at 1 kHz	Harmonic: < 1 %
INPUTS	3 balanced mics./lines, combo (XLR and 6.3 mm jack) 600 Ω 2 mV and 47,000 Ω 150 mV, switchable 1 auxiliary, 2 x RCA, 47 000 Ω 300 mV 1 amp in, RCA 10 000 Ω 1 V 1 tel. input, screw terminals 600 Ω 100 mV	3 balanced mics./ lines, combo (XLR and 6.3 mm jack) 600 Ω 2 mV and 47,000 Ω 150 mV, switchable. 1 auxiliary, 2 x RCA 47,000 Ω 300 mV 1 amp in, RCA 10,000 Ω 1 V 1 telephone input, screw terminals 600 Ω 100 mV
OUTPUTS	1 line out, 2 x RCA 47 000 Ω 1 V 1 pre out, RCA 600 Ω 1 V 1 monitor, screw terminals 600 Ω 775 mV and 1 W 8 Ω (auxiliary input)	1 line out, 2 x RCA 47,000 Ω 1 V 1 pre out, RCA 600 Ω 1 V 1 monitor, screw terminals 600 Ω , 775 mV and 1 W 8 Ω (aux. input)
CONTROLS	Tone: Bass: ± 10 dB Treble: ± 10 dB Volume: inputs 1 to 3, aux and general volume	Tone: Bass: ± 10 dB Treble: ± 10 dB Volume: Input 1-3, aux, general volume and USB/SD/MP3 player.
PLAYER	-	USB/SD/MP3 recorder/player
PHANTOM	24 V in mics 1 to 3, selectable	24 V in mics. 1 to 3, selectable
ZONE SELECTOR	Tel. input and mic. 1 depending on signal level, selectable	Tel. input and micro 1 through signal level, selectable
IMPEDANCE	4 Ω and 100, 70 and 25 V lines, screw terminals	4 Ω and lines 100, 70 y 25 V, screw terminals
POWER SUPPLY	230/115 V AC, 130 W and 24 V DC, 82 W	230/115 V AC, 130 W and 24 V DC, 82 W
DIMENSIONS	420 x 89 x 300 mm depth. 2U 19" rack	420 x 89 x 300 mm depth. 2 U 19" rack
WEIGHT	7.6 kg	7.4 kg
OPTIONAL	MA-2N: mounts for assembly in 19" rack	MA-2N: mounts for assembly on a 19" U rack.


REC
USB
SD
MP3
MPEG
RADIO


MA-65RGUB

**90 W max.
60 W RMS**

CHARACTERISTICS	P. A. Amplifier. Bluetooth receiver incorporated, plays the music received from a mobile telephone. USB/SD/MP3 recorder/player. Digital FM tuner. Phantom power supply. Priority paging.
POWER	90 W maximum, 60 W RMS
RESPONSE	80-16 000 Hz ± 3 dB
DISTORTION	Harmonic: $< 1\%$
INPUTS	4 balanced mics./lines, combo (XLR and 6.3 mm jack) 600 Ω 2 mV and 47 000 Ω 150 mV, switchable 1 auxiliary, 2 x RCA 47 000 Ω 300 mV 1 amp in, RCA 10 000 Ω 1 V 1 tel. input, screw terminals 600 Ω 100 mV
OUTPUTS	1 line out, 2 x RCA 47 000 Ω 1 V 1 pre out, RCA 600 Ω 1 V 1 monitor, screw terminals 600 Ω , 775 mV and 1 W 8 Ω (aux input)
CONTROLS	Tone: Bass: ± 10 dB Treble: ± 10 dB Volume: inputs 1 to 4, aux., general volume, USB/SD/MP3 player and bluetooth receiver
PLAYER	Bluetooth receiver, USB/SD/MP3 recorder/player and digital FM tuner with pre-tuned channels and auto scan
PHANTOM	24 V in mics. 1 to 4, selectable
PRIORITY	Tel. input and mic. 1 through signal level, selectable
IMPEDANCE	4 Ω and 100, 70 and 25 V lines, screw terminals
POWER SUPPLY	230/115 V AC, 130 W and 24 V DC, 82 W
DIMENSIONS	420 x 89 x 300 mm depth. 2 U 19" rack
WEIGHT	7.8 kg
ACCESSORIES	Mounts for assembly in a 19" rack

PA SYSTEM AMPLIFIERS. PREMIUM SERIES

PA amplifiers with excellent features and a variety of inputs and outputs. Suitable for shops, P.A. installations and split audio.



MA-125 180 W max.
120 W RMS

MA-125Z 180 W max.
120 W RMS

CHARACTERISTICS	PA amplifier. Phantom power supply. Priority paging.	PA Amplifier 4 selectable loudspeaker zones with independent volume control. Phantom power. Input level priority.
POWER	180 W maximum, 120 W RMS	180 W maximum, 120 W RMS
RESPONSE	80-16 000 Hz ± 3 dB	80-16 000 Hz ± 3 dB
DISTORTION	Harmonic: < 1 % at 1 kHz	Harmonic: < 1 %
INPUTS	4 balanced mics./lines, combo (XLR and 6.3 mm jack) 600 Ω 2 mV and 47 000 Ω 150 mV, switchable 1 auxiliary, 2 x RCA, 47 000 Ω 300 mV 1 amp in, RCA 10 000 Ω 1 V 1 tel. input, screw terminal blocks 600 Ω 100 mV	4 balanced mics./lines, combo (XLR and 6.3 mm jack) 600 Ω 4 mV and 47000 Ω 150 mV, switchable 1 auxiliary, 2 x RCA 47,000 Ω 300 mV 1 amp in, RCA 10,000 Ω 1 V 1 tel. input, screw terminals 600 Ω 100 mV
OUTPUTS	1 line out, 2 x RCA 47 000 Ω 1 V 1 pre out, RCA 600 Ω 1 V 1 monitor, screw terminal blocks 600 Ω 775 mV and 1 W 8 Ω (auxiliary input)	1 line out, 2 x RCA 47,000 Ω 1 V 1 pre out, RCA 600 Ω 1 V 1 monitor, screw terminals 600 Ω , 775 mV and 1 W 8 Ω (aux. input)
CONTROLS	Tone: Bass: ± 10 dB Treble: ± 10 dB Volume: inputs 1 to 4, aux and general volumen	Tone: Bass: ± 10 dB Treble: ± 10 dB Volume: Inputs 1 to 4, aux and general volume
PHANTOM	24 V in mics 1 to 4, selectable	24 V in mics. 1 to 4, selectable
PRIORITY	Tel. input and mic. 1 depending on signal level, selectable	Tel. input and mic. 1 input level priority, selectable
ZONE SELECTOR	-	4 selectable speaker zones with independent volume control, maximum 120 W per zone
IMPEDANCE	4 Ω and 100, 70 and 25 V lines, screw terminals	4 Ω and 100, 70 and 25 V lines, screw terminals
POWER SUPPLY	230/115 V AC, 290 W and 24 V DC, 161 W	230/115 V AC, 290 W and 24 V DC, 161 W
DIMENSIONS	420 x 89 x 300 mm depth. 2U 19" rack	420 x 89 x 300 mm depth. 2 x 19" U rack
WEIGHT	9.4 kg	10.2 kg
OPTIONAL	MA-2N: mounts for assembly in 19" rack	MA-2N: mounts for assembly in 19" rack

RELATED PRODUCTS

SL-400V

100 V 4-line mono speaker switcher with independent volume control and A or B input selector.
Attenuation with autotransformer.
Each output can be individually activated/deactivated.
Page 87.



CB-400V

4-line 8 Ω stereo speaker switcher with independent volume control and A or B input selection.
Attenuation with auto-transformer.
Each output can be activated/deactivated individually.
Page 88.





MA-125GU

180 W max.
120 W RMS

CHARACTERISTICS	PA amplifier. USB/SD/MP3 recorder/player. 4 selectable loudspeaker zones with independent volume control. Phantom power. Input level priority.	P. A. amplifier. USB/SD/MP3 recorder/player. Digital FM tuner. Bluetooth receiver incorporated, plays the music received from a mobile telephone. Phantom power supply. Priority paging.
POWER	180 W maximum, 120 W RMS	180 W maximum, 120 W RMS
RESPONSE	80-16 000 Hz ± 3 dB	80-16,000 Hz ± 3 dB
DISTORTION	Harmonic: < 1%	Harmonic: < 1%
INPUTS	4 balanced mics./lines, combo (XLR and 6.3 mm jack) 600 Ω 2 mV and 47,000 Ω 150 mV, switchable 1 auxiliary, 2 x RCA 47,000 Ω 300 mV 1 amp in, RCA 10,000 Ω 1 V 1 tel. input, screw terminals 600 Ω 100 mV	4 balanced mics./lines, combo (XLR and 6.3 mm jack) 600 Ω 2 mV and 47,000 Ω 150 mV, switchable 1 auxiliary, 2 x RCA 47,000 Ω 300 mV 1 amp in, RCA 10,000 Ω 1 V 1 tel. input, screw terminals 600 Ω 100 mV
OUTPUTS	1 line out, 2 x RCA 47,000 Ω 1 V 1 pre out, RCA 600 Ω 1 V 1 monitor, screw terminals 600 Ω, 775 mV and 1 W 8 Ω (aux input)	1 line out, 2 x RCA 47,000 Ω 1 V 1 pre out, RCA 600 Ω 1 V 1 monitor, screw terminals 600 Ω, 775 mV and 1 W 8 Ω (aux input)
CONTROLS	Tone: Bass: ± 10 dB Treble: ± 10 dB Volume: Inputs 1-4, aux, general volume and USB/SD/MP3 player	Tone: Bass: ± 10 dB Trebles: ± 10 dB Volume: inputs 1 to 4, aux, general volume and USB/SD/MP3 player and bluetooth receiver
PLAYER	USB/SD/MP3 recorder/player	Bluetooth receiver, USB/SD/MP3 recorder/player and digital FM tuner with pre-tuned channels and auto scan
PHANTOM	24 V in mics. 1 to 4, selectable	24 V in mics. 1 to 4, selectable
PRIORITY	Tel. input and mic. 1 input level priority, selectable	Tel. input and mic. 1 through input level, selectable
ZONE SELECTOR	4 selectable speaker zones with independent volume control, maximum 120 W per zone	-
IMPEDANCE	4 Ω and 100, 70 and 25 V lines, screw terminals	4 Ω and 100, 70 and 25 V lines, screw terminals
POWER SUPPLY	230/115 V AC, 290 W and 24 V DC, 161 W	230/115 V AC, 290 W and 24 V DC, 161 W
DIMENSIONS	420 x 89 x 300 mm depth. 2 U 19" rack	420 x 89 x 300 mm depth. 2 U 19" rack
WEIGHT	10.2 kg	9.8 kg
ACCESSORIES	-	Mounts for assembly in 19" rack
OPTIONAL	MA-2N: mounts for assembly on 19" rack	-

PA SYSTEM AMPLIFIERS. PREMIUM SERIES

P. A. amplifier with 4 auxiliary input selector and microphone with priority.

Suitable for shops with background music from several sources and priority paging.



MPA-120

180 W max.
120 W RMS

CHARACTERISTICS	P.A. Amplifier. Phantom power supply. Priority paging. Chimes. 4 auxiliary input selector.
POWER	180 W maximum, 120 W RMS
RESPONSE	50 -16,000 Hz ±3 dB
DISTORTION	Harmonic: < 0.5% at 1 kHz
INPUTS	4 balanced mics., XLR 2,000 Ω 5 mV, adjustable 4 auxiliaries, 2 x RCA 10,000 Ω 200 mV 1 amp in, RCA 10,000 Ω 1
OUTPUTS	1 rec out, 2 x RCA 470 Ω 200 mV 1 pre out, RCA 470 Ω 1 V 1 mix out, XLR 47,000 Ω 1 V
CONTROLS	Tone: bass and treble Volume: mic. 1 to 4, aux, chime and general volume
PHANTOM	48 V in mics. 1 to 4, selectable
PRIORITY	Mics. 1 to 4 through signal level, selectable Chimes on contact closure
CHIMES	2 chimes, selectable
PROTECTION	Temperature, overload, short-circuit
IMPEDANCE	4 Ω and 100, 70 and 50 V lines, euroblock
POWER SUPPLY	230 V AC, 200 W and 24 V DC, 5 A
DIMENSIONS	483 x 89 x 340 mm depth. 2 U 19" rack
WEIGHT	9.3 kg

RELATED PRODUCTS

FS-2915CDR

CD/USB/SD/MP3 player and digital AM/FM tuner.
Page 81.



FS-2905GU

USB/SD/MP3 recorder/player
Page 78.



P. A. amplifier with SD/MP3 programmer/player.
Weekly programming for MP3 file playback: bells, adverts, background music, etc.
Specially recommended for schools, offices, businesses, churches, etc.



MPA-122P

180 W max.
120 W RMS

SD



CHARACTERISTICS	PA Amplifier. Weekly programmer. SD/MP3 player. LCD screen. Priority paging.
POWER	180 W maximum, 120 W RMS
RESPONSE	50 ñ 18,000 Hz ±3 dB
DISTORTION	Harmonic: < 0.5 % at 1 kHz
INPUTS	1 balanced mic., combo (XLR and 6.3 mm jack) 600 Ω 5 mV 2 auxiliaries, 2 x RCA 10,000 Ω 350 mV
OUTPUTS	1 recording, XLR 600 Ω 1 V
CONTROLS	Tone: bass and treble Volume: mic, aux 1 and 2, MP3 and general volume
PRIORITY	Mic. through signal level, selectable
IMPEDANCE	4 - 16 Ω and 100 and 70 V lines, screw terminals
POWER SUPPLY	230 V AC, 180 W
DIMENSIONS	483 x 89 x 390 mm depth. 2 U 19" rack
WEIGHT	10.9 kg

RELATED PRODUCTS

ZSM-1040

Programmed message player with 4 output zones. Manages and automates message playback in one or various output zones. Priority for paging and messages over background music inputs. General use inputs and outputs. Programming using touchpad and software for PC included. Connection to Ethernet and Internet for message transfer, programming, software upgrading, etc.
Page 56.



PA SYSTEM AMPLIFIERS. PREMIUM SERIES

P.A. Amplifiers with excellent features and a variety of inputs and outputs. Suitable for shops, P. A. systems and split audio.



MA-245

360 W max.
240 W RMS

CHARACTERISTICS	P.A. Amplifier. Phantom power supply. Priority paging.	MA-245Z	P. A. amplifier 4 selectable loudspeaker zones with independent volume control. Phantom power. Priority paging.
POWER	360 W maximum, 240 W RMS		360 W maximum, 240 W RMS
RESPONSE	80-16 000 Hz ± 3 dB		80-16 000 Hz ± 3 dB
DISTORTION	Harmonic: < 1 % at 1 kHz		Harmonic: < 1 %
INPUTS	4 balanced mics./lines, combo (XLR and 6.3 mm jack) 600 Ω 2 mV and 47 000 Ω 150 mV, switchable 1 auxiliary, 2 x RCA, 47 000 Ω 300 mV 1 amp in, RCA 10 000 Ω 1 V 1 tel. input, screw terminal blocks 600 Ω 100 mV		4 balanced mics/ lines, combo (XLR and 6.3 mm jack) 600 Ω 4 mV and 47 000 Ω 150 mV, switchable. 1 auxiliary, 2 x RCA 47000 Ω 300 mV. 1 amp in, RCA 10 000 Ω 1 V. 1 telephone input, screw terminals 600 Ω 100 mV
OUTPUTS	1 line out, 2 x RCA 47 000 Ω 1 V 1 pre out, RCA 600 Ω 1 V 1 monitor, screw terminal blocks 600 Ω 775 mV and 1 W 8 Ω (auxiliary input)		1 line out, 2 x RCA 47 000 Ω 1 V 1 pre out, RCA 600 Ω 1 V 1 monitor, screw terminals 600 Ω , 775 mV and 1 W 8 Ω (aux input)
CONTROLS	Tone: Bass: ± 10 dB Treble: ± 10 dB Volume: inputs 1 to 4, aux and general volumen		Tone: Bass: ± 10 dB Treble: ± 10 dB Volume: input 1-4, aux and general volume
PHANTOM	24 V in mics 1 to 4, selectable		24 V in mics. 1 to 4, selectable
PRIORITY	Tel. input and mic. 1 depending on signal level, selectable		Telephone input and mic 1 according to signal level, selectable
ZONE SELECTOR	-		4 selectable loudspeaker zones with independent volume control, maximum 120 W per zone
IMPEDANCE	4 Ω and 100, 70 and 25 V lines, screw terminal blocks		4 Ω and 100, 70 and 25 V lines, screw terminals
POWER SUPPLY	230/115 V AC, 600 W and 24 DC, 312 W		230/115 V AC, 600 W and 24 V DC, 312 W
DIMENSIONS	420 x 89 x 300 mm depth. 2U 19" rack		420 x 89 x 300 mm depth. 2 U 19" racks
WEIGHT	11.4 kg		11.7 kg
OPTIONAL	MA-2N: mounts for assembly in 19" rack		MA-2N: Mounts for assembly on a 19" rack



MA-245GU

360 W max.
240 W RMS

REC

USB

SD

MP3

MPEG

CHARACTERISTICS	P. A. amplifier. USB/SD/MP3 recorder/player. 4 selectable loudspeaker zones with independent volume control. Phantom power. Priority paging.
POWER	360 W maximum, 240 W RMS
RESPONSE	80-16 000 Hz ± 3 dB
DISTORTION	Harmonic: $< 1\%$
INPUTS	4 balanced mics./lines, combo (XLR and 6.3 mm jack) 600 Ω 2 mV and 47000 Ω 150 mV, switchable 1 auxiliary, 2 x RCA 47000 Ω 300 mV 1 amp in, RCA 10000 Ω 1 V 1 tel. input, screw terminals 600 Ω 100 mV
OUTPUTS	1 line out, 2 x RCA 47000 Ω 1V 1 pre out, RCA 600 Ω 1 V 1 monitor, screw terminals 600 Ω , 775 mV and 1 W 8 Ω (aux. input)
CONTROLS	Tone: Bass: ± 10 dB Treble: ± 10 dB Volume: Inputs 1-4, aux, general volume and USB/SD/MP3 player
PLAYER	USB/SD/MP3 recorder/player
PHANTOM	24 V in mics. 1 to 4, selectable
PRIORITY	Tel. input and mic. 1 depending on signal level, selectable
ZONE SELECTOR	4 selectable speaker zones with independent volume control, maximum 120 W per zone
IMPEDANCE	4 Ω and 100, 70 and 25 V lines, screw terminals
POWER SUPPLY	230/115 V AC, 600 W and 24 V DC, 312 W
DIMENSIONS	420 x 89 x 300 mm depth. 2 x 19" U rack
WEIGHT	11.7 kg
OPTIONAL	MA-2N: mounts for assembly in 19" rack

RELATED PRODUCTS

CF-7V

Switcher with 6 auxiliary inputs with independent volume control
Page 86.



PA SYSTEM AMPLIFIERS. PREMIUM SERIES

PA amplifier with excellent features and a variety of inputs and outputs. A practical speaker zone selector is incorporated. Suitable for large shops, P. A. installations and split audio.



MA-460BZ

460 W max.
360 W RMS

CHARACTERISTICS	PA amplifier. Phantom power. Priority paging. 5-zone loudspeaker selector.
POWER	460 W maximum, 360 W RMS
RESPONSE	50-15,000 Hz ± 3 dB
DISTORTION	Harmonica: < 1% at 1 kHz
INPUTS	1 unbalanced mic., 6.3 mm jack 300-600 Ω 4 mV 4 balanced mics./lines, combo (XLR and 6.3 mm jack) 600 Ω 4 mV and 47,000 Ω 200 mV, switchable 1 auxiliary, 2 x RCA CD/tape/tuner/aux, selectable level 1 main in, RCA 10,000 Ω 1 V 1 tel. paging, screw terminals 600 Ω 200-300 mV
OUTPUTS	1 auxiliary, 2 x RCA 50,000 Ω 320 mV 1 pre out, RCA 600 Ω 1 V 1 monitor, screw terminals 1 W 8 Ω (aux input)
CONTROLS	Tone: Bass: ± 10 dB at 100 Hz Treble: ± 10 dB at 10,000 Hz Volume: Inputs 1-4, aux and general volume
PHANTOM	24 V in mics. 1 to 4, selectable
PRIORITY	Tel. paging and input 1 input level priority, selectable Inputs 2-4, contact closure
ZONE SELECTOR	5 selectable speaker zones
IMPEDANCE	4 Ω and 100 and 70 V lines, screw terminals
POWER SUPPLY	230/115 V AC, 710 W and 24 V DC, 240 W
DIMENSIONS	482 x 133 x 415 mm depth. 3 U x 19" rack
WEIGHT	18.1 kg

PA SYSTEM AMPLIFIERS. MASTER SERIES

FONESTAR

High quality P. A. amplifiers allowing you to make installations with a 3-thread priority system to transmit announcements even when the attenuators are at their minimum. Suitable for shops, voice and music P. A. and split audio.



FS-2061

90 W max.
60 W RMS

FS-2121

180 W max.
120 W RMS

CHARACTERISTICS	P. A. Amplifier. Phantom power. Priority paging. Chimes. 2-input auxiliary selector.	P. A. Amplifier. Phantom power. Priority paging. Chimes. 2-input auxiliary selector.
POWER	90 W maximum., 60 W RMS	180 W maximum, 120 W RMS
RESPONSE	Microphones: 60-15,000 Hz ± 3 dB Aux/CD: 50-20,000 Hz ± 3 dB Tel. emer.: 100-15,000 Hz ± 3 dB	Microphones: 60-15 000 Hz ± 3 dB Aux/CD: 50-20 000 Hz ± 3 dB Tel. emer.: 100-15 000 Hz ± 3 dB
DISTORTION	Harmonic: < 1% at 1 kHz	Harmonic: < 1% at 1 kHz
INPUTS	2 balanced mics., XLR and DIN 5 250-600 Ω 1 mV, adjustable 2 balanced mics./lines, combo (XLR and 6.3 mm jack) and DIN 5, 250-600 Ω 1 mV and 47,000 Ω 200 mV, switchable 1 auxiliary/CD, 2 x RCA 47,000 Ω 200 mV and 500 mV, selectable. Tel. emer., screw terminals 600 Ω 0.1-1 V 1 power in, RCA 47,000 Ω 1 V	2 balanced mics., XLR and DIN 5 250-600 Ω 1 mV, adjustable 2 balanced mics./lines, combo (XLR and 6.3 mm jack) and DIN5, 250-600 Ω 1 mV and 47 000 Ω 200 mV, switchable. 1 auxiliary/CD, 2 x RCA 47 000 Ω 200 mV and 500 mV, selectable Tel. emer., screw terminals 600 Ω 0.1-1 V. 1 power in, RCA 47 000 Ω 1 V
OUTPUTS	1 tape out, 2 x RCA 4,700 Ω 350 mV 1 pre out, RCA 600 Ω 1 V 1 monitor, screw teminals 600 Ω 775 mV and 1 W 8 Ω (aux and CD inputs) Speakers: 2 outputs, music/speech active at all times and speech only active with priority	1 tape/line, 2 x RCA 4 700 Ω 350 mV 1 pre out, RCA 600 Ω 1 V 1 monitor, screw terminals 600 Ω 775 mV and 1 W 8 Ω (aux and CD inputs) Speakers: 2 outputs, music/speech active at all times and speech only is activated with priority
CONTROLS	Tone: Bass: ± 10 dB at 100 Hz Trebles: ± 10 dB at 10 000 Hz Volume: Inputs 1-4, line and general volume	Tone: Bass: ± 10 dB at 100 Hz Treble: ± 10 dB at 10 000 Hz Volume: Inputs 1-4, line and general volume
PHANTOM	20 V in mics. 1 to 4, selectable	20 V in mics. 1 to 4, selectable
PRIORITY	Tel. emer. and mic 1 input level priority, selectable Mics. 1-4 and chimes on contact closure	Tel. emer. And mic 1 depending on signal level, selectable Mics. 1-4 on contact closure
CHIMES	Chimes, selectable	2 musical EMC tones with contact closure
IMPEDANCE	8 Ω and 100 V line, screw terminals	8 Ω and 100 V line, screw terminals
POWER SUPPLY	230/115 V AC, 170 W and 24 V DC, 96 W	230/115 V AC, 360 W and 24 V DC, 192 W
DIMENSIONS	430 x 88 x 300 mm depth. 2 x 19" U rack	430 x 88 x 300 mm depth. 2 x 19" U rack
WEIGHT	7.7 kg	9.2 kg
OPTIONAL	FSA-20: Mounts for assembly in 19" rack	FSA-20: mounts for 19" rack assembly

PA SYSTEM AMPLIFIERS. MAZ SERIES

High power multichannel amplifier with mixer and 4 output channels with independent volume control.
Suitable for large shops, P. A. systems and split audio.



MAZ-4250E

4 x 300 W max.
4 x 250 W RMS

CHARACTERISTICS	Multichannel PA amplifier. 4 output channels with independent volume control. Phantom power. Priority paging. Chimes. Siren.
POWER	4 x 300 W maximum, 4 x 250 W RMS
RESPONSE	50-17,000 Hz ± 3 dB
DISTORTION	Harmonic: < 0.5%
INPUTS	4 balanced mics./lines, combo (XLR and 6.3 mm jack) and Euroblock 600 Ω 2 mV and 47,000 Ω 250 mV, switchable. 2 auxiliaries, 2 x RCA 47,000 Ω 250 mV. 1 amp in, RCA 10,000 Ω 1 V. 1 tel. paging, Euroblock 600 Ω 100-300 mV
OUTPUTS	1 pre out, RCA 600 Ω 1 V
CONTROLS	Tone: Bass: ± 10 dB Treble: ± 10 dB Volume: inputs 1 to 4, aux 1 and 2, chimes, siren and general volume through each output channel
PHANTOM	48 V in mics. 1 to 4, selectable
PRIORITY	Tel. paging input level priority and siren with push button or contact closure Input 1 input level priority, selectable Musical announcement tones with push button and contact closure
IMPEDANCE	4 output channels: 4 and 8 Ω and 100, 70 and 25 V lines, screw terminals
POWER SUPPLY	230/115 V AC, 1,500 W maximum
DIMENSIONS	480 x 133 x 480 mm depth. 3 U x 19" rack
WEIGHT	26 kg

Multizone audio matrix PA amplifier with 5 input channels that can be distributed to 4 output zones with independent volume control. Suitable for shops with several areas and different musical programmes.



MAZ-4160/MAZ-4480



MAZ-4160



MAZ-4480

MAZ-4160

4 x 45 W max.
4 x 40 W RMS

MAZ-4480

4 x 135 W max.
4 x 120 W RMS

CHARACTERISTICS	Multizone amplifier. Allocation matrix with 5 input channels to be distributed to 4 output zones. 4 zones with independent volume control and line output. Phantom power. Priority paging.	Multizone amplifier. Allocation matrix of 5 input channels to 4 output zones. 4 zones with independent volume control and line output. Phantom power supply. Paging priority.
POWER	4 x 45 W maximum, 4 x 40 W RMS	4 x 135 W maximum, 4 x 120 W RMS
RESPONSE	50-17,000 Hz ± 3 dB	60-17 000 Hz ± 3 dB
DISTORTION	Harmonic: < 0.5%	Harmonic: < 1%
INPUTS	3 balanced mics./lines, combo (XLR and 6.3 mm stereo jack) 600 Ω 7 mV and 15,000 Ω 100 mV, switchable. 2 auxiliaries, 2 x RCA 50,000 Ω 300 mV. 1 tel. paging, screw terminals 600 Ω 100-300 mV	4 balanced mics./lines, combo (XLR and 6.3 mm jack) 600 Ω 7 mV and 15 000 Ω 100 mV, switchable 1 auxiliary, 2 x RCA 50 000 Ω 300 mV 1 tel. paging, screw terminals 600 Ω 100-300 mV
OUTPUTS	4 balanced lines or unbalanced zones 1 to 4, screw terminals 1 monitor, screw terminals 600 Ω 775 mV and 1 W 8 Ω 1 stereo headphone, 3.5 mm jack 47 Ω 0.5 W	4 balanced or unbalanced lines zones 1 to 4, screw terminals 1 monitor, screw terminals 600 Ω 775 mV and 1 W 8 Ω 1 stereo headphones, 3.5 mm jack 47 Ω 0.5 W
CONTROLS	Channels 1-5: Gain, bass, treble, volume and zone allocation Tel. paging: volume and zone selector Zones 1 to 4: Volume, monitor selector Headphone monitor volume	Channels 1 to 5: gain, bass, treble, volume and zone allocation. Tel. paging: volume and zone selector Zones 1 to 4: Volume, monitor selector. Headphone monitor volume
PHANTOM	15 V in mics. 1 to 3, selectable	48 V in mics. 1 to 4, selectable
PRIORITY	Tel. paging and input 1 through signal level, selectable Input 1, contact closure	Tel. paging and input 1 depending on signal level, selectable Input 1 on contact closure, selectable
IMPEDANCE	4 zones: 4 and 8 Ω and 100, 70 and 25 V lines, screw terminals	4 zones: 4 and 8 Ω and 100, 70 and 25 V lines, screw terminals
POWER SUPPLY	230/115 V AC, 800 W maximum	230/115 V AC, 1200 W maximum
DIMENSIONS	483 x 133 x 335 mm depth. 3 U 19" rack	483 x 133 x 410 mm depth. 3U 19" rack
WEIGHT	15.5 kg	20.7 kg

PA SYSTEM AMPLIFIERS. MAZ SERIES

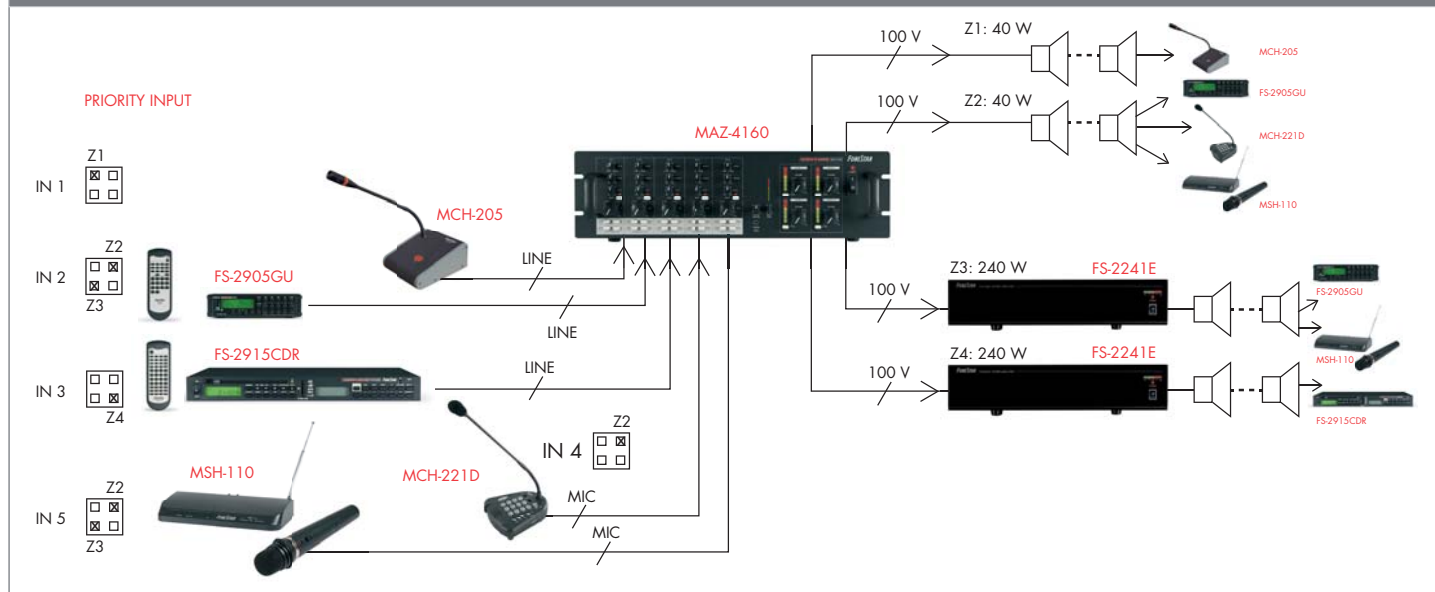
Multizone amplifier with matrix with 5 input channels to 6 output zones with independent volume control. USB/SD/MP3 player with digital FM radio tuner. Suitable for commercial installations with several zones and different musical programs.



USB SD MP3 MPEG RADIO

MAZ-6600RU N! 6 x 100 W RMS

CHARACTERISTICS	Multizone amplifier. Allocation matrix with 5 input channels to 6 output zones. USB/SD player for MP3 files. Digital FM radio tuner. 6 zones with independent volume control. Phantom power supply. Musical chimes. Paging priority. Remote control for USB/SD/MP3/FM player.
POWER	6 x 100 W RMS
RESPONSE	80-18 000 Hz ± 3 dB
DISTORTION	Harmonic: < 1%
S/N RATIO	Microphones: > 65 dB Auxiliaries: > 75 dB
INPUTS	1 unbalanced mic., 6.3 mm jack, 5 mV 2 balanced mics./lines, combo (XLR and 6.3 mm jack) 5 mV and 175 mV, switchable 1 stereo TAPE/CD/AUX auxiliary, 2 x RCA 220 mV, 150 mV, 110 mV, selectable 1 stereo auxiliary, 3.5 mm jack, 100 mV
OUTPUTS	1 stereo monitor, 6.3 mm jack
CONTROLS	6 zone buttons (1 to 6) for each input channel (2 to 5) and USB/SD/MP3/FM player Channels 1 to 4: volume control, bass and treble Zones 1 to 6: volume control, monitor selector Monitor volume
PLAYER	USB/SD/MP3 player and digital FM tuner with pretuned channels and auto scan
PHANTOM	48 V in mics. 2 to 3, selectable
PRIORITY	Mic. 1 through signal level or contact closure, selectable
IMPEDANCE	6 zones: 8 Ω and 100 and 70 V lines, screw terminals
POWER SUPPLY	230/115 V AC, 1000 W maximum
DIMENSIONS	481 x 133 x 341 mm depth. 3 U 19" rack
WEIGHT	17.5 kg
ACCESSORIES	FM aerial Mounts for assembling in 19" rack

MAZ-4160 MULTIZONE AMPLIFIER


PA SYSTEM AMPLIFIERS. LOOP AMPLIFIER

Induction loop amplifier to ease hearing for people wearing a hearing aid with a T switch. It has 3 balanced mic/line inputs and 1 x 100 V line priority input.



MPL-600 240 W, 10 A

CHARACTERISTICS	Induction loop amplifier. Enables hearing for users with a hearing aid with a 'T' switch when within the area where the loop is installed. The loop can be installed in the floor or the ceiling. Automatic gain control (AGC) or limiter. Metal loss compensation control. Fault detection with relay output. It is possible to add more amplifiers at 0° or 90°
POWER	240 W, 10 A
INPUTS	3 balanced mics/lines, XLR 2.5 mV and 385 mV switchable 1 priority input, 100 V line
OUTPUTS	1 line out, XLR 500 mV Stereo headphones: 3.5 mm jack
CONTROLS	Tone: bass and treble Volume: inputs 1 to 3 and general volume
INDICATORS	Input and output level Loop, AGC, limiter and failure
PHANTOM	48 V in mics 1 to 3, selectable
PRIORITY	Priority input over the rest of inputs through 100 V line Input 1 through signal level, selectable.
POWER SUPPLY	230 V AC, 500 W
DIMENSIONS	483 x 89 x 380 mm depth. 2U 19" rack
WEIGHT	10.4 kg
ACCESSORIES	Mounts for assembly in 19" rack



MIXERS/PREAMPLIFIER. FOR MICROPHONES

Passive mixer with microphones and auxiliary.



CB-119

CHARACTERISTICS	Passive mixer with 3 microphones and 1 auxiliary input. Mic. output level for connecting to 1 microphone input.
INPUTS	3 unbalanced mics., 6.3 mm jack 1 auxiliary, 2 x RCA
OUTPUTS	1 unbalanced mic., 6.3 mm jack
CONTROLS	Volume through input
DIMENSIONS	145 x 31 x 76 mm depth
WEIGHT	0.2 kg
ACCESSORIES	1 audio cable, 6.3 mm mono plug to 6.3 mm mono plug, 1.8 m

12-channel microphone mixer with independent volume control and 48V phantom power supply. The number of microphones in a sound system installation can easily be increased..



MX-824

CHARACTERISTICS	Professional 12-channel mixer/preamplifier. Phantom power.
INPUTS	12 balanced mics., XLR 8000 Ω 2.5 mV
OUTPUTS	1 balanced master XLR 600 Ω 7 mV and unbalanced 2 x RCA 4700 Ω 150mV
CONTROLS	Input volume and master output
RESPONSE	50-20,000 Hz
S/N RATIO	> 60 dB
PHANTOM	48 V in mics. 1 to 12, selectable
POWER SUPPLY	230 V AC, 10W
DIMENSIONS	483 x 44.5 x 225 mm depth. 1 U x 19" rack
WEIGHT	2.7 kg
ACCESSORIES	1 RCA cable 1 XLR cable

MIXERS/PREAMPLIFIER. FOR INSTALLATIONS

FONESTAR

Mixer/preamplifier. Stereo and mono output.
Suitable for P. A. and audio installations.



MX-848

CHARACTERISTICS	Mixer/preamplifier. Microphone input with paging priority. Phantom power supply. LED output level indicators.
INPUTS	6 balanced mics./lines, combo (XLR and 6.3 mm jack), 1500 Ω 7.7 mV y 10 000 Ω 775 mV switchable 3 stereo auxiliaries, 2 x RCA, 10 000 Ω 775 mV
OUTPUTS	1 balanced stereo master, XLR 120 Ω 2.5 V maximum 1 balanced mono master, 6.3 mm jack, 120 Ω 2.5 V maximum 1 balanced mono mix out, 120 Ω 6.3 mm jack 1 line out, 2 x RCA 1000 Ω 775 mV
CONTROLS	Tone: master output bass, mid and treble Volume: inputs 1 to 12 and general volume (stereo and mono master)
RESPONSE	10-20 000 Hz
DISTORTION	Harmonic: < 0.05% at 1 kHz
S/N RATIO	Microphones > 70 dB Auxiliary/Line > 103 dB
PHANTOM	18 V in mics. 1 to 6, selectable
PRIORITY	Mic. 1 depending on signal level, selectable
POWER SUPPLY	230 V AC, 18 W and 24 V DC, 500 mA
DIMENSIONS	483 x 44 x 220 mm depth. 1 U 19" rack

7-channel microphone/line mixer with acoustic feedback suppressor via frequency displacement.

Independent acoustic feedback suppression and 48 V phantom power supply controls. It efficiently removes acoustic feedback or coupling causing minimum distortion. Easy to use



MX-875-SR

CHARACTERISTICS	Mixer/preamplifier. 7 channels: 6 microphone and 1 auxiliary line. Phantom power. Feedback suppressor.
INPUTS	6 balanced mics., XLR 5000 Ω 2.5 mV 1 unbalanced line, RCA 5000 Ω 1 V
OUTPUTS	1 balanced master, XLR 600 Ω 100mV 1 unbalanced line, RCA 600 Ω 2,5 V
CONTROLS	Volume, feedback suppression and phantom power supply through input, master output volume
RESPONSE	20-20 000 Hz without feedback suppressor 150-15 000 Hz with feedback suppressor
FEEDBACK SUPPRESSOR	Frequency displacement 5 Hz $\pm$ 1 Hz
PHANTOM	48 V in mics. 1 to 6, selectable
POWER SUPPLY	230 V AC, 15 W
DIMENSIONS	483 x 44.5 x 225 mm depth. 1 U x 19" rack
WEIGHT	2.6 kg
ACCESSORIES	1 RCA cable 1 XLR cable 2 x 6.3 mm jack to RCA cables

MIXERS/PREAMPLIFIER. FOR INSTALLATIONS

High quality and highly reliable 6-channel mixer/preamplifier, that can be increased to 12 channels using a second preamplifier, phantom power, priority and chimes.



FS-2002M

CHARACTERISTICS

Mixer/preamplifier.
6 channels, 5 for mics./lines and 1 auxiliary line with 3 selectable inputs.
Phantom power.
Priority paging.
Chimes.
Selector for 3 auxiliary inputs.

ADDITIONAL FEATURES

-

RESPONSE

Microphones: 60-15,000 Hz ± 3 dB
Line/aux/CD/tuner: 50-20,000 Hz ± 3 dB
Tel. emer.: 100-15,000 Hz ± 3 dB

DISTORTION

Harmonic: < 0.5% at 1 kHz

INPUTS

5 balanced mics./lines, XLR and DIN 5, 250-600 Ω 1 mV and 47 000 Ω 200 mV, internally switchable.
1 aux, tuner, CD, 2 x RCA 47,000 Ω 200mV and 500 mV, selectable.
Tel. emer., screw terminals 600 Ω 0.1-1 V.
1 power in, RCA 47000 Ω 1 V

OUTPUTS

1 balanced master, XLR 600 Ω 1 V
1 master, 2 x RCA 600 Ω 1 V
1 tape out, 2 x RCA 4,700 Ω 350 mV,
1 pre out, RCA 600 Ω 1 V

CONTROLS

Tone:
Bass: ± 10 dB at 100 Hz
Treble: ± 10 dB at 10,000 Hz
Volume: Inputs 1-6 and general volume

PHANTOM

20 V in mics. 1 to 5, selectable

PRIORITY

Tel. emer. input level priority
Mics. 1-5 and chimes on contact closure

MUSICAL TONES

Chimes, selectable

POWER SUPPLY

230/115 V AC, 25 W and 24 V DC, 1 A

DIMENSIONS

430 x 88 x 300 mm depth. 2 U 19" rack

WEIGHT

4.9 kg

OPTIONAL

FSA-20: mounts for 19" rack assembly

FS-2005-SR

Mixer/pre-amplifier.

6 channels, 5 for mics./lines and 1 for auxiliary line with 3 selectable inputs.
Phantom power.
Priority paging.
Chimes.
Feedback suppressor.
Selector for 3 auxiliary inputs.

Feedback suppressor. This function can be activated or deactivated at will and is especially designed to avoid feedback problems or acoustic connection.

Microphones: 60-15 000 Hz ± 3 dB
Line/aux/CD/tuner: 50-20 000 Hz ± 3 dB
Tel. emer.: 100-15 000 Hz ± 3 dB

Harmonic: < 0.5% at 1 kHz

5 balanced mics./lines, XLR and DIN 5, 250-600 Ω 1 mV and 47 000 Ω 200 mV, internally switchable.
1 aux, tuner, CD, 2 x RCA 47 000 Ω 200mV and 500 mV, selectable.
Tel. emer., screw terminals 600 Ω 0.1-1 V adjustable.
1 power in, RCA 47000 Ω 1 V

1 balanced master, XLR 600 Ω 1 V
1 master, 2 x RCA 600 Ω 1 V
1 tape out, 2 x RCA 4700 Ω 350 mV,
1 pre out, RCA 600 Ω 1 V

Tone:

Bass: ± 10 dB at 100 Hz
Treble: ± 10 dB at 10 000 Hz
Volume: Inputs 1-6 and general volume

20 V in mics. 1 to 5, selectable

Tel. emer. depending on signal level
Mics. 1-5 and chimes on contact closure

Musical chimes, selectable

230/115 V AC, 25 W and 24 V DC, 1 A

430 x 88 x 300 mm depth. 2 x 19" U rack

4.9 kg

FSA-20: mounts for assembly in 19" rack

MIXERS/PREAMPLIFIER. MULTIZONE

FONESTAR

Multizone mixer/preamplifier with audio matrix for 5 input channels that are assignable to 4 output zones with independent volume control. Audio distribution in installations with various zones and different musical programs.



MX-4000

CHARACTERISTICS	Multizone mixer/preamplifier. Matrix audio system with 5 input channels to 4 output zones. 4 output zones with independent volume control. Phantom power supply. Priority paging.
INPUTS	4 mics./balanced lines, combo (XLR and 6.3 mm jack) 600 Ω 2 mV and 47 000 Ω 150 mV, switchable 1 auxiliary, 2 x RCA 50,000 Ω 300 mV 1 tel. paging, screw terminals 600 Ω 100-300 mV
OUTPUTS	4 balanced or unbalanced zones, euroblock 1 V 1 monitor, screw terminals 600 Ω 775 mV and 1 W 8 Ω 1 stereo headphones, 3.5 mm jack 47 Ω 0.5 W
CONTROLS	4 buttons for zones 1 to 4 for each input channel 1 to 5 and tel. paging selector to individually assign them to zones 1 to 4 Channels 1 to 5: gain, bass, trebles and volume control Zones 1 to 4: volume control, monitor selector Headphone volume Monitor volume
RESPONSE	20 ñ 20,000 Hz $\pm$ 3 dB
DISTORTION	Harmonic: < 0.1 % at 1 kHz
S/N RATIO	Microphones > 75 dB Lines > 90 dB
PHANTOM	15 V in mics 1 to 4, selectable
PRIORITY	Tel. paging and input 1 input level priority, selectable Input 1 through contact closure, selectable
POWER SUPPLY	230/115 V AC, 12 W and 24 V DC, 0.45 A
DIMENSIONS	483 x 133 x 222 mm depth. 3 U 19" rack
WEIGHT	4.5 kg

MIXERS/PREAMPLIFIER. MULTIZONE

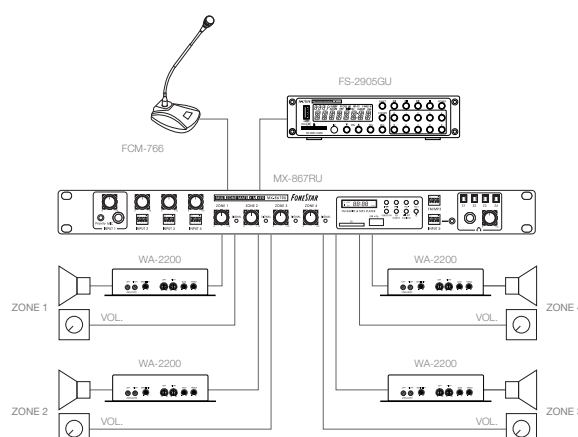
Mixer for microphones/lines of 7 channels which can be individually assigned to the 2 output zones with independent volume control. Suitable for PA and audio systems.



MX-865

CHARACTERISTICS	Mixer/preamplifier. 7 channels: 3 microphone and 4 auxiliary lines. 2 output zones with independent volume control. Input channels that are individually assignable to the output zones. Priority paging Phantom power. Emergency input with priority.
INPUTS	3 balanced mics., combo (XLR and 6.3 mm stereo jack) 10,000 Ω 1.5 mV 4 lines, 2 x RCA 10,000 Ω 750 mV 1 emergency, 2 x RCA 10,000 Ω 300 mV
OUTPUTS	2 balanced and unbalanced zones, XLR, 6.3 mm jack and 2 x RCA 2.5 V max, selectable level. 1 stereo headphone, 6.3 mm jack 500 mW
CONTROLS	Tones: Bass ± 20 dB Mid ± 15 dB Treble ± 14 dB Mic.1: on/off with LED indicator, gain, 3-band equalizer, output zone A, B or A+B Channel 2 to 7: on/off with LED indicator, gain, output zone A, B or A+B Zones A and B: mono/stereo, balance, volume, 3-band equalizer and output level LED indicator Headphone volume GND lift earth disconnection
RESPONSE	20-20,000 Hz
DISTORTION	Harmonic: < 0.01%
S/N RATIO	Microphones > 75 dB Lines > 92 dB
PHANTOM	15 V in mics 1 to 3, selectable
PRIORITY	Mics. 1 to 3 through signal level, selectable
EMERGENCY	Emergency input with priority over other inputs, activated with emergency power supply (24 V DC)
POWER SUPPLY	± 15 V DC, 0.35 A x 2 with adaptor included
DIMENSIONS	483 x 44.5 x 200 mm depth. 1 U x 19" rack
WEIGHT	2.5 kg

MX-867RU EXAMPLE



Multizone mixer/preamplifier with audio matrix, with 5 channels to be assigned to 4 output zones with independent volume control. USB/SD/MP3 player with digital FM radio tuner. Audio distribution in installations with several zones and different musical programmes. Remote control of the volume in each zone.



USB SD MP3 MPEG RADIO

MX-867RU **NI**

CHARACTERISTICS	Multizone mixer/preamplifier. Microphone input with chime priority. Allocation matrix with 5 input channels to 4 output zones. USB/SD player for MP3 files. Digital FM radio tuner. 4 output zones with independent volume control. Remote volume control for the zones. Phantom power supply.
INPUTS	1 balanced microphone, 6.3 mm stereo jack, 3 mV 1 balanced mic. combo (XLR and 6.3 mm jack), 3 mV 2 balanced mics./lines combo (XLR and 6.3 mm jack) adjustable, 3 mV and 175 mV 1 stereo auxiliary, 2 x RCA, 175 mV 1 stereo auxiliary, 3.5 m jack
OUTPUTS	4 balanced zones, XLR, 2.5 V maximum Remote volume control for the zones 1 stereo monitor, 6.3 mm jack, 1 V
CONTROLS	4 micro allocation switches for zones 1 to 4 Inputs 1 to 4: volume control Inputs 2 and 3: gain control Zones 1 to 4: volume control Monitor: volume control and zone selection USB/SD player FM tuner
RESPONSE	20-20,000 Hz
DISTORTION	Harmonic: < 0.2 % to 1 kHz
S/N RATIO	Microphones > 65 dB Auxiliary/Line > 80 dB
PHANTOM	48 V in mics. 2 and 3, selectable
PRIORITY	Mic. 1 input level priority, selectable
POWER SUPPLY	230/115 V AC, 9 W
DIMENSIONS	483 x 44.5 x 200 mm depth. 1 U 19" rack
WEIGHT	3 kg

MC-867 **NI**



CHARACTERISTICS	Remote volume control for the mixer preamplifier MX-867RU.
INPUTS	1 euroblock
CONTROLS	Volume
DIMENSIONS	89 x 89 x 54 mm depth Compatible with standard box
WEIGHT	0.2 kg
ACCESSORIES	Steel flush mount box

PA SYSTEM POWER AMPLIFIERS. MONOCHANNEL

High quality power amplifiers allowing installations with 3-thread priority systems, for sending messages even when the attenuators are at their minimum.

FS-2241E



FS-2481E



FS-2241E



FS-2481E

	360 W max. 240 W RMS FS-2241E	720 W max. 480 W RMS FS-2481E
CHARACTERISTICS	Mono Power Amplifier.	Mono Power Amplifier
POWER	360 W maximum, 240 W RMS	720 W maximum, 480 W RMS
RESPONSE	50-20,000 Hz ± 3 dB	50-20 000 Hz ± 3 dBs
DISTORTION	Harmonic: < 1% at 1 kHz	Harmonic: < 1% at 1 kHz
INPUTS	1 balanced/unbalanced line, XLR, 6.3 mm jack and 2 x RCA 47 000 Ω 500 mV (1 V, 500 mV, 100 mV internally selectable)	1 balanced/unbalanced line, XLR, 6.3 mm jack and 2 x RCA 47 000 Ω 500 mV (1 V, 500 mV, 100 mV internally selectable)
OUTPUTS	Line: 1 balanced/unbalanced line, XLR, 6.3 mm jack and 2 x RCA 600 Ω 1 V Speakers: 2 outputs, music speech activated at all times and speech only activated on contact closure	Line: 1 balanced/unbalanced line, XLR, 6.3 mm jack and 2 x RCA 600 Ω 1 V Speakers: 2 outputs, music speech activated at all times and speech only activated on contact closure
CONTROLS	General volume on the back panel	General volume on the back panel
IMPEDANCE	8 Ω and 100 V line, screw terminals	8 Ω and 100 V line, screw terminals
POWER SUPPLY	230/115 V AC, 760 W and 24 V DC, 15 A	230 V AC, 1500 W and 24 V DC, 32 A
DIMENSIONS	430 x 88 x 300 mm depth. 2 U x 19" rack	430 x 133 x 365 mm depth. 3 U x 19" rack
WEIGHT	11.2 kg	23.3 kg
OPTIONAL	FSA-20: mounts for 19" rack assembly	FSA-22: mounts for assembly in 19" U rack

RELATED PRODUCTS



FDT-112
Audio Splitter, 1 mono input to 10 mono outputs or 1 stereo input to 5 stereo outputs.
Page 176.



FDT-110F
Audio splitter with 1 input to 10 outputs on the front.
Page 176.

Power amplifiers with 4 and 8 Ω loudspeaker output, 100 and 70 V lines..



FS-1240E N! 300 W max. 240 W RMS

CHARACTERISTICS	Mono power amplifier
POWER	300 W maximum, 240 W RMS
RESPONSE	50-22,000 Hz ± 3 dB
DISTORTION	Harmonic: < 0.5%
INPUTS	1 balanced auxiliary line, XLR and 6.3 mm jack 20,000 Ω , 1 V
OUTPUTS	1 balanced auxiliary line, XLR and 6.3 mm jack
FUNCTIONS	Forced ventilation with variable speed according to the temperature Automatic compression of the input signal LED protection, signal peak and output signal indicators
PROTECTION	3 circuits: temperature, shortcircuit and overload
CONTROLS	Tone: bass, mids and trebles ± 12 dB General volume
IMPEDANCE	4 and 8 Ω and 100 and 70 V lines, screw terminals and banana plugs
POWER SUPPLY	230/115 V AC, 600 W maximum and 24 V DC, 480 W
DIMENSIONS	483 x 89 x 329 mm depth. 2 U 19" rack
WEIGHT	11.9 kg

FS-2601E 700 W max. 600 W RMS

CHARACTERISTICS	Mono power amplifier
POWER	700 W maximum, 600 W RMS
RESPONSE	50-22 000 Hz ± 3 dB
DISTORTION	Harmonic: < 0.5%
INPUTS	1 balanced auxiliary line, XLR and 6.3 mm jack 20,000 Ω , 1 V
OUTPUTS	1 balanced auxiliary line, XLR and 6.3 mm jack
FUNCTIONS	Forced ventilation with variable speed according to the temperature Automatic compression of the input signal LED temperature, protection, signal peak and output signal indicators
PROTECTION	3 circuits: temperature, short circuit and overload
CONTROLS	Tone: bass, mid and treble ± 12 dB General volume
IMPEDANCE	4 and 8 Ω and 100 and 70 V lines, screw terminals and banana plugs
POWER SUPPLY	230 V AC, 1,000 W maximum Resettable 6 A fuse
DIMENSIONS	483 x 89 x 435 mm depth. 2 U x 19" rack
WEIGHT	17.5 kg

RELATED PRODUCTS



MX-848

Mixer/preamplifier. Stereo and mono output.
Page 33.



MX-824

Professional 12-channel mixer/preamplifier.
Phantom power.
Page 32.

PA SYSTEM POWER AMPLIFIERS. MULTICHANNEL

2-channel power amps with 100 V line output. High power output in 1U 19" rack format. Switched power supply source and highly efficient amplifier without output transformer.



FS-2501E



FS-2502APD



FS-2501E

2 x 500 W RMS

FS-2502APD

2 x 500 W RMS

CHARACTERISTICS	2-channel power amp. High efficiency amplifying circuit. Switchable power supply source. Direct output without 100 V line transformer. High quality audio.	2-channel power amp. Energy saving class-H amplifier circuit. Switched power supply source. Direct output without 100 V line transformer. Energy saving. ENERGY STAR® approved. Automatic switch off after 25 minutes of inactivity, reducing the energy consumption considerably. Less than 1 W consumption in standby mode.
POWER	Stereo and parallel mode: 2 x 500 W RMS 100 V line Bridge mode: 1000 W RMS 200 V line	Stereo and parallel mode: 2 x 500 W RMS 100 V line. Bridge mode: 1000 W RMS 200 V line
RESPONSE	20-20 000 Hz, ± 1 dB	20-20 000 Hz, ± 1 dB
DISTORTION	Harmonic: < 1%	Harmonic: < 0.2%
INPUTS	2 balanced auxiliary lines, XLR, 0.775, 1, 1.44 V selectable	2 balanced auxiliary lines, XLR, 0.775, 1, 1.44 V selectable
OUTPUTS	2 balanced auxiliary lines, 6.3 mm jack	2 balanced auxiliary lines, 6.3 mm jack
FUNCTIONS	Forced ventilation with variable speed. Input signal limiter. LED power, signal, limiter, protection and mode indicators.	Forced ventilation with variable speed Input signal limiter LED indicators for power, signal, limiter, protection and operating mode
CONTROLS	Volume per channel Parallel/stereo/bridge operating mode selector Bass cut off filter GND lift earth disconnection	Volume per channel Parallel/stereo/bridge operating mode selector Bass cutoff filter GND lift earth disconnection
PROTECTION	Soft start up, temperature, short circuit, overload, VHF, DC and AC	Soft start, temperature, short circuit, overload, VHF, DC and AC
S/N RATIO	-	> 100 dB
CROSSTALK	-	> 70 dB
DAMPING FACTOR	> 250	> 250
SPEED CHANGE	> 20 V/ μ s	> 20 V/ μ s
IMPEDANCE	20 Ω for 100 V line, screw terminals and banana plugs	20 Ω for 100 V line, screw terminals and banana plugs
POWER SUPPLY	230 V AC, 1430 W maximum	230 V AC, 1430 W maximum
DIMENSIONS	483 x 44.5 x 403 mm depth. 1U 19" rack	483 x 44 x 403 mm depth. 1 U 19" rack
WEIGHT	7.4 kg	7.4 kg

2-channel power amps with 100 V line output. High performance. Reliable and resistant.



FS-2155E



FS-2503E



FS-2155E



2 x 150 W RMS

FS-2503E

2 x 500 W RMS

CHARACTERISTICS	2-channel power amplifier.	2-channel power amp.
POWER	2 x 150 W RMS	2 x 500 W RMS
RESPONSE	30-20 000 Hz, ± 3 dB	30-20 000 Hz, ± 3 dB
DISTORTION	Harmonic: < 1%	Harmonic: < 1%
INPUTS	2 balanced auxiliary lines, XLR, 700 mV	2 balanced auxiliary lines, XLR, 700 mV
OUTPUTS	2 balanced auxiliary lines, XLR	2 balanced auxiliary lines, XLR
FUNCTIONS	Forced ventilation LED power, signal, clip, temperature and protection indicators	Forced ventilation LED power, signal, clip, temperature and protection indicators
CONTROLS	Volume per channel, trimmer type GND lift earth disconnection	Volume per channel GND lift earth disconnection
PROTECTION	Overload, overcurrent, surge and temperature	Overload, overcurrent, surge and temperature
S/N RATIO	> 90 dB	> 90 dB
IMPEDANCE	4 and 8 Ω and 100 and 70 V lines, screw terminals	4 and 8 Ω and 100 and 70 V lines, screw terminals
POWER SUPPLY	230/115 V AC, 550 W maximum Resettable 3 A fuse	230/115 V AC, 1,800 W maximum Resettable 10 A fuse
DIMENSIONS	483 x 89 x 410 mm depth. 2 U 19" rack	483 x 89 x 410 mm depth. 2 U 19" rack
WEIGHT	14.5 kg	19.8 kg

PA SYSTEM POWER AMPLIFIERS. MULTICHANNEL

4-channel power amplifier with 100 V line output, 4 x 200 W RMS.



FS-4200E 4 x 200 W RMS

CHARACTERISTICS	4-channel power amp. Highly efficient class H amplifier circuit. Switched power supply source. Direct output without 100 V line transformer.
POWER	Stereo and parallel mode: 4 x 200 W RMS 100 V line Bridge mode: 2 x 400 W RMS 200 V line
RESPONSE	20-20 000 Hz, ± 1 dB
DISTORTION	Harmonic: $< 1\%$
INPUTS	4 balanced auxiliary lines, XLR, 0.775, 1, 1.44 V selectable
OUTPUTS	4 balanced auxiliary lines, 6.3 mm jack
FUNCTIONS	Forced ventilation with variable speed Input signal limiter Led power, signal, limiter, protection and operating mode indicators
CONTROLS	Volume per channel Operating mode selector Bass cut off filter GND lift earth disconnection
PROTECTION	Soft start up, temperature, short circuit, overload, VHF, DC and AC
DAMPING FACTOR	>250
SLEW RATE	> 20 V/ μ s
IMPEDANCE	50 Ω 100 V line, speaker connector
POWER SUPPLY	230 V AC, 1150 W maximum
DIMENSIONS	482 x 89 x 241 mm depth. 2 U 19" rack
WEIGHT	6.2 kg

RELATED PRODUCTS



MX-865
Mixer/preamplifier. 7 input channels and 2 output zones.
Page 36.



MX-4000
Multizone mixer/preamplifier.
Allocation matrix with 5 input channels to 4 output zones.
Page 35.

IP audio receiver with line output. Audio reception through the local area network (LAN).
Manages background music, programmed and instant messages, alarms and voice messages using the software included. It has 4 level inputs and 4 output relays for event activation and external device control. Automatic network parameter setting. The perfect solution for large shopping centres, schools, office blocks etc.



AIP-3010

CHARACTERISTICS	IP audio receiver. For audio reception through streaming using multicast through a local area network (LAN). Selection of the audio channel and setting through the front keypad and remotely through a PC. General use separate inputs and outputs. Remote upgrading using software for PC, or locally using SD or USB.
INPUTS	1 x 10/100 base T ethernet, RJ-45 4 separate programmable inputs for events activation through contact closure: message playback, alarms, switching on devices, etc., euroblock 1 USB port and SD card reader for software upgrading
OUTPUTS	1 auxiliary, 2 x RCA 1 V 4 separate programmable outputs for opening and closing contacts, euroblock
POWER SUPPLY	100-240V AC, 16 W
DIMENSIONS	337 x 44.5 x 240 mm depth. 1 U 19" rack
WEIGHT	2.5 kg
ACCESSORIES	Mounts for 19" rack assembly
SOFTWARE	Software for PC with automatic detection of the AIP series devices connected to the local area network Audio channel creation Remote selection of the audio channel in each receiver Remote adjustment of the configuration parameters Scheduled and real-time messages Firmware upgrading

IP SYSTEMS. IP TRANSMITTER

IP audio transmitter with line input. For transmitting audio through the local area network LAN. It has 4 level inputs and 4 output relays for event activation and controlling external devices. It can configure the network parameters automatically. The perfect solution for large shopping centres, schools, office buildings, etc.



AIP-4010

CHARACTERISTICS	IP audio Transmitter. For audio transmission through streaming using multicast through the local area network (LAN). General purpose inputs and outputs. Remote upgrading through software for PC or locally through SD or USB.
INPUTS	1 auxiliary, 2 x RCA and 3.5 mm stereo jack 4 separate programmable inputs for events activation through contact closure, euroblock USB port and SD card reader for software upgrading
OUTPUTS	1 ethernet 10/100 base T, RJ-45 4 separate programmable outputs for opening and closing contacts, euroblock
POWER SUPPLY	100-240 V AC, 16 W
DIMENSIONS	337 x 44.5 x 240 mm depth. 1 U 19" rack
WEIGHT	2.5 kg
ACCESSORIES	Mounts for assembly in 19" rack
SOFTWARE	Software for PC with automatic detection of the AIP series devices connected to the local area network Audio channel creation Remote selection of the audio channel in each receiver Remote adjustment of the configuration parameters Scheduled and real-time messages Firmware upgrading

IP SYSTEMS. IP MICROPHONE

FONESTAR

IP audio system microphone with 7" easy to use touchpad for live paging, managing and playing audio channels, programmed messages, instant messages, events. Internal 8 GB memory for storing multimedia content. It has a USB port and an SD card reader for connecting drives and upgrading firmware.

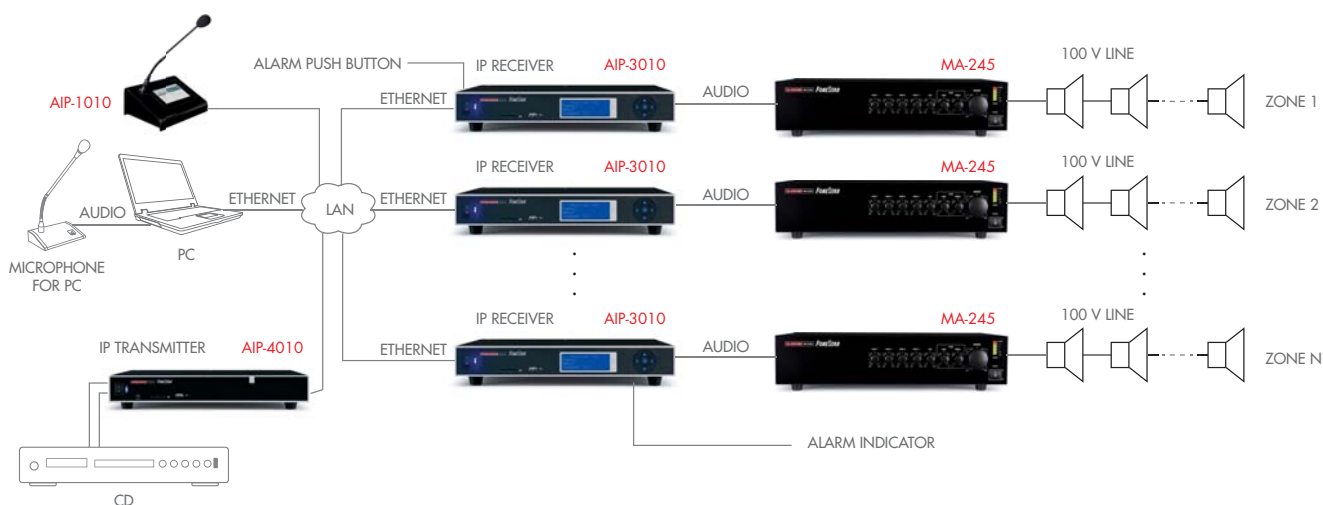


AIP-1010 **NI**

CHARACTERISTICS	IP audio system microphone. 7" touchpad. 8 GB internal memory. Live paging. MP3 player from the internal memory. For managing and playing audio channels, programmed messages, instant messages and events. It functions through the local area network, LAN
INPUTS	1 balanced mic., XLR 600 Ω 5 mV USB port for drive connection SD card reader
OUTPUTS	1 ethernet 10/100/1000 Base T, RJ-45 1 auxiliary, 3.5 mm stereo jack 1 V
POWER SUPPLY	15 to 24 V DC, 1 A with adapter included
DIMENSIONS	Microphone with gooseneck: 370 mm height Base: 285 x 120 x 200 mm depth
WEIGHT	1.6 kg

INSTALLATION EXAMPLE WITH AUDIO IP RECEIVER AIP-3010, AIP-4010 AND AIP-1010

- Installation of IP PA in a local area network (LAN) with N zones using AIP-3010 receivers and 100 V line amplifiers.
- Controlled by a PC with the management software installed. This software is supplied with all the equipment in the AIP family.
- IP audio channels without the need for a PC. For creating and transmitting IP audio channels using an AIP-1010 microphone and AIP-4010 transmitter.
- Including alarm activation using a push button (contact opening/closure) and showing it in the rest of the zones using contact opening or closure.

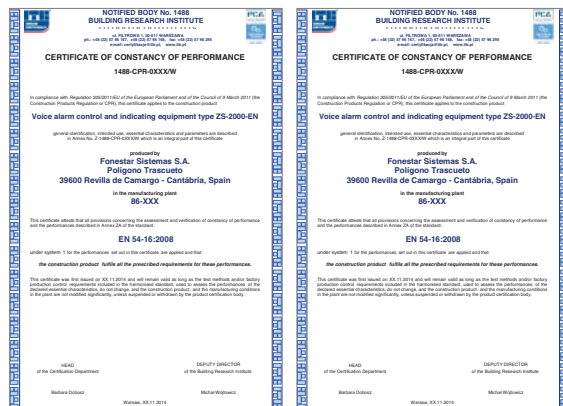


An evacuation system is crucial for sending messages to the public and avoids panic situations. In this way evacuation from a building is much faster and safer than using sirens or bells. This type of system must be available at all times.

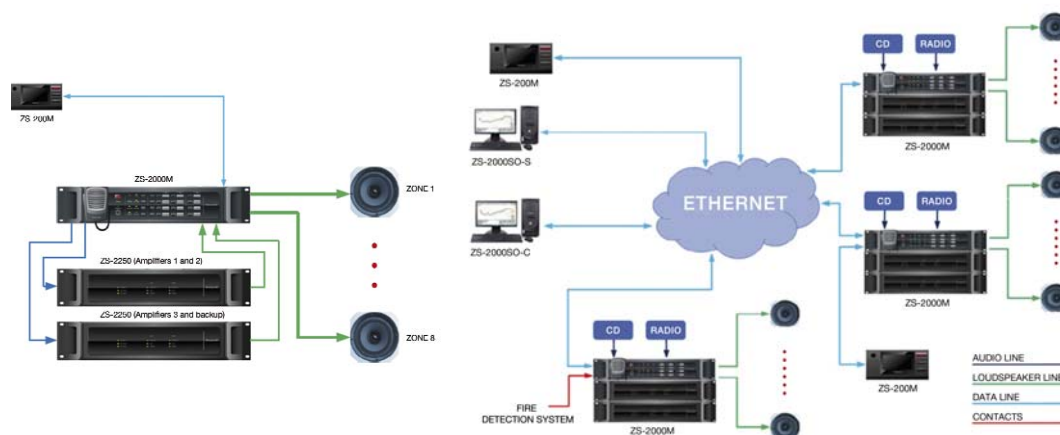
The European EN 54 Standard (Detection and fire alarm systems) is responsible for establishing and monitoring the operational requirements of the evacuation systems. This standard is mandatory in the European Union and specifies the minimum requirements and laboratory tests to ensure a certain safety level for all the components in the fire alarm system. As it is a European Standard, it is mandatory in all member states without having to incorporate it into the internal regulations of the country. PAVA systems must have, for being a product directive, a certificate that has been issued by an approved company guaranteeing the reliability and high quality of the product. All PA installations in spaces with public access must have a system certified with the EN 54 standard.

The FONESTAR ZS-2000-EN system is a flexible, reliable and effective solution for PAVA projects. It is the perfect solution for medium-sized and large installations. The ideal option for hotels, office buildings, shopping centres, stadiums, congress centres, etc.

- EN 54-16:2008 European Standard certified
- Setting through software for PC [included]
- Management and monitoring through local network [software optional]
- Easy installation design and extension
- Incorporated system supervision
- Multichannel class D amplifiers
4 x 125 W, 2 x 250 W and 1 x 500 W
- Microphone with zone selector with LCD touch pad
- Easy to use control interface
- Can be increased to 2000 zones
- Full-duplex intercom function between microphones



SYSTEM ARRANGEMENT





ZS-2000M

Main control unit which performs matrix functions with 8 output zones, message player, emergency microphone monitoring, amplifier control with automatic switching to the reserve amplifier in case of fault and loudspeaker line monitoring. Totally settable through PC. 8 loudspeaker lines, increasable to a maximum of 2000 zones. Acts as a 100 V line switching unit with 2 operating modes: 1 amplifier for each audio source or connection for 1 amplifier every 2 zones, divided into 8 output zones. Direct connection with the paging microphones or through the local network. 4 auxiliary audio inputs.

- Control unit for EN 54 PAVA alarm system
- 8 loudspeaker zones
- Increasable to 2000 zones maximum with ZS-2000M
- Monitoring of 8 loudspeaker lines (A+B)
- Monitoring of ZS-200M microphones
- 100 V line switching with 2 operating modes: connection for 1 amplifier per audio source or connection for 1 amplifier for every 2 zones split to 8 output zones for loudspeakers
- Message player with 512 MB storage capacity.



ZS-200M

Paging microphone with zone selector, for sending voice or pre-recorded messages. Direct connection with the control unit or through the local network (LAN). User friendly touch pad. Several user priority levels available. Flexible configuration for the keys on the screen: zone selection, zone names, groups, messages, etc.



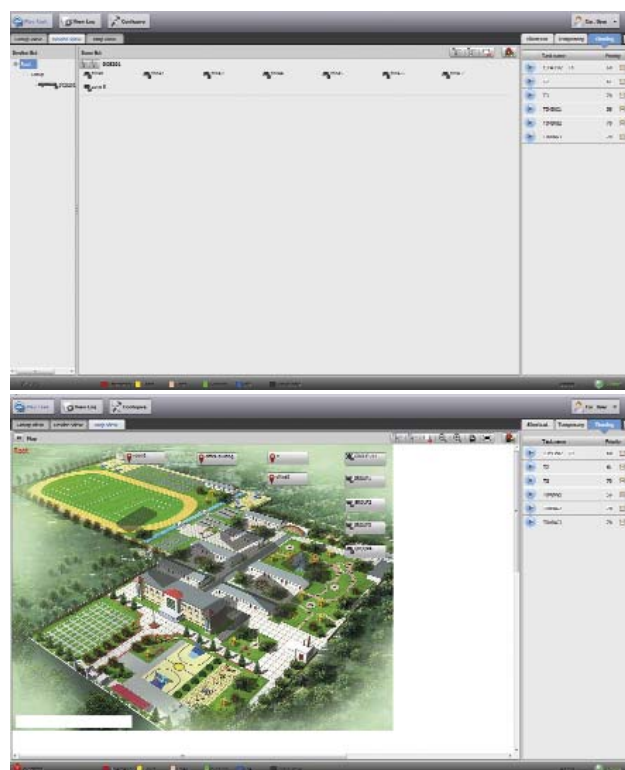
ZS-432810

Input and output management system. It increases the PA system with 4 audio sources and message player with the capacity to store 4 GB. It has 32 general use contact opening/closing inputs and 8 outputs.



ZS-4125/ZS-2250/ZS-1500

Digital power amplifier, 4/2/1 channels [4 x 125 W/2 x 250 W/1 x 500 W], with output transformer for 100 V and 70 V lines.



ZS-200SO-SP/ZS-200SO-S/ZS-200SO-C

Control software for EN 54 PAVA alarm system. For monitoring the state of the system, paging, playing or programming audio files and registering the events in the P.A. system. **ZS-200SO-SP** for medium sized and small installations, up to 20 **ZS-2000M** units can be managed and up to 20 audio channels can be generated. **ZS-200SO-S** and **ZS-200SO-C** for large installations, for managing up to 250 **ZS-2000M** control units and generating up to 60 audio channels.

Minimum requirement of one license for server and one for client.

EN 54 EVACUATION SYSTEMS. ZS-2000-EN

PAVA alarm system. EN 54-16 certified. Can be increased to 2000 zones, 20 audio channels and 20 microphones. Equipment interconnection through the Ethernet network. Management and PC monitoring software [optional].



ZS-2000-EN **N!** EN 54

CHARACTERISTICS

EN 54-16 certified.
Can be increased to 2000 zones.
Monitoring for emergency microphones, amplifying and speaker lines.
Up to 20 audio channels.
Message player incorporated, with capacity to store 512 MB.
Error register and storage.
Microphones with zone selector with touch pad, up to 20 microphones.
Intercom function between microphones incorporated.
Totally settable through your PC.
Management and monitoring software optional.

Main control unit ZS-2000M which performs audio matrix functions with 8 output zones, message player, emergency microphone monitoring, amplifier control with automatic switching to the reserve amplifier in case of fault and loudspeaker line monitoring. Totally settable through PC. 8 loudspeaker zones, increasable to a maximum of 2000 zones. 100 V line switching with two operating modes: connection for 1 paging amplifier and 1 amplifier for each one of the audio sources with 4 auxiliary inputs maximum or connection for 1 amplifier every 2 zones. Direct connection or through Ethernet using the ZS-200M call stations.



ZS-2000M **N!** EN 54

CHARACTERISTICS

Control unit for EN 54 PAVA alarm system.
8 loudspeaker zones.
Increasable to 2000 zones maximum with ZS-2000M.
Monitoring of 8 loudspeaker lines (A+B).
Monitoring of ZS-200M microphones.
100 V line switching with two operating modes: connection for 1 amplifier per audio source or connection for 1 amplifier for every 2 zones split to 8 output zones for loudspeakers.
Message player with 512 MB storage capacity.
Error register and storage.
EN 54-16 certified.
8 inputs and 8 outputs through contact closure.

POWER SUPPLY

100-240 V AC, 120 W and 24 V DC, 2.5 A

ZS-200M microphone with zone selector for paging, message sending and controlling the **ZS-2000M** unit, direct connection or through the local network [LAN]. User friendly touch pad. Flexible configuration for the keys on the screen: zone selection with different buttons, zone names, groups, message sending, etc.

N!

EN 54

Ethernet



ZS-200M

CHARACTERISTICS	Microphone with zone selector for EN 54 PAVA alarm system. 4.3" TFT colour touch pad. Flexible setting for the keys on the screen. EN 54-16 certified. Loudspeaker incorporated, for monitoring zones or communicating with another ZS-200M microphone. Direct connection with the ZS-2000M control unit or through the local network (LAN). Connection of up to 20 microphones.
POWER SUPPLY	12/24 V DC, 2/1 A with adapter included



Panel for **ZS-200M** microphone with zone selector assembly in rack.



N!

EN 54

ZS-200RK

CHARACTERISTICS	Panel for ZS-200M microphone with zone selector assembly in rack.
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Emergency microphone for the **ZS-2000M** control unit or microphone with **ZS-200M** zone selector installed in the **ZS-200RK** rack panel.



N!

EN 54

ZS-200P

CHARACTERISTICS	Emergency microphone for the ZS-2000M control unit or microphone with ZS-200M zone selector installed in the ZS-200RK rack panel. Dynamic capsule. PTT button. Robust construction.
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EN 54 EVACUATION SYSTEMS. ZS-2000-EN

Audio input management system. General use inputs/outputs. It increases the EN 54 PAVA alarm system. It allows the connection of up to 4 additional audio sources to the system. Message player with the capacity to store 512 MB internal memory and 4 GB with the internal SD card. It has 32 general use contact opening/closing inputs and 8 outputs.



ZS-4328IO **N!** EN 54 Ethernet

CHARACTERISTICS	Management system for audio inputs. General use input/outputs. It increases the EN 54 PAVA alarm system. 4 balanced line inputs. Message player. 32 supervised contact opening/closing inputs, euroblock. 8 general purpose contact opening/closing outputs, euroblock. 512 MB internal memory and 4 GB memory with internal SD card. 4 ethernet, RJ45. 2 communication ports RS-485.
POWER SUPPLY	100-240 V AC, 15 W

Digital power amplifiers for EN 54 PAVA alarm systems.



ZS-4125 **N!** EN 54 4 x 125 W Ethernet

CHARACTERISTICS	Digital power amplifier with 4 x 125 W channels, 100 V and 70 V lines. EN 54-16 certified. 2 audio inputs and RJ-45 control for connecting to the ZS-2000M control unit. General front indicators (power supply, battery and input signal) and state (temperature and overload). Supervision using the ZS-2000M control unit. 2 U 19" rack format.
POWER SUPPLY	100-240 V AC, 700 W and 24 V DC, 10 A



ZS-2250 **N!** EN 54 2 x 250 W Ethernet

CHARACTERISTICS	Digital power amplifier, 2 x 250 W channels, 100 V and 70 V lines. EN 54-16 certified. 2 audio inputs and RJ-45 control for connecting to the ZS-2000M control unit. General front indicators (power supply, battery and input signal) and state (temperature and overload). Supervision using the ZS-2000M control unit. 2 U 19" rack format.
POWER SUPPLY	100-240 V AC, 700 W and 24 V DC, 10 A



ZS-1500 **N!** EN 54 500 W Ethernet

CHARACTERISTICS	1-channel 500 W digital power amplifier, 100 V and 70 V lines. EN 54-16 certified. Audio input and RJ-45 control for connecting to the ZS-2000M control unit. General front indicators (power supply, battery and input signal) and state (temperature and overload). Supervision using the ZS-2000M control unit. 2 U 19" rack format.
POWER SUPPLY	100-240 V AC, 700 W and 24 V DC, 10 A

EN 54 EVACUATION SYSTEMS. ZS-2000-EN

Control software for EN 54 PAVA alarm system for small, medium or large installations.



ZS-200SO-SP **NI**

CHARACTERISTICS

Control software for EN 54 PAVA alarm system for medium sized and small installations. Up to 20 ZS-2000M control units can be managed and up to 20 audio channels can be generated. Different user levels supported. Visual management interface of system using maps. Monitoring for all the system elements and fault detection. Stores an events register. Security copy function for the system information.

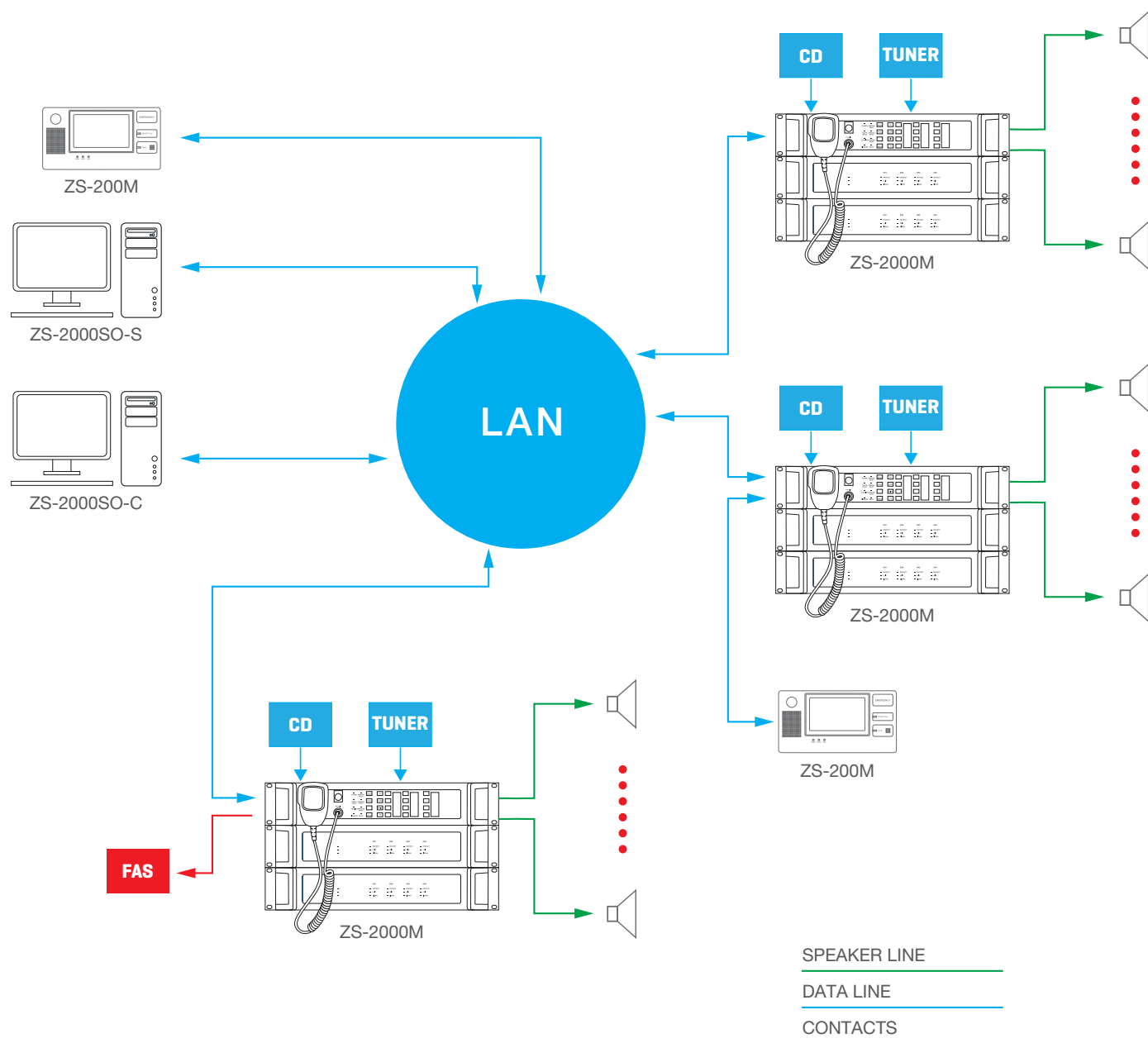
ZS-200SO-S **NI**

Control software for EN 54 PAVA alarm system for large installations. 1 licence for 1 server PC. Up to 250 ZS-2000M control units can be managed and up to 60 audio channels can be generated. Different user levels can be supported. Visual management interface of system using maps. Monitoring for all the system elements and fault detection. Stores an events register. Security copy function for the system information.

ZS-200SO-C **NI**

Control software for EN 54 PAVA alarm system for large installations. 1 licence for 1 client PC. Up to 250 ZS-2000M control units can be managed and up to 60 audio channels can be generated. Different user levels can be supported. Visual management interface of system using maps. Monitoring for all the system elements and fault detection. Stores an events register. Security copy function for the system information.

ZS-2000-EN, EN 54 EVACUATION SYSTEM EXAMPLE



ZONE SYSTEMS. ZS SERIES

Zone system for P.A. with control for 10 loudspeaker zones, can be increased to 300 zones. Paging in one or several zones while background music is maintained in the others. Inputs for connection with the alarm control. 100 V line switching; 2 input channels for the 100 V line coming from the background music amplifiers and paging (maximum of 500 W per zone). Suitable for P. A. installations of any size.

Microphone with zone selector for the zone system mod. ZSC-1110. Priority paging and chimes. Line input for background music reproduction from the microphone. Selection of 300 zones.



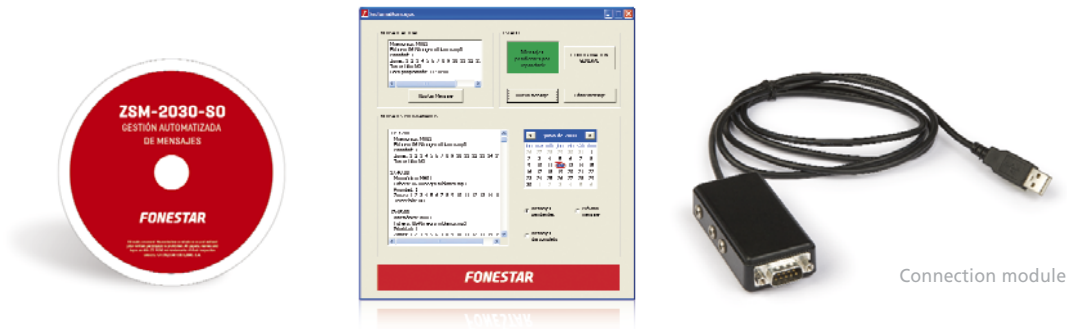
ZSC-1110

CHARACTERISTICS	10-zone switching unit for 100 V line. Can be increased to 300 loudspeaker zones with additional ZSC-1110 units. Suitable for P.A. installations of any size. LED switching matrix indicators. Musical chimes. Connection of up to 16 microphones with ZS-11 zone selector.
INPUTS	2 unbalanced mics., 6.3 mm jack 600 Ω 5 mV 2 unbalanced lines, euroblock 10.000 Ω 775 mV 2 alarm activation through contact closure, euroblock 10 x 100 V line for paging amplifier, euroblock 10 x 100 V line for background music amplifier, euroblock 1 mic. with zone selector, RJ-45
OUTPUTS	10 loudspeaker zones, euroblock 1 unbalanced line, euroblock 10 000 Ω 775 mV 2 alarms through contact closure, euroblock 1 zone increase, RJ-45
RESPONSE	Microphones: 100 - 15 000 Hz Lines: 30 - 18 000 Hz
CONTROLS	Volume: microphones and chimes Tone: Bass: ±10 dB Treble: ±10 dB Chime activation Selection of zones 1 to 10 and general Music and paging selection
POWER SUPPLY	230 V AC, 40 W
DIMENSIONS	484 x 88 x 303 mm depth. 2 U 19" rack
WEIGHT	5.2 kg

ZS-11

CHARACTERISTICS	Microphone with direct selection buttons from 10 zones. Selection of up to 300 zones. Microphone and chime volume control.
MICROPHONE	Electret condenser with gooseneck
INPUTS	1 balanced mic., XLR 600 Ω 5 mV 1 unbalanced line, 6.3 mm jack 10 000 Ω 775 mV 1 zone selector mic., RJ-45
OUTPUTS	1 unbalanced line, 6.3 mm jack 10 000 Ω 775 mV 1 zone selector mic., RJ-45
CONNECTION	Cat 5e cable, up to 100 metres
POWER SUPPLY	24 V DC, 2 A with adapter included
DIMENSIONS	Microphone with gooseneck: 475 mm height Base: 220 x 52 x 143 mm depth
WEIGHT	1.5 kg

Management software and automated transmission of recorded messages and live paging for PC.
Recorded message programming. Live paging. Priority over background music. Compatible with any amplifier.

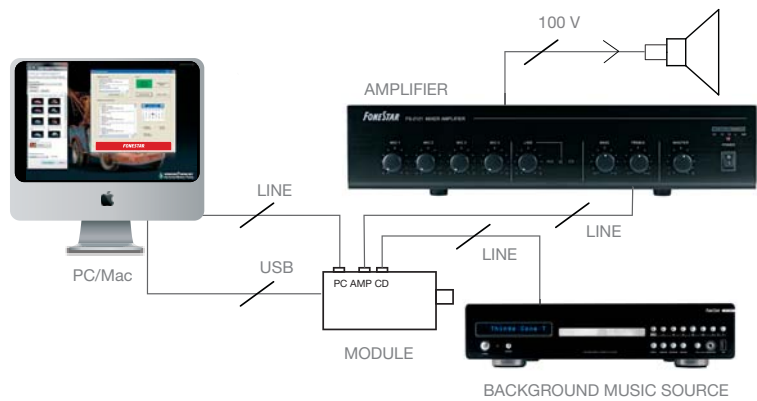


ZSM-2030-SO

CHARACTERISTICS	Management software and automated transmission of recorded messages and live paging for PC. Easy to program timetable for recorded message transmission and repetition using working PC. Priority to messages and paging over background music input for use in amplifiers without priority. Compatible with any amplifier.
REQUIREMENTS	PC Windows operative system. Mac with Intel processor and Parallels emulator Sound card and USB port
INPUTS	1 PC for messages and paging (connection for the PC sound card output), 3.5 mm stereo jack 1 CD for optional background music source, 3.5 mm stereo jack
OUTPUTS	1 amp for connecting to an amplifier, 3.5 mm jack
WEIGHT	0.3 kg
ACCESSORIES	1 cable with 3.5 mm stereo plug to 3.5 mm stereo plug

MESSAGE SYSTEM FOR PC ZSM-2030-SO

Example of message software module connection to an amplifier. It adds message priority over background music input.



ZONE SYSTEMS. ZS SERIES

Programmed message player with 4 output zones. Manages and automates message playback in one or various output zones. Priority for paging and messages over background music inputs. General use inputs and outputs. Programming using touchpad and software for PC included. Connection to Ethernet and Internet for message transfer, programming, software upgrading, etc.



ZSM-1040

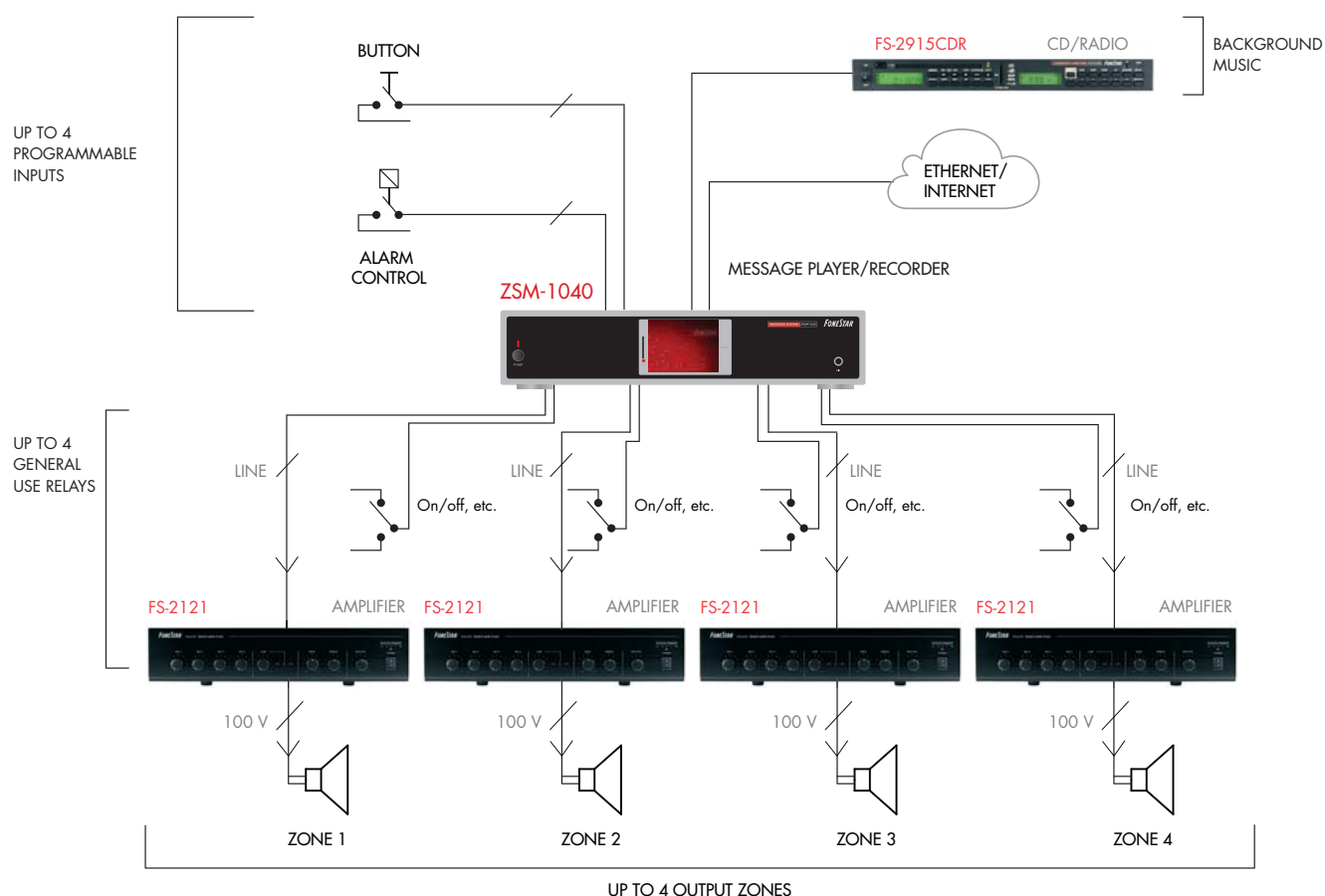
CHARACTERISTICS	Player for programmed messages with 4 output zones. To manage and automate message playback in one or various output zones. Programming with a touchpad display. External alarm management. Interconnection with zone systems ZSC-1016, ZSC-2016 or other P.A. systems. General use inputs and outputs. Priority for paging and messages over background music inputs. Connection to Ethernet and internet for message transfer, programming, software upgrading, etc. through the software included.
INPUTS	4 programmable inputs for events activation through contact closure: message playback, alarms, equipment power, etc., euroblock 1 auxiliary background music, 2 x RCA 1 V 1 ethernet connection, RJ-45 SD card reader
OUTPUTS	4 zones, 2 x RCA 4 general purpose relays, euroblock 1 power supply for switching on equipment, female 3-pin 1 control and audio signal D9/RJ-45 for connecting with ZSC-1016 and ZSC-2016
POWER SUPPLY	230 V AC, 78 W
DIMENSIONS	430 x 89 x 280 mm depth. 2U 19" rack
WEIGHT	5.8 kg
ACCESSORIES	Mounts for assembly in a 19" rack
SOFTWARE	Control software for the programmed message player model ZSM-1040. It can remotely control ZSM-1040, monitor its state, create programmed messages, set alarms and change their parameters. If there are several message management systems available, they can be organized in groups to ease their administration. Furthermore, audio files can be sent for playback in programmed messages and set alarms, as well as downloading the files in the message system memory to your PC. The application can be minimized, leaving it as resident while you work with other programs. The software is compatible with Windows XP, Vista and 7 and with MAC through the Parallels emulator.

Control software for the programmed message player model ZSM-1040. It can remotely control ZSM-1040, monitor its state, create programmed messages, set alarms and change their parameters. If there are several message management systems available, they can be organized in groups to ease their administration. Furthermore, audio files can be sent for playback in programmed messages and set alarms, as well as downloading the files in the message system memory to your PC. The application can be minimized, leaving it as resident while you work with other programs. The software is compatible with Windows XP, Vista and 7 and with MAC through the Parallels emulator



MESSAGE PLAYER ZSM-1040

Connection example with 4 outputs zones, independent message player.



ZONE SYSTEMS. MZ SERIES

Highly versatile multifunction P. A. unit, 240 W RMS. 5 zones with 100 V line output and independent volume control, increasable up to 20 zones. 3 audio sources incorporated: a DVD/CD player, USB/MP3 player and digital AM/FM tuner. Events programming function: on, off and zone selection.

It can operate in background music mode or background music and announcement mode: in background music mode, music playback in the other zones is interrupted when an announcement is given. In background music and announcement mode another amplifier is neccessary, eg. MZ-240A model, for playing the announcments in some zones while the MZ-5240M plays background music in others.



5 ZONES, TO 20 ZONES MAXIMUM

480 W max. 240 W RMS

DVD VIDEO

USB

MP3

MPEG

RADIO

MZ-5240M

CHARACTERISTICS	5-zone PA system unit with DVD/CD, USB/MP3 and AM/FM digital tuner. Function mode for background music or background music and paging. Events program function. The system can be completed with up to 3 zone extension amplifiers, mods. MZ-240E, up to 4 EMC amplifiers, mods. MZ-240A and up to 4 microphones with zone selector, mod. MZ-20. 5 zones with independent volume control. LCD screen.
POWER	480 W maximum, 240 W RMS
INPUTS	2 unbalanced microphones, 6.3 mm jack 1 auxiliary line, 2 x RCA 1 auxiliary emergency line, 2 x RCA 1 zone selector microphone, RJ-45 1 EMC amplifier, 100 V Euroblock 2 alarms with contact closure, Euroblock
OUTPUTS	1 system control, RJ-45 5 zones and general, 100 V line Euroblock 2 auxiliary lines, EMC amplifier and background music, 2 x RCA 1 composite video, RCA 1 communication port RS-232, D9
POWER SUPPLY	230 V AC, 900 W
DIMENSIONS	430 x 89 x 381 mm depth. 2 x 19" U rack.
WEIGHT	16.3 kg
ACCESSORIES	Mounts for assembly in 19" rack. PC storage software and events programming transfer Remote control Battery for the remote control 2 x RCA cable. RCA Cable Cat. 5 cable, RJ-45 RS-232 cable. Aerial.
OPTIONAL	MZ-20: Microphone with zone selector MZ-240E: Zone extension amplifier MZ-240A: EMC amplifier.



MZ-20

MZ-5240M/MZ-240E/MZ-240

Microphone with zone selector, MZ series. For selecting up to 20 zones, chime and paging transmission, and microphone priority configuration. Up to 4 microphones per system.



MZ-20

CHARACTERISTICS	PA Microphone with 20 zone selector. Musical chimes. Paging.
MICROPHONE	Electret condenser with gooseneck.
INPUTS	1 zone selector mic., RJ-45
OUTPUTS	1 zone selector mic., RJ-45
CABLE	Cat. 5e type cable
POWER SUPPLY	230 V AC
DIMENSIONS	Microphone with gooseneck: 400 mm height Base: 200 x 50 x 145 mm depth.
WEIGHT	0.9 kg
ACCESSORIES	Cat. 5e cable, RJ-45

EMC amplifier allowing you to amplify paging in zones while background music is being played in others, when the the MZ zone system is operating in background music and paging.

It has an amplifier incorporated and operates as an extension of the P.A. unit model **MZ-5240M**.



MZ-240A

**480 W max.
240 W RMS**

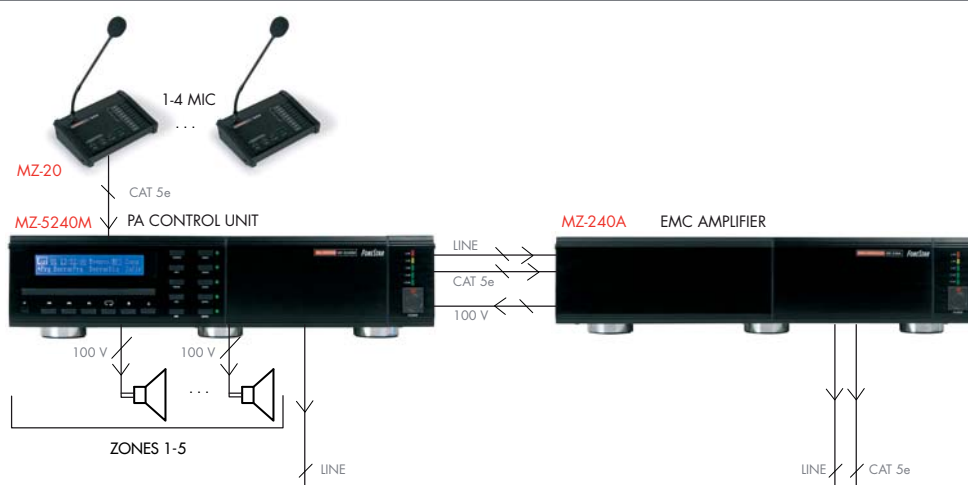
MZ-240E

**480 W max.
240 W RMS**

CHARACTERISTICS	EMC Amplifier. Amplifies paging when the zone system is working in background music and EMC mode.	5-zone extension amplifier. Independent volume control in each zone.
POWER	480 W maximum, 240 W RMS	480 W maximum, 240 W RMS
INPUTS	1 auxiliary line, 2 x RCA 1 system control, RJ-45	1 auxiliary line, 2 x RCA 1 EMC amplifier, 100 V line Euroblock 1 system control, RJ-45
OUTPUTS	1 auxiliary line, 2 x RCA 4-16 Ω and 100 V and 70 V lines, Euroblock 1 system control, RJ-45	1 auxiliary line, 2 x RCA 5 zones, 100 V line Euroblock. 1 system control, RJ-45.
POWER SUPPLY	230 V AC, 900 W	230 V AC, 900 W
DIMENSIONS	430 x 89 x 381 mm depth. 2 x 19" U rack.	430 x 89 x 381 mm depth. 2 x 19" U rack.
WEIGHT	14.7 kg	14.7 kg
ACCESSORIES	Mounts for assembly in 19" rack. 2 x RCA cable Cat. 5 cable, RJ-45	Mounts for assembly in 19" rack. 2 x RCA cable. Cat. 5 cable, RJ-45.

EXAMPLE OF MZ SERIES ZONE SYSTEM

Example of operating mode for background music and paging.
Up to 20 zones.



ZONE SYSTEMS. MPX SERIES

Preamplifier with allocation matrix for 8 input channels to 8 output zones with independent volume control, increasable to 32 zones.

Musical source selection and volume control for each zone through the front panel or the optional zone control models **MCR-81** or **MCR-90E**.

Priority paging through microphone with zone selector model **M-880** or MIC 1 input, emergency, evacuation and warning message siren through contact closure per zone.

A highly versatile system which is suitable for installations of any size, allowing music to be selected in each zone.

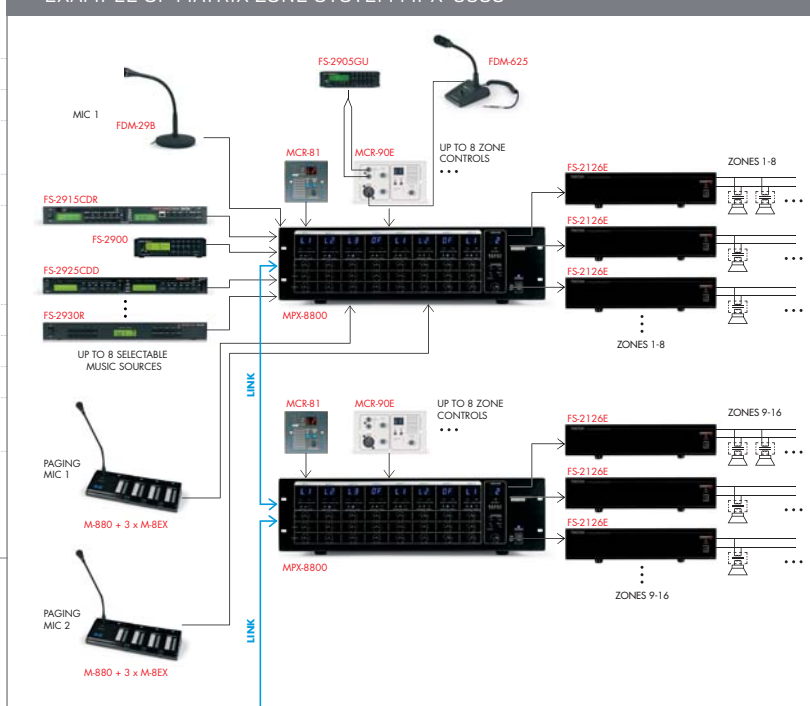
Suitable for commercial installations, hotels with conference rooms, etc.



MPX-8800

CHARACTERISTICS	Preamplifier with allocation matrix for 8 input channels to 8 output zones with independent volume control, increasable to 32 zones. 8 output zones with independent volume control, display for showing the selected source, microphone volume and background music. Optional zone controls for selecting whether to send the program out in the zone or local source. Monitor speaker integrated for controlling the audio sent out in each zone. Priority on contact closure, microphone with zone selector and MIC 1 input. Emergency message input and emergency, evacuation or warning siren. LED indicators for power, bus occupation, mic. 1 activation and monitor output level.
INPUTS	1 balanced mic., XLR 600 Ω 5-300 mV 4 balanced mics./lines, euroblock 600 Ω 5 mV, 10 000 Ω 300 mV switchable 4 lines, 2 x RCA 47 000 Ω 2 V 2 mics. with zone selector, RJ-45 10 000 Ω 500 mV 8 lines of remote sources, Euroblock 10 000 Ω 1.1 V 8 zone controls, RJ-45 1 link in extension, D37 1 emergency message, Euroblock 8 inputs for message and emergency siren, evacuation and warning activation on contact closure
OUTPUTS	8 balanced or unbalanced zones, euroblock 600 Ω 775 mV 1 link out extension, D37
RESPONSE	20-20 000 Hz ± 3 dB
DISTORTION	Harmonic: < 0.07% at 1 kHz
S/N RATIO	Microphones > 65 dB Lines > 85 dB
PHANTOM	48 V in inputs 5 to 8, selectable
PRIORITY	Emergency messages through signal level Siren on contact closure for each zone MIC 1 through signal level Microphone with zone selector
POWER SUPPLY	230/115 V AC, 20 W and 24 V DC, 0.8 A
DIMENSIONS	483 x 133 x 325 mm depth. 3U 19" rack
WEIGHT	10.3 kg
ACCESSORIES	1.5 m interconnection cable, D37 Microphone cable, Cat 5e, RJ45
OPTIONAL	M-880: Microphone with zone selector MCR-81: Zone control MCR-90E: Zone control with inputs for local sources

EXAMPLE OF MATRIX ZONE SYSTEM MPX-8800



Microphone with zone selector and chimes for the audio matrix MPX-8800 model. Selection of 8 zones increasable to 32 with M-8EX extension modules. Connection to the system using Cat 5 cable.

M-880

CHARACTERISTICS	Microphone with zone selector. Chimes. Selection of 8 zones, increasable to 32 zones. LED indicators for power, zone selection and output level. Personalization of zone names. Zone selection and paging in the audio matrix MPX-8800
MICROPHONE	Electret condenser with gooseneck and led ring
INPUTS	1 balanced mic., XLR 600 Ω 5 mV
OUTPUTS	1 zone selector mic., RJ-45 Zone enlargement, rectangular connector
CABLE	Cat 5e cable, distance over 100 m
PHANTOM	12 V
POWER SUPPLY	24 V DC, 0.2 A with adapter included
DIMENSIONS	Microphone with gooseneck: 440 mm height Base: 180 x 60 x 147 mm depth
WEIGHT	1.3 kg
ACCESSORIES	Cat 5e connector cable, RJ 45 Flat cable for increasing zones. Windshield
OPTIONAL	M-8EX: 8-zone extension



M-8EX

CHARACTERISTICS	8-zone extension module for the microphone with zone selector model M-880. A maximum of 3 modules per microphone. LED zone activation indicators. Personalization of zone names.
CABLE	Flat cable for zone enlargement
CONTROLS	Zone selection
DIMENSIONS	70 x 60 x 142 mm depth
WEIGHT	0.5 kg
ACCESSORIES	Plate and screws for connection

Zone control for audio source selection and with volume control for audio matrix model MPX-8800. Mic. and line inputs with independent volume control assignable as remote source, with box for wall flush mounting.



MCR-81

CHARACTERISTICS	Zone control for audio matrix model MPX-8800. Audio source selection. Volume control.
INPUTS	-
OPTIONAL	46006: surface box
CABLE	Cat 5e cable, distance of over 100 m
PHANTOM	-
POWER SUPPLY	24 V DC, Euroblock, power supply through the audio matrix or a local power supply
COLOUR	White
DIMENSIONS	Total: 85 x 85 x 47 mm depth Insert: 70 x 70 x 30 mm depth
WEIGHT	0.1 kg
ACCESSORIES	Box for flush mounting

MCR-90E

CHARACTERISTICS	Zone control, for audio matrix model MPX-8800. Audio source selection. Microphone and local music source input. Volume control.
INPUTS	1 balanced mic., XLR 600 Ω 5mV 1 auxiliary, 2 x RCA 10 000 Ω 350 mV
OPTIONAL	Surface box. PLEASE ENQUIRE
CABLE	Cat 5e cable, distance of over 100 m
PHANTOM	12 V
POWER SUPPLY	24 V DC, Euroblock, power supply through the audio matrix or a local power supply
COLOUR	White
DIMENSIONS	Total: 145 x 85 x 47 mm depth Insert: 130 x 70 x 30 mm depth
WEIGHT	0.2 kg
ACCESSORIES	Box for flush mounting

ZONE SYSTEMS. MPZ SERIES

Multizone amplifier with 5-input channel matrix and USB/SD/MP3 player with digital FM tuner to 4 output zones with independent volume control. Possible for remote paging using a microphone with zone selector model M-46. Suitable for commercial installations with several zones and different musical programs.



MPZ-461



4 x 60 W RMS

CHARACTERISTICS	Multizone amplifier. USB/SD/MP3 player. Digital FM radio tuner. 5-input channel allocation matrix and USB/SD/MP3 player with FM digital tuner to 4 output zones. 4 zones with independent volume control and line output. Phantom power supply. Paging priority. Microphone input with zone selector. Communication protocol through the RS-232 port. Remote control for MP3 player.
POWER	4 x 60 W RMS
RESPONSE	80-16 000 Hz ± 3 dB
DISTORTION	Harmonic: < 1%
INPUTS	3 balanced mics/lines, combo (XLR and 6.3 mm jack) 600 Ω 7.5 mV and 10 000 Ω 350 mV, switchable 2 auxiliaries, 2 x RCA 10 000 Ω 350 mV 1 tel. paging, screw terminals 10 000 Ω 350 mV 1 mic. with zone selectors, RJ-45 1 RS-232, D9
OUTPUTS	4 balanced or unbalanced lines zones 1 to 4, screw terminals, 600 Ω 350 mV 1 monitor, screw terminals 1 W 8 Ω
CONTROLS	Channels 1 to 5: gain, bass, treble, volume and zone allocation USB/SD/MP3/FM player: zone allocation Tel. paging, volume and zone selector Zones 1 to 4: volume control, monitor selector Monitor volume GND LIFT earth disconnection
S/N RATIO	> 65 dB
PROTECTION	Temperature, overload and short circuit
PHANTOM	48 V in mics 1 to 3, selectable
PRIORITY	Input 1, Tel. paging and microphone with zone selector through signal level
IMPEDANCE	4 zones: 4 Ω and 100 and 70 V lines, screw terminals
POWER SUPPLY	230 V AC, 375 W maximum
DIMENSIONS	483 x 133 x 410 mm depth. 3 U 19" rack
WEIGHT	15.5 kg
ACCESSORIES	FM aerial
OPTIONAL	M-46: microphone with zone selector

Microphone with zone selector for amplifier MPZ-461.

For selecting up to 4 zones, paging and musical chimes in the amplifier.

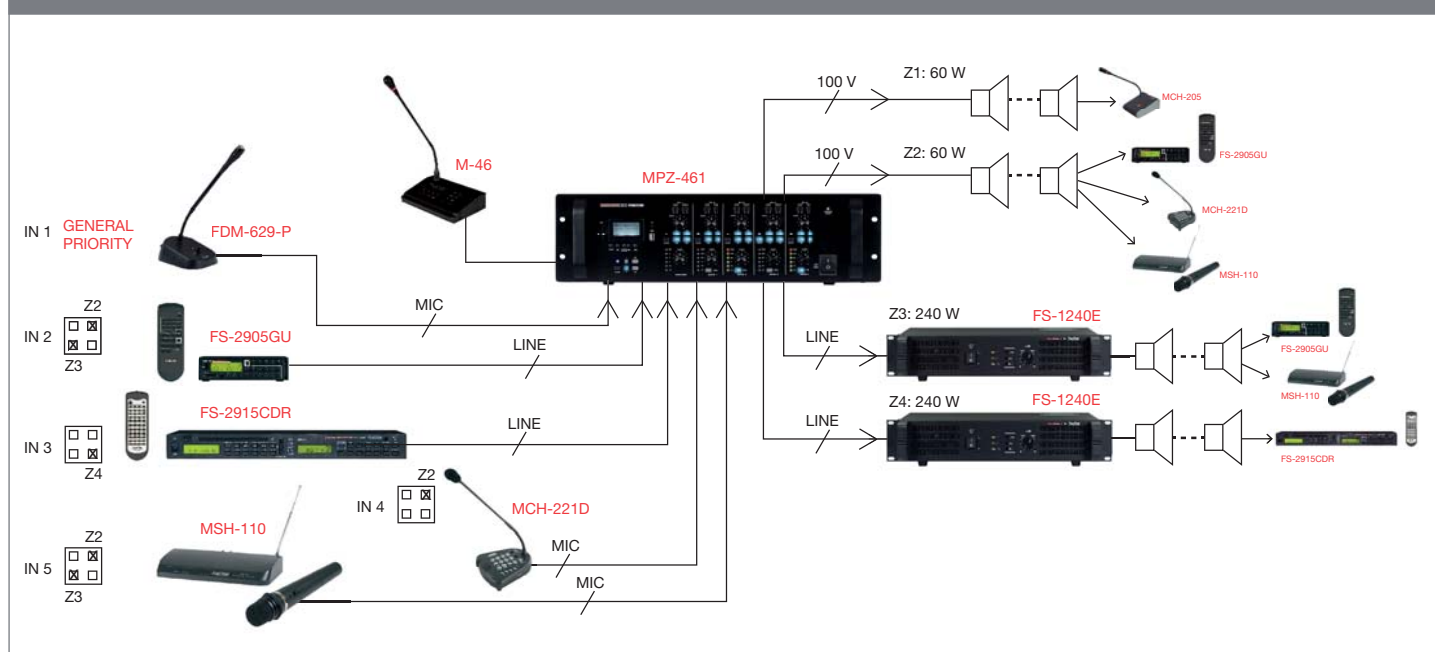


M-46 N!

CHARACTERISTICS	Microphone with 4-zone selector. Musical chimes. LED ring and power indicators, zone and output level selection. Zone selection and paging in amplifier mod. MPZ-461.
MICROPHONE	Electret condenser with gooseneck
INPUTS	1 mic. 5-pin socket 1 link input, RJ-45
OUTPUTS	1 zone selector mic., RJ-45
CONNECTION	RJ-45 cable, for distances over 100 m
PHANTOM	12 V
POWER SUPPLY	24 V DC, 2 A with adapter included, power through the amplifier or local power supply
DIMENSIONS	Gooseneck microphone: 470 mm height Base: 220 x 55 x 140 mm depth
WEIGHT	1.4 kg
ACCESSORIES	RJ-45 cable



EXAMPLE SYSTEMS



ZONE SYSTEMS.
 MPZ SERIES

P. A. Amplifier with 5 x 100 V line output zones and independent volume control per zone. Compact zone system with 120 W RMS amplifier for 5 speaker zones. It can amplify background music in all zones. When an announcement is given in one zone, music playback will be interrupted in the rest of the zones until the announcement has finished. Paging and zone selection with the M-512 model microphone.

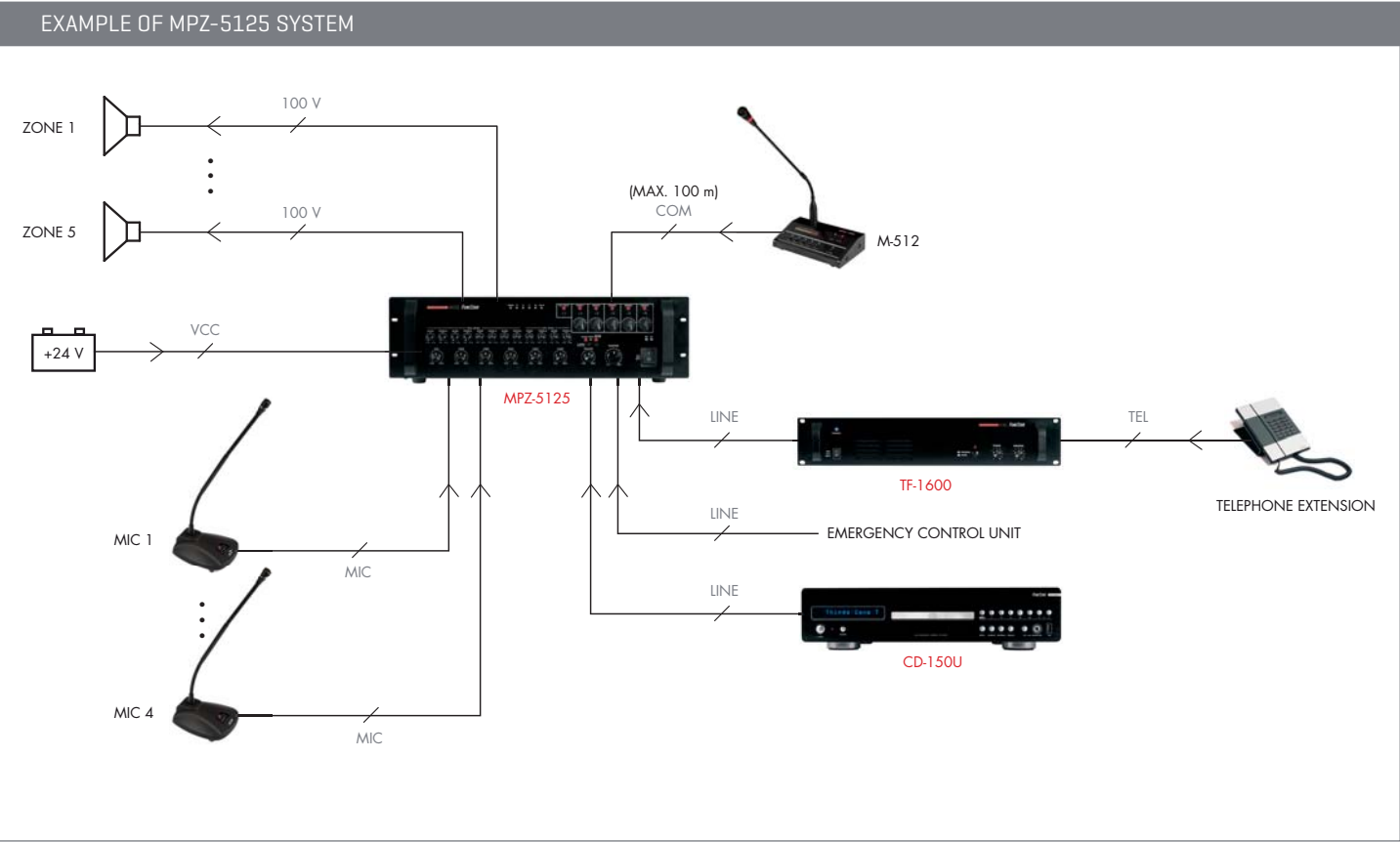


MPZ-5125
 120 W RMS

CHARACTERISTICS	P. A. Amplifier. 5 zones of selectable loudspeakers with independent volume control. Microphone input with zone selector. Phantom power supply, priority, chimes, siren and emergency paging.
POWER	120 W RMS
RESPONSE	20 - 20 000 Hz ± 3 dB
DISTORTION	Harmonic: < 0.5%
INPUTS	4 balanced mics., combo (XLR and 6.3 mm jack) 600 Ω 2.45 mV, adjustable 2 auxiliaries, 2 x RCA 47 000 Ω 250 mV 1 tel. input, RCA 10 000 Ω 300 mV 1 emergency, RCA 10 000 Ω 300 mV 1 paging microphone, D15 30 mV 600 Ω
OUTPUTS	1 line out, 2 x RCA 600 Ω 1 V
CONTROLS	Tone: Bass: ±10 dB Treble: ±10dB Volume: mics. 1 to 4, aux 1-2, chimes, siren, tel. input and general volume
PHANTOM	48 V in mics. 1 to 4, selectable
PRIORITY	Emergency through signal level Tel. input, through signal level Microphone with zone selector through signal level Input 1, through signal level, selectable Chimes on contact closure or using button Siren using button
CHIMES	2 chimes, selectable
ZONE SELECTOR	5 selectable speaker zones with independent volume control
IMPEDANCE	4 and 8 Ω and 100 and 70 V lines, screw terminals
POWER SUPPLY	230 V AC, 200 W and 24 V DC, 5A
DIMENSIONS	482 x 132 x 450 mm depth. 3 U 19" rack
WEIGHT	14 kg

Microphone with zone selector for MPZ-5125 amplifier.
Up to 5 zones can be selected for paging and chimes in the amplifier.

M-512	
CHARACTERISTICS	Microphone with 5-zone selector. Musical chimes. LED power ring and indicators, zone selection and output level. Zone selection and paging in the MPZ-5125 model amplifier.
MICROPHONE	Electret condenser with gooseneck
INPUTS	1 mic., XLR
OUTPUTS	1 paging mic., D15
CABLE	10-conductor cable, distance of over 100 m
PHANTOM	12 V
POWER SUPPLY	24 V DC, 120 mA, power supply through the amplifier or local power supply
DIMENSIONS	Microphone with gooseneck: 460 mm height Base: 200 x 55 x 120 mm depth
WEIGHT	1 kg
ACCESSORIES	2m connection cable 24 V DC power supply connector Windshield



ZONE SYSTEMS. MXZ SERIES

2-channel multizone mixer/preamplifier with 6 output zones. Two operating modes: as an auxiliary line switching unit with one amplifier per zone or as a 100V line switching unit with one background music amplifier and another for paging in all zones. Message recorder/player with selectable playback mode. With the possibility of remote paging through the **M-203** microphone with zone selector (up to 6 microphones).



MXZ-2036

CHARACTERISTICS	Multizone mixer/preamplifier. 6 selectable output zones. Recorder/player for 3 pre-recorded messages. Remote paging and pre-recorded messages through the optional M-203 microphone. Phantom, chimes and priority.
INPUTS	1 balanced mic., XLR 600 Ω 2.5 mV 1 mic. with zone selector, RJ-45 500 mV 1 CD, 2 x RCA 47 000 Ω 500 mV 1 tuner, 2 x RCA 47 000 Ω 200 mV 1 tape, 2 x RCA 47 000 Ω 200 mV Selection of 1 emergency message on contact closure, Euroblock
OUTPUTS	Paging output, Euroblock 47 000 Ω 1.5 V Background music output, Euroblock 47 000 Ω 1.5 V 6 zones, Euroblock 47 000 Ω 1.5 V 6 priority relays in attenuators 24 V DC, Euroblock
CONTROLS	Microphone volume, auxiliary and general Zone 1 to 6 selection Auxiliary input selection: tape, CD and tuner Messages: Play, stop and rec Message and playback mode selector
FUNCTIONS	Recorder/player for 3 messages, 1 minute maximum per message Two of the messages are played from the front panel and are selectable on contact closure. The third message is played from the M-203 microphone with zone selector
RESPONSE	20-20 000 Hz ± 3 dB
DISTORTION	Harmonic: < 0.1 %
S/N RATIO	> 90 dB
PHANTOM	48 V
PRIORITY	Mic. with zone selector depending on signal level Chimes on contact closure Pre-recorded messages
POWER SUPPLY	230 V AC, 10 W
DIMENSIONS	484 x 88 x 301 mm depth. 2U 19" rack
WEIGHT	6 kg
ACCESSORIES	Cat 5e connector cable, RJ45 Mounts for assembly in 19" rack
OPTIONAL	M-203: microphone with zone selector

Microphone with zone selector and chimes for multizone mixer/pre-amplifier MXZ-2036. It allows pre-recorded message playback. 6-zone selection. System connection using a Cat 5e cable.

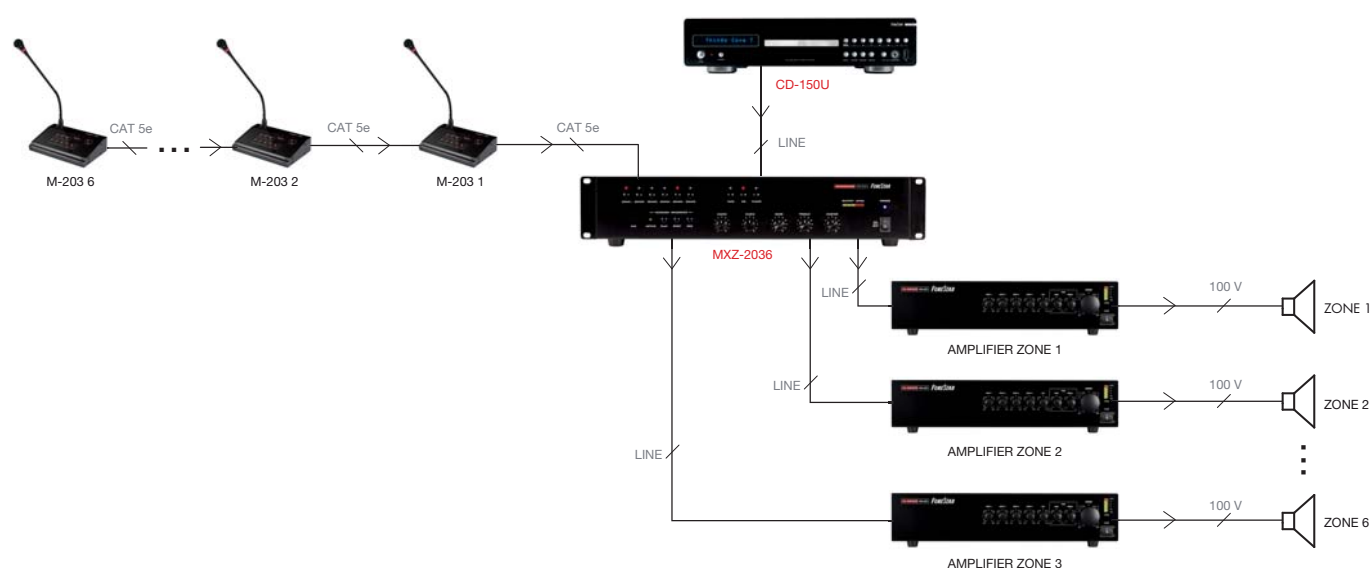
M-203

CHARACTERISTICS	6-zone paging microphone. Chimes. Paging and pre-recorded messages in the mixer MXZ-2036.
MICROPHONE	Electret condenser with gooseneck
INPUTS	1 balanced mic., XLR 600 Ω 5 mV 1 zone selector mic., RJ-45
OUTPUTS	1 paging mic, RJ-45
PHANTOM	12 V
CABLE	Cat 5e cable, distance over 100 m
POWER SUPPLY	24 V DC, 0.2 A, power supply through the mixer/preamplifier or local power supply
DIMENSIONS	Microphone with gooseneck: 440 mm height Base: 220 x 55 x 145 mm depth
WEIGHT	1.3 kg
ACCESSORIES	Cat 5e connector cable, RJ45 24 V DC power supply connector Windshield



EXAMPLE OF MXZ-2036 SYSTEM

Example of switching for auxiliary line with an amplifier per zone



ZONE SYSTEMS. MULTIZONE SERIES

Amplification control unit with control for 6 zones or rooms and 6 audio sources. It includes 6 remote zone controls. A music program can be selected from each zone and the volume can be controlled using the touch pad panels supplied. Independent stereo amplifiers for each zone.

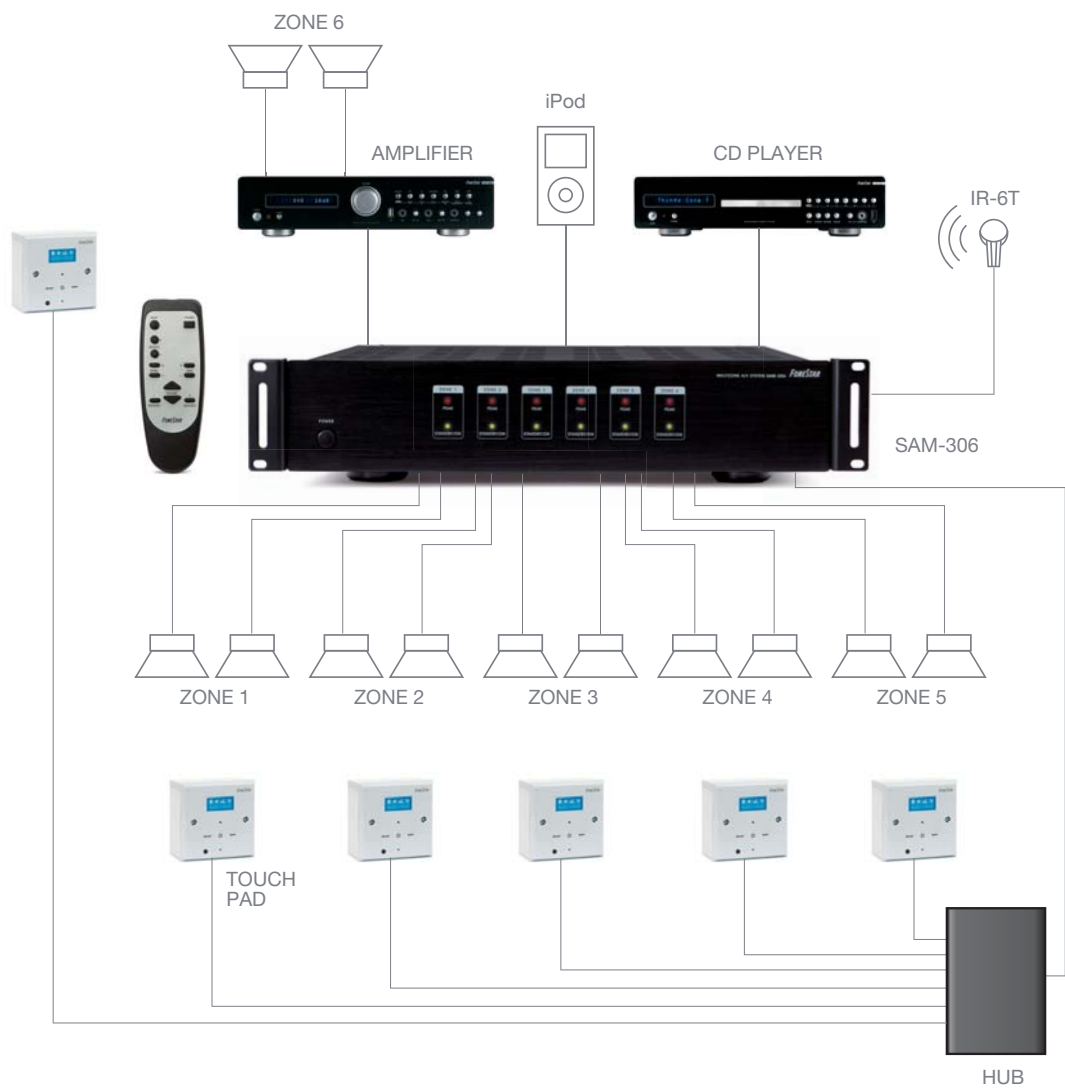
Control uses RS-232 to be used with other systems. The IR transmitters let you use the remote controls for the audio sources from the zones. A versatile system with high quality audio. Split audio system for offices, home, doctor's surgery, etc.



SAM-306

CHARACTERISTICS	Multizone audio system central unit. Can be increased to 18 zones. Allocation matrix for audio sources to speaker zones. 6 speaker zones, with highly efficient class D amplifier for each zone. 6 zone control touchpads. Communications protocol through the RS-232 port.
POWER	Zones 1 to 6: 2 x 50 W RMS at 4 Ω 2 x 25 W RMS at 8 Ω 100 W RMS at 8 Ω in bridge mode
RESPONSE	20-20 000 Hz
INPUTS	6 auxiliary inputs, 2 x RCA 1 PA, 3.5 mm mono jack 1 mute in, 3.5 mm mono jack 1 extension, male rectangular 18-pin connector 1 control panel, RJ-45 1 RS-232, D9
OUTPUTS	6 hi-fi stereo speaker zones, Euroblock 6 pre-amp, 2 x RCA 7 outputs for remote control IR transmitter, 3.5 mm mono jack 6 status, 3.5 mm mono jack 1 extension, male rectangular 18-pin connector 1 control out, 3.5 mm mono jack
DISTORTION	Harmonic: < 0.1 dB
S/N RATIO	> 85 dB
PROTECTION	Overload, short-circuit and temperature
COLOUR	Black
POWER SUPPLY	230/115 V AC, 1250 W
DIMENSIONS	483 x 89 x 425 mm depth. 2 U 19" rack
WEIGHT	13.5 kg
ACCESSORIES	6 zone controls 1 remote control
OPTIONAL	IR-6T: IR transmitter for remote control 46006: Surface box for zone control

EXAMPLE OF SAM-306 MULTIZONE SYSTEM



Accessories for the SAM-306 multizone control unit.



	IR-6T	46006
CHARACTERISTICS	IR transmitter for controlling the audio source in each zone using the remote control	ABS surface installation box for model MCR-81 and zone control touch pad for the SAM-306.
COLOUR	-	White
CABLE	1.5 m with 3.5 mm mono jack connector	-
DIMENSIONS	-	85 x 85 x 42 mm depth

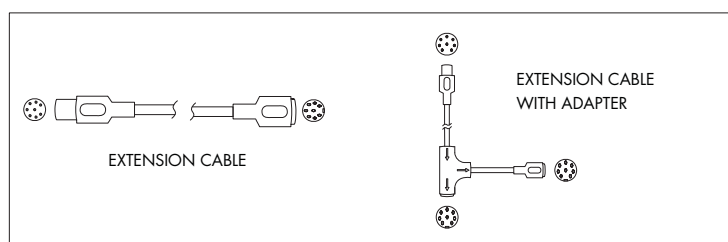
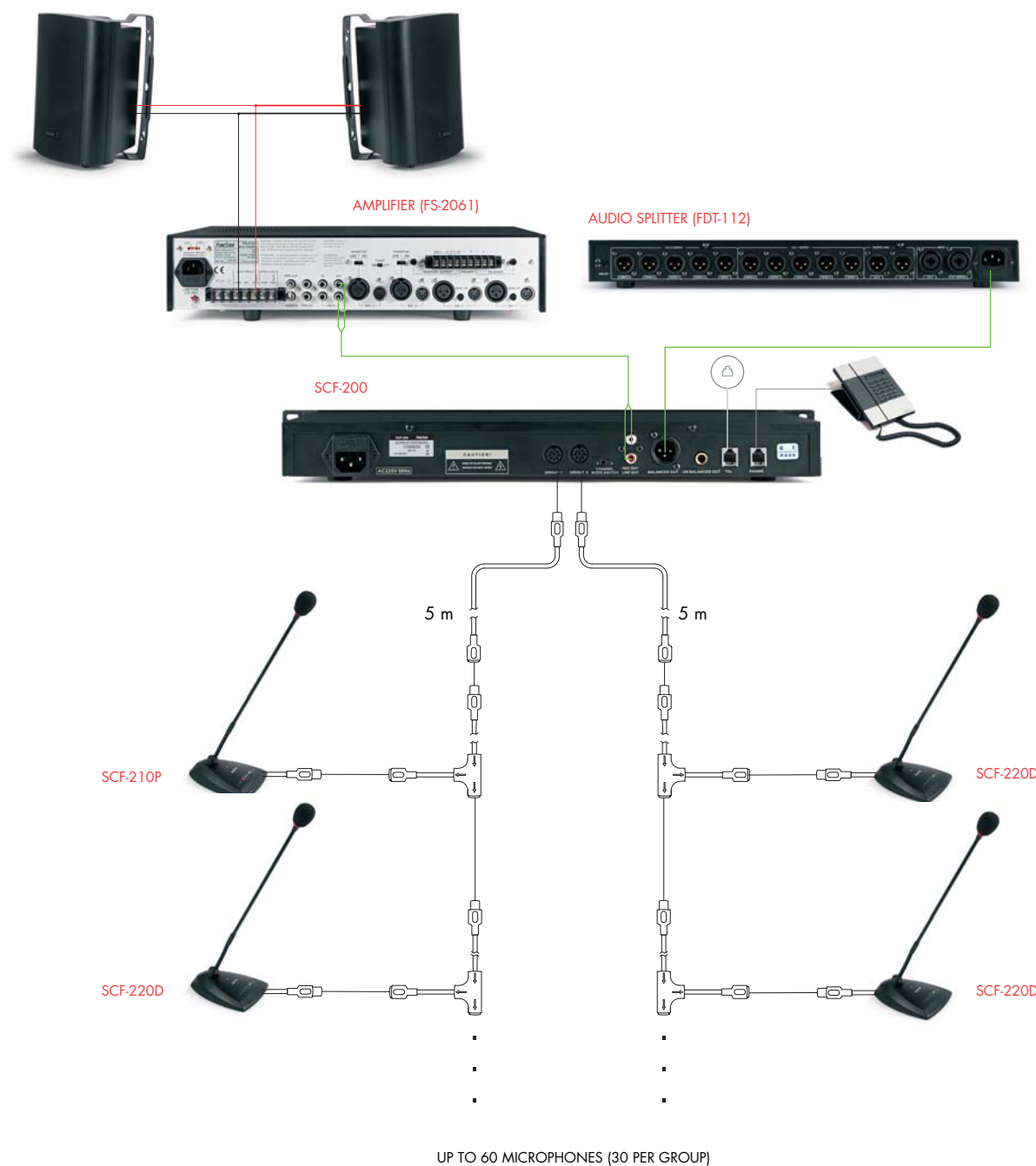
CONFERENCE SYSTEMS. 200 SERIES

Conference system designed for rooms with PA. The system allows you to connect a telephone to take part in the conference. The control unit provides an output signal for recording, amplifying or splitting. Up to 60 microphones can be connected.



	SCF-200	SCF-210P	SCF-220D
CHARACTERISTICS	System power supply control unit. Input for telephone connection. Allows the connection of up to 60 microphones.	President microphone with speech priority and possibility of cancelling delegate microphones. Metal microphone base.	Delegate microphone. Metal microphone base.
MICROPHONE	-	Unidirectional electret condenser	Unidirectional electret condenser
RESPONSE	40-16,000 Hz	50-17,000 Hz	50-17,000 Hz
CONTROLS	Telephone, output volume, and bass and treble tone controls Selector for maximum number of microphones working at the same time	Priority and on/off	On/off
LED INDICATORS	On/off	LED ring and power indicator	LED ring and power indicator
INPUTS	1 telephone and telephone line, 2 x RJ-11 2 groups of microphones, 2 x female DIN 8 to interconnect the system	Power supply and audio, 2.1 m male DIN 8 interconnection cable	Power supply and audio, 2.1 m male DIN 8 interconnection cable
OUTPUTS	1 unbalanced mic., XLR and 6.3 mm jack 1 rec, 2 x RCA 500 mV	Audio, interconnection cable	Audio, interconnection cable
POWER SUPPLY	230 V AC	18 V DC, supplied by the control unit	18 V DC, supplied by the control unit
DIMENSIONS	482 x 44 x 250 mm depth. 1 U 19" rack	Gooseneck microphone: 430 mm height Base: 115 x 45 x 160 mm depth	Gooseneck microphone: 430 mm height Base: 115 x 45 x 160 mm depth
WEIGHT	3 kg	0.9 kg	0.9 kg
ACCESSORIES	1 x 10 m extension cable to interconnect male DIN 8 and female DIN 8 microphones (Please enquire for other lengths) 1 x 1 m audio cable, 6.3 mm mono jack to 6.3 mm mono jack	1 extension cable with 3 m adapter, male DIN 8 to 2 female DIN 8 for interconnection of microphones Windshield	1 extension cable with 3 m adapter, male DIN 8 to 2 female DIN 8 for microphone interconnection Windshield

CONFERENCE SYSTEMS SCF-200 SERIES



CONFERENCE SYSTEMS. 500 SERIES

Conference system with monitor speaker in each microphone.

The control unit has an amplifier incorporated with microphone inputs, auxiliary line and speaker output. The system checks all the microphones connected when switched on, it has control over the number of open microphones and automatically disconnects the microphones not being used. Furthermore, it supplies an output signal for recording or splitting. It allows the connection of 10 president microphones, up to 75 microphones in total.



SCF-500



SCF-510P

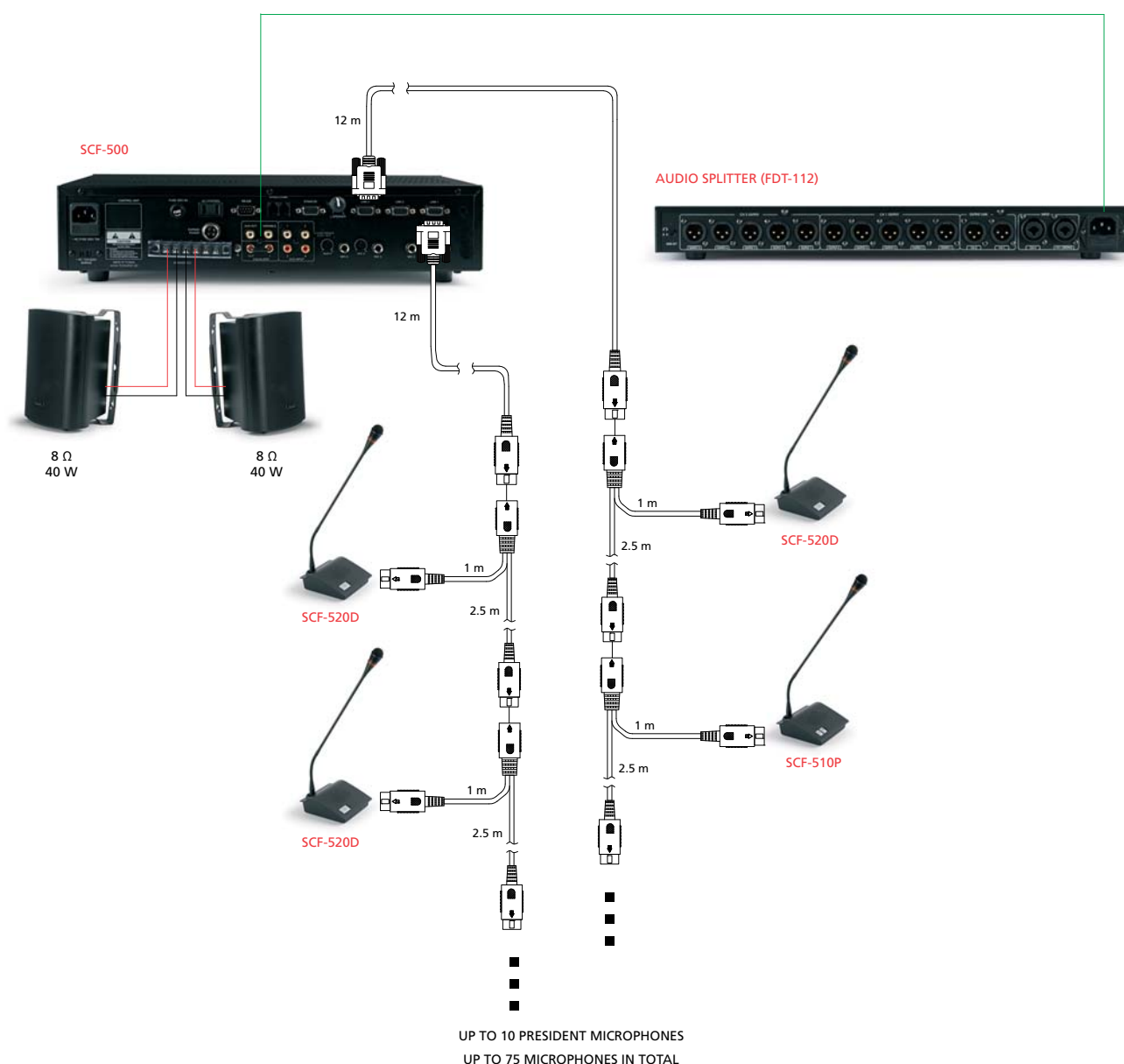
SCF-520D



SCF-500

CHARACTERISTICS	Control unit for system power supply. Integrated amplifier. System test. Control of number of microphones in use. Disconnects unused microphones. Distribution or recording output. Allows the connection of up to 75 microphones.
POWER	2 x 40 W RMS at 8 Ω
RESPONSE	100-16,000 Hz
CONTROLS	Volume mics. 1-3. Auxiliary volume 1 and 2. Conference system output volume (aux 3). Bass and trebles control. General volume. Selector with digital control of number of mics. in use. Selector with digital control of disconnection time of unuserd mics. Monitor speakers volume.
INDICATORS	LED power indicator Microphones in use Disconnection time LED output volume indicator
INPUTS	3 groups of microphones, D9 for system interconnection 4 balanced mics., 6.3 mm jack 600 Ω 6 mV 4 auxiliaries, RCA 20,000 Ω 300 mV 1 equalization in, RCA 20,000 Ω 300 mV
OUTPUTS	2 auxiliaries, RCA 200 Ω 750 mV 1 equalization out, RCA 200 Ω 750 mV
POWER SUPPLY	230 V AC
DIMENSIONS	430 x 89 x 230 mm depth. 2 U 19" rack
WEIGHT	6.6 Kg
ACCESSORIES	1 x 12 m cable for interconnection, D9 connector to male DIN 8 (Please enquire for other lengths) Mounts for assembly in 19" rack

CONFERENCE SYSTEMS SCF-500 SERIES



SCF-510P

SCF-520D

CHARACTERISTICS	President microphone with speech priority and possibility of cancelling delegate microphones. Monitor speaker incorporated. Metal microphone base.	Delegate microphone. Monitor speaker incorporated. Metal microphone base
MICROPHONE	Unidirectional electret condenser	Unidirectional electret condenser
RESPONSE	120-16,000 Hz	120-16,000 Hz
CONTROLS	Priority and on/off	On/off
INDICATORS	LED ring and buttons with backlight	LED ring and button with backlight
INPUTS	Power supply and audio, female DIN 8 interconnection	Power supply and audio, female DIN 8 interconnection
OUTPUTS	1 headphone, 3.5 mm stereo jack 1 audio, female DIN 8 interconnection	1 headphone, 3.5 mm stereo jack 1 audio, female DIN 8 interconnection
POWER	0.5 W RMS	0.5 W RMS
POWER SUPPLY	12-18 V DC, supplied by control unit	12-18 V DC, supplied by control unit
DIMENSIONS	Gooseneck microphone: 430 mm height Base: 142 x 59 x 151 mm depth	Gooseneck microphone: 430 mm height Base: 142 x 59 x 151 mm depth
WEIGHT	1.2 Kg	1.2 Kg
ACCESSORIES	1 Y interconnection cable, 2 male DIN 8 to female DIN 8	1 Y interconnection cable, 2 male DIN 8 to female DIN 8

CONFERENCE SYSTEMS. WIRELESS 700 SERIES

Wireless conference system. It combines the characteristics of a conference system (priority and maximum number of open microphone selection) with those of a wireless microphone system (mobility and easy installation). A total of up to 12 microphones.



SCI-700

CHARACTERISTICS	Microprocessed control unit. Capacity for 6 receiver modules (supplied with a minimum of 3 microphones and 3 receiver modules, not included in the price). Priority control. Maximum number of operating microphones selector. IR frequency selector. Can be increased with another control unit (12 receiver modules in total)
RESPONSE	50-18 000 Hz
CONTROLS	On/off switch General (MASTER) volume Maximum number of operating microphones selector Headphone output volume Output level selector
INDICATORS	LED main or secondary (external) unit indicator LED open microphone indicator LED maximum number of operating microphones indicator
INPUTS	6 wireless microphone receiver modules 2 aerials, TNC 50 Ω RJ-45 control unit interconnection IR transmitter to send the transmission channel to the microphones
OUTPUTS	1 balanced line, XLR 200 Ω 1 V, 350 mV or 100 mV, selectable 1 unbalanced line, 6.3 mm jack 5 kΩ 1 V, 350 mV or 100 mV selectable 1 stereo headphones, 6.3 mm jack
POWER SUPPLY	110-240 V AC, 15 W
DIMENSIONS	483 x 89 x 360 mm depth. 2U 19" rack
WEIGHT	5.5 kg (with 6 receiver modules)
ACCESSORIES	Mounts for assembly in 19" rack 2 aerials 1.2 m audio cable, 6.3 mm mono plug to 6.3 mm mono plug 1 m interconnection cable, Cat 5e Blank panels for uninstalled receiver module holes (in this case)
OPTIONAL	SCI-705R: UHF wireless conference system receiver module. SCI-710P: Wireless president desktop microphone. SCI-720D: Wireless delegate desktop microphone. AMP-800S: Aerial amplifier CAB-05M, CAB-1M: 0.5 or 1m aerial cables



12 CH UHF


12 CH UHF


SCI-705R

SCI-710P

SCI-720D

CHARACTERISTICS	UHF 863-865 MHz receiver module. For a UHF wireless conference system control unit. PLL tuner. Infrared transmission of the channel to the microphone.	Wireless president microphone. Priority and control over delegate microphones. Activation by switch. Gooseneck microphone. Metal base. 12 available channels. IR sensor for transmission channel reception.	Wireless delegate microphone. Activation by switch. Gooseneck microphone. Metal base. 12 available channels. IR sensor for transmission channel reception.
CAPSULE	-	Unidirectional electret condenser	Unidirectional electret condenser
CONTROLS	Channel selection and blocking. Squelch adjustment	On/off switch Priority	On/off switch
RESPONSE	50-18 000 Hz.	-	-
INDICATORS	LCD screen, channel viewing, RF and AF signal level	LED power ring LED low battery indicator	LED power ring LED low battery indicator
POWER	-	10 mW maximum	10 mW maximum
POWER SUPPLY	Supplied by control unit	3 V DC: 2 x 1.5 V batteries, LR6-AA (included)	3 V DC: 2 x 1.5 V batteries, LR6-AA (included)
DIMENSIONS	90 x 37 x 95 mm depth	Gooseneck microphone: 440 mm Base: 122 x 50 x 150 mm depth	Gooseneck microphone: 440 mm Base: 122 x 50 x 150 mm depth
WEIGHT	0.2 kg	1 kg	1 kg
ACCESSORIES	-	Windshield Aerial	Windshield Aerial

LANGUAGE DISTRIBUTION SYSTEM

Language distribution system for up to 5 languages with transmission through IR radiators. For connecting up to 6 translation desks. High quality audio without interference with lighting systems.



SCT-600

CHARACTERISTICS	SCT language distribution system transmitter. Up to 5 languages, besides the original language. Several SCT-61M or SCT-112M microphones can be connected in cascade. Automatic control of output volume.
RESPONSE	100-14 000 Hz
INDICATORS	Output level in each channel
INPUTS	6 line input, RCA 18 000 Ω 2 V
OUTPUTS	6 line output, RCA 600 Ω 1 V 2 signal out, TNC 50 Ω 2 interpreter unit, DB25
S/N RATIO	>75 dB
POWER SUPPLY	110-240 V AC, 40 W
DIMENSIONS	483 x 89 x 355 mm depth
WEIGHT	7 kg
ACCESSORIES	Interconnection cable for 10 m interpretation units, DB25 Audio cable, RCA Audio cable, 6.3 mm jack

Desktop microphone for 1 interpreter. Eases original channel selection for translating, and output channel. Microphone and speaker incorporated.

SCT-61M

CHARACTERISTICS	Desktop microphone with gooseneck for interpretation. Input and output channel selection. Mute (cough) function. Monitor speaker. Information display. Cascade connection. LED operating ring.
INPUTS	1 external microphone, 3.5 mm stereo jack 1 interconnection with control unit, DB25 and DIN13
OUTPUTS	1 headphones, 3.5 mm stereo jack 1 interconnection, DB25
DIMENSIONS	Gooseneck microphone: 425 mm Base: 278 x 65 x 140 mm depth
WEIGHT	1.5 kg
ACCESSORIES	3 m interconnection cable, DB25

Desktop base for 2 interpreters. External microphone connection. Allows interpreters to alternate during translation.

SCT-122M

CHARACTERISTICS	Desktop base for two interpretation microphones in the same output channel. Input and output channel selection. Mute function (cough). Cascade connection.
INPUTS	2 microphones, 3.5 mm stereo jack 1 interconnection cable, DB25
OUTPUTS	2 headphones, 3.5 mm stereo jack 2 rec out, 3.5 stereo jack 1 interconnection cable, DB25
DIMENSIONS	330 x 65 x 200 mm depth
WEIGHT	2.2 kg
ACCESSORIES	10 m interconnection cable, DB25
OPTIONAL	Headphones with microphone



IR radiator for SCT language distribution system. Wide coverage, can be increased with cascade connection.

IR-600T

CHARACTERISTICS	IR radiator for SCT language distribution system. Each radiator covers up to 600 m ² .
INPUTS	Signal In, BNC, for connecting the SCT-600 transmitter
OUTPUTS	Signal Out, BNC, for connecting to other IR-600T radiators in cascade
OUTPUT POWER	25 W
REACH	Up to 30 m
DISPERSION	±22°
POWER SUPPLY	230/115 V AC, 55 W
DIMENSIONS	440 x 232 X 75 mm depth
WEIGHT	3.6 Kg
ACCESSORIES	Wall mount



Personal IR receiver for SCT language distribution system.

SCT-6R

CHARACTERISTICS	IR receiver for SCT language distribution system. 6 selectable channels. Easy to use and intuitive. Information display.
CONTROLS	On Channel selection Volume
OUTPUT	1 earphone, 3.5 mm stereo jack
POWER SUPPLY	3 x AAA-R03 batteries, 700 mAh, included Recharge function incorporated using the recharge docking station SCT-24CH
DIMENSIONS	155 x 45 x 20 mm
WEIGHT	0.1 kg
ACCESSORIES	Mono earphone Hanger for the receiver



Charger for 24 SCT-6R receivers with transport briefcase.

SCT-24CH

CHARACTERISTICS	Recharge docking station for 24 SCT-6R receivers. Reinforced structure and wheels for transporting.
RECHARGE TIME	Signal In, BNC, for connecting the SCT-600 transmitter
POWER SUPPLY	110/240 V AC 200 W
DIMENSIONS	455 x 320 x 340 mm depth
WEIGHT	10.75 kg



AUXILIARY EQUIPMENT. PLAYERS

USB/SD/MP3 recorder/player with USB port and SD card reader. Autoplay with memory of the last selected playback mode.



FS-2905GU



FS-2905GURK



FS-2905GU

FS-2905GURK

CHARACTERISTICS	USB/SD/MP3 recorder/player. USB port for flash drive and FAT 32 format hard disc connection. SD card reader. Recording of auxiliary input in MP3 format in the storage device connected to the USB port and in SD memory cards. ID3 information tag in MP3 files. Indexes up to 1999 songs. Remote control.	USB/SD/MP3 recorder/player. USB port for flash drive and FAT 32 format hard disc connection. SD card reader. Recording of auxiliary input in MP3 format in the storage device connected to the USB port and in SD memory cards. ID3 information tag in MP3 files. Indexes up to 1999 songs. Remote control.
RESPONSE	20-20,000 Hz	20-20 000 Hz
DISTORTION	Harmonic: < 0.5% at 1 kHz	Harmonic: < 0.5% at 1 kHz
S/N RATIO	> 80 dB at 1 kHz	> 80 dB at 1 kHz
INPUTS	1 auxiliary, 2 x RCA 500 mV	1 auxiliary, 2 x RCA 500 mV
OUTPUTS	1 auxiliary, 2 x RCA 1 V	1 auxiliary, 2 x RCA 1 V
FUNCTIONS	USB/SD/MP3 recorder/player for drives of up to 32 GB	USB/SD/MP3 player/recorder for memories of up to 32 GB
POWER SUPPLY	12 V DC, 0.5 A with adapter included	12 V DC, 0.5 A with adapter included
DIMENSIONS	174 x 42 x 129 mm depth	483 x 42 x 129 mm depth (with rack mounts) 1 U 19" rack
WEIGHT	0.5 kg	0.9 kg
ACCESSORIES	2 x 2 RCA connector cables Batteries for the remote control	2 x 2 RCA connector cables Mounts for assembly in 19" rack Batteries for the remote control

USB/SD/MP3 players with USB port and SD card reader with special normal or background music playback. Autoplay with selectable playback mode, random or play all.



FS-2909U



FS-2909URK

USB

SD

MP3

MPEG

FS-2909U **N!**

FS-2909URK **N!**

CHARACTERISTICS	USB/SD/MP3 player. USB port for drive connection and hard discs with FAT 32/NTFS format and connection to Android devices. SD/SDHC/SDXC card reader. ID3 tag en MP3 files. Indexes up to 9999 folders and 9999 songs. Quick playback in 3 seconds. USB/SD drives 64 GB maximum. Mobile telephones and Android tablets. Power supply for portable hard discs up to 1 A. Remote control.	USB/SD/MP3 player. USB port for connecting flash and hard drives with FAT 32/NTFS format and connection to Android devices. SD/SDHC/SDXC card reader. ID3 tag in MP3 files. Indexes up to 9999 folders and 9999 songs. Quick playback in 3 seconds. USB/SD drives with 64 GB maximum. Mobile telephones and Android tablets. Power supply for portable hard discs up to 1 A. Remote control.
RESPONSE	20-20 000 Hz	20-20 000 Hz
DISTORTION	Harmonic: < 0.2% at 1 kHz	Harmonic: < 0.2% at 1 kHz
S/N RATIO	> 65 dB at 1 kHz	> 65 dB at 1 kHz
OUTPUTS	1 auxiliary, 2 x RCA 1.4 V	1 auxiliary, 2 x RCA 1.4 V
POWER SUPPLY	12 V DC, 2 A with adapter included	12 V DC, 2 A with adapter included
DIMENSIONS	174 x 44 x 129 mm depth	483 x 44 x 129 mm depth (with rack mounts). 1 U 19" rack
WEIGHT	0.6 kg	0.9 kg
ACCESSORIES	Connection cables, 2 x RCA Batteries for the remote control	Connection cable 2 x RCA Mounts for 19" rack assembly Batteries for the remote control

AUXILIARY EQUIPMENT. PLAYERS

DVD/USB player. USB host port for connecting USB drives with FAT32 file format. Autoplay function.



DVD-7900 **N!**

CHARACTERISTICS	DVD/USB player. USB host port for connecting USB flash drives with FAT32 file format. Autoplay function.
OUTPUTS	Audio/Video: VGA, female D15 Stereo audio, 2 x RCA 2 mono audio, RCA Coaxial digital audio, RCA Video through components Y, Pb, Pr, 3 x RCA Composite video, RCA S-Video, DIN 4
FUNCTIONS	USB player for flash drives up to 32 GB
POWER SUPPLY	230 V AC, 15 W
DIMENSIONS	482 x 44.5 x 240 mm depth. 1 U 19" rack
WEIGHT	3.2 kg
ACCESSORIES	Connection cable 2 x RCA Batteries for the remote control

Professional CD/USB/SD/MP3 player with pitch control and gapless function, without pause between songs. Compact size, 1 U 19" rack. For gymnasiums, bars, commercial audio, etc.



CD-2000UDJ

CHARACTERISTICS	CD/USB/SD/MP3 player. CD reading mechanism with front slot in system. USB port for flash drive connection and hard discs with FAT32 format. SD card reader. Speed adjustment for the pitch control playback $\pm 16\%$. Gapless function, without pause between songs in audio CD and MP3. Remote control.
RESPONSE	20-20 000 Hz
OUTPUTS	1 stereo audio, 2 x RCA 1 stereo balanced line, 2 x XLR
POWER SUPPLY	115/230 V AC, 20 W
DIMENSIONS	483 x 44 x 266 mm depth. 1 U 19" rack
WEIGHT	4.3 kg
ACCESSORIES	Connector cable, 2 x RCA Batteries for the remote control

CD/USB/SD/MP3 player and digital AM/FM tuner for P. A.

With CD slot in system, USB port and SD card reader.



CD

USB

SD

MP3

MPEG

RADIO

FS-2915CDR

CHARACTERISTICS	CD/USB/SD/MP3 player and digital AM/FM tuner. CD reading mechanism with front slot in system. USB port for flash drive connection and hard discs with FAT32 format. SD card reader. Indexes up to 1999 songs. 40 second anti-shock buffer memory. Digital tuner with 40 pre-tuned channels and RDS, very sensitive reception and permanent memory. Automatic and manual scan. Remote control. Video output.
RESPONSE	CD/USB/SD: 20-20 000 Hz, AM/FM: 40-14 000 Hz
OUTPUTS	Tuner: 1 stereo audio, 2 x RCA CD out: 1 stereo audio, 2 x RCA and 1 composite video, RCA
POWER SUPPLY	230/115 V AC, 50 W
DIMENSIONS	430 x 44.5 x 250 mm depth. 1U 19" rack
WEIGHT	3.5 kg
ACCESSORIES	2 cables, 2 x RCA Mounts for assembly in 19" rack AM and FM aerials Batteries for the remote control

CD/USB/SD/MP3 player, AM/FM digital tuner and bluetooth receiver for P. A. Independent outputs in each module and priority output with signal from the module with the largest priority. Operating mode for just one module or for all modules simultaneously.



CD

USB

SD

MP3

MPEG

RADIO

Bluetooth

FS-2916BP

CHARACTERISTICS	CD/USB/SD/MP3 player, AM/FM digital tuner and bluetooth receiver. CD reading mechanism with front slot in system. USB port for flash drive connection and hard discs with FAT32 format. SD card reader. 40-second anti-shock buffer memory. Digital tuner with 40 pretuned channels and RDS, highly sensitive reception and permanent memory. Manual and auto scan. Bluetooth receiver incorporated, plays back music received from a mobile telephone. Operating mode selector, just one module or all simultaneously. Remote control. Independent outputs and priority output. Video output
RESPONSE	20-20,000 Hz (AM/FM: 40-14,000 Hz)
OUTPUTS	Tuner: 1 stereo audio, 2 x RCA CD out: 1 stereo audio, 2 x RCA y 1 composite video, RCA Bluetooth out: 1 stereo audio, 2 x RCA Priority out: 1 stereo audio, 2 x RCA
POWER SUPPLY	230/115 V AC, 50 W
DIMENSIONS	430 x 44.5 x 250 mm depth. 1 U 19" rack
WEIGHT	3.5 kg
ACCESSORIES	1 connector cable, 2 x RCA Mounts for assembly in 19" rack AM and FM aerials Batteries for the remote control

AUXILIARY EQUIPMENT. PLAYERS

Double CD/USB/SD/MP3 player for P. A. with front slot in system [no tray], with USB port and SD card reader.



FS-2925CDD

CHARACTERISTICS	Double CD/USB/SD/MP3 player. CD reading mechanism with front slot in system. USB port for flash drive connection and hard discs with FAT32 format. SD card reader. ID3 tag in MP3 files. Indexes up to 1,999 songs. 40-second anti-shock buffer memory. Remote control.
RESPONSE	20-20,000 Hz
OUTPUTS	2 auxiliaries, 2 x RCA
POWER SUPPLY	230/115 V AC, 50 W
DIMENSIONS	430 x 44.5 x 250 mm depth. 1 x 19" U rack.
WEIGHT	3.9 kg
ACCESSORIES	2 x 2 RCA cables Mounts for assembly in 19" U rack Batteries for remote control

Digital AM/FM tuner with manual and automatic station scan. Very sensitive reception and permanent memory. 100 pre-tuned channels [60 FM and 40 AM].



FS-2930R

CHARACTERISTICS	Digital AM/FM tuner. Very sensitive reception and permanent memory. Manual and automatic scan. 100 pre-tuned channels (60 FM and 40 AM). Automatic switch off and remote control.
RESPONSE	40-14 000 Hz
OUTPUTS	1 auxiliary, 2 x RCA
POWER SUPPLY	230 V AC, 50 W
DIMENSIONS	430 x 44.5 x 250 mm depth. 1 x 19" U rack
WEIGHT	3 kg
ACCESSORIES	2 x RCA cable Mounts for assembly in 19" U rack AM and FM aerial Batteries for the remote control

USB/SD/MP3 players/recorders.


REC
USB
SD
MP3
MPEG

FS-2940GU

FS-2960GU

CHARACTERISTICS	USB/SD/MP3 recorder/player. USB port for flash drive connection and hard discs with FAT32 format. Aux. and mic. inputs recorded in MP3 format in the storage device connected to the USB port and SD memory cards. Recording quality: 192 Kbps. SD card reader. ID3 tag in MP3 files. indexes up to 1999 songs. LED recording and peak indicators. Remote control.	USB/SD/MP3 Recorder/player. It records the aux input in MP3 format in the storage device connected to the USB port. USB port for connecting memories and hard discs with FAT32 format. SD card reader. ID3 tag in MP3 files. It allows you to record the aux input in one storage device and play a song from another storage device simultaneously. It indexes up to 1999 songs. Peak and recording LED indicators Remote control.
INPUTS	1 unbalanced dynamic mic., 6.3 mm jack 1 auxiliary, 2 x RCA 1 V	1 auxiliary, 2 x RCA 500 mV
OUTPUTS	1 auxiliary, 2 x RCA	2 auxiliaries, 2 x RCA 1 V
POWER SUPPLY	230 V AC, 50 W	230 V AC, 50 W
DIMENSIONS	430 x 44.5 x 200 mm depth. 1 x 19" U rack	430 x 44.5 x 200 mm depth. 1 U 19" rack
WEIGHT	2.2 kg	3 kg
ACCESSORIES	2 cables, 2 x RCA Mounts for assembly in 19" rack Batteries for the remote control	3 connector cables, 2 x RCA Mounts for assembly in 19" rack Batteries for the remote control

CD/USB/SD/MP3 player for background music and priority messages.

Background music from CD, USB or SD. Messages are played from the SD with priority.


CD
USB
SD
MP3
MPEG

FS-2950P

CHARACTERISTICS	CD/USB/SD/MP3 player for background music and priority messages. 10 messages, individually selectable through shortcut buttons, RS-232 or contact closure. Priority for messages over background music. Selectable message reproduction mode: once, 3 times or continually. CD reader mechanism with slot in loading system. USB port for the connection of FAT32 format hard discs and flash drives. SD card reader. ID3 tag in MP3 files. Indexes up to 1999 songs. Remote control.
RESPONSE	20-20 000 Hz
OUTPUTS	1 auxiliary, 2 x RCA
POWER SUPPLY	230/115 V AC, 50 W
DIMENSIONS	430 x 44.5 x 250 mm depth. 1U 19" rack
WEIGHT	3.5 kg
ACCESSORIES	Cable, 2 x RCA Mounts for assembly on a 19" rack Batteries for remote control

AUXILIARY EQUIPMENT. AUDIO PROCESSORS

Digital acoustic feedback suppressor through adaptive notch filters. It can be set so that the audio signal is continually being processed and the filter parameters adjusted, automatically removing acoustic feedback or couplings produced by the acoustic conditions of the area or by microphones placed close to the speakers.



SR-1602

CHARACTERISTICS	Feedback suppressor. 12 adaptive notch filters per channel. 15 sensitivity and bypass levels. Parameters and attenuation of fixed or variable filters. Stereo microphone input with phantom or line power supply. Input and output gain control. Stereo or mono mode.
RESPONSE	20-20,000 Hz ± 0.5 dB
DISTORTION	Harmonic: < 0.01 % (-6 dB, bypass)
S/N RATIO	> 90 dB (A weighting, bypass)
A/D, D/A RESOLUTION	20 bit
PROCESSED RESOLUTION	24 x 32 bit
INPUTS	2 balanced mics./lines, XLR and 6.3 mm jack 2 V maximum, switchable
OUTPUTS	2 balanced auxiliary lines, XLR and 6.3 mm jack 2 V maximum
PHANTOM	48 V, selectable
POWER SUPPLY	230 V AC, 10 W maximum
DIMENSIONS	482 x 44.5 x 165 mm depth. 1 U x 19" rack
WEIGHT	2.4 kg
OPTIONAL	FRP-41G: control panel cover with window



SR-1590

Acoustic feedback suppressor using frequency displacement. Efficiently removes acoustic feedback or couplings which cause minimum distortion. Easy to use, with no configuration controls that can be manipulated by the user. The feedback suppression function is activated by a button.

CHARACTERISTICS	Feedback suppressor. Frequency displacement 5Hz ±1Hz. Mono mode.
RESPONSE	20-20,000 Hz without feedback suppression 150-15,000 Hz with feedback suppression
INPUTS	1 balanced mic,XLR 5,000 Ω 2.5 mV 1 unbalanced line, RCA 5,000 Ω 1 V
OUTPUTS	1 balanced mic., XLR 600 Ω 100mV 1 unbalanced line, RCA 600 Ω 2.5V
POWER SUPPLY	230 V AC, 12 W
DIMENSIONS	483 x 44.5 x 210 mm depth. 1 U x 19" rack
WEIGHT	2.3 kg
ACCESSORIES	1 RCA cable 1 XLR cable 2 x 6.3 mm jack to RCA cables

Telephone switchboard cable adapter for P.A. paging. This equipment lets you connect the telephone switchboard extension directly and converts the telephone signal into an audio analogue one to be connected directly to a P. A. amplifier.



TF-1600

CHARACTERISTICS	Telephone switchboard adapter for P.A. systems. Automatic or manual pick up and hang up of the line. Dynamic microphone input for intercom. Contact closure output during call. Monitor speaker incorporated.
INPUTS	1 telephone, RJ-11 1 dynamic mic., 600 Ω 2.5 mV
OUTPUTS	1 auxiliary, 2 x RCA 47,000 Ω 1 V 1 contact closure, screw terminals
CONTROLS	General volume Monitor speaker
POWER SUPPLY	230 V AC, 50 W
DIMENSIONS	484 x 88 x 350 mm depth. 2 U 19" rack
WEIGHT	4.4 kg
ACCESSORIES	RJ-11 cable, 1.5 m

AUXILIARY EQUIPMENT. POWER SUPPLY

Power sequencer for switching audio devices on in a sequence to protect and avoid noises when switching on. For selecting power delay between devices and remote on/off using contact closure.



PD-707 **N!**

CHARACTERISTICS	Power sequencer. Sequential on/off. Selectable power delay between devices. Fixed off delay. Possibility of remote on/off using contact closure
OUTPUTS	8 female schuko connectors, 15 A total
INDICATORS	LED power and auto-on/off LED selected output Delay between equipment display Operating voltage display
CONTROLS	Auto on/off Power retard selector (0.5 to 4.5 s) Output selector
POWER SUPPLY	100-240 V AC, 5000 W maximum
DIMENSIONS	483 x 88 x 210 mm depth. 2 u 19" rack
WEIGHT	3.8 kg

AUXILIARY EQUIPMENT. ACCESSORIES

Auxiliary input switchers.



	CF-5	CF-6	CF-7V
CHARACTERISTICS	Switcher with 4 auxiliary inputs for expansion	6-way switcher for auxiliary input expansion. Switchable inputs/outputs 1 to 6 for CD, tape, tuner, auxiliary, PC, etc., allowing various selection and mixer options.	6 auxiliary input switcher with independent volume control.
INPUTS	3 stereo auxiliaries, 2 x RCA 1 stereo auxiliary, 3.5 mm jack	4 auxiliary inputs/outputs, 2 x RCA 2 auxiliary inputs/outputs, 3.5 mm stereo jack	6 stereo auxiliaries, 2 x RCA
OUTPUTS	1 stereo auxiliary, 2 x RCA	-	2 stereo auxiliaries, 2 x RCA
CONTROLS	Input switcher	Input/output switcher	Input switcher Volume: aux 1 to 6 on back panel
DIMENSIONS	125 x 57 x 100 mm depth	178 x 40 x 83 mm depth	262 x 44 x 93 mm depth. 1U 19" rack
WEIGHT	0.3 kg	0.4 kg	0.7 kg
ACCESSORIES	-	-	Mounts for assembly in 19" rack

Stereo to mono signal converter.

It converts 1 stereo signal into 2 mono signals to connect to 2 mono amplifiers.



	TC-3SM
CHARACTERISTICS	It converts a stereo signal into 2 mono signals. It adapts impedances and distributes the signal.
INPUTS	1 stereo auxiliary, 2 x 4700 Ω RCA
OUTPUTS	2 mono auxiliaries, RCA.
RESPONSE	20-20 000Hz.
DIMENSIONS	42 x 31 x 67 mm depth.
WEIGHT	0.1 kg

Speaker switchers from 2 to 10 mono ways, for 100 V line.



	SL-2	SL-4	SL-10
CHARACTERISTICS	2-way mono loudspeaker switcher for 2 lines of 100 V line loudspeakers. Converts 1 line into 2, working either independently or together in PA installations. Selection with switches. Maximum operating power 200 W.	4-way mono switcher for 4 lines of 100 V line loudspeakers. Converts 1 line into 4, working either independently or together in PA installations. Line selection with 4 switches and a master switch. Maximum operating power 200 W.	10-way mono loudspeaker switcher for 10 lines of 100 V line loudspeakers. Converts 1 line into 10, working either independently or together in PA installations. Line selection with 10 switches + master switch. Maximum operating power 200 W.
WEIGHT	0.4 kg	0.4 kg	0.5 kg

Mono speaker switcher with 4 x 100 V lines, with independent volume control and input selection.



SL-400V

CHARACTERISTICS	100 V 4-line mono speaker switcher with independent volume control and A or B input selector. Attenuation with autotransformer. Each output can be individually activated/deactivated.
POWER	300 W maximum, 150 W RMS per channel
INPUTS	2 x 100 V line amplifiers
OUTPUTS	4 x 100 V speaker lines
CONTROLS	On/off, A/B input switcher and 12-position independent volume control, 42 dB attenuation
DIMENSIONS	432 x 76 x 190 mm depth. 1.7 U 19" rack
WEIGHT	2.8 kg
ACCESSORIES	19" rack mounts

AUXILIARY EQUIPMENT. ACCESSORIES

Stereo loudspeaker switchers.



CB-2

CHARACTERISTICS	2-way stereo switcher for 2 pairs of loudspeakers. Converts 1 output into 2. Selection with switches. Connection through spring terminals. For low Z 4-8 Ω loudspeaker
WEIGHT	0.4 kg

CB-4

CHARACTERISTICS	4-way stereo switcher for 4 pairs of loudspeakers. Converts 1 output into 4. Selection with switches. Connection through spring terminals. For low Z 4-8 Ω speakers
WEIGHT	0.5 kg

4-line 8 Ω stereo
loudspeaker switcher
with independent
volume control and
input selection.



CB-400V

CHARACTERISTICS	4-line 8 Ω stereo speaker switcher with independent volume control and A or B input selection. Attenuation with auto-transformer. Each output can be activated/deactivated individually.
POWER	100 W maximum per channel
INPUTS	2 x 8 Ω amplifier lines
OUTPUTS	4 x 8 Ω speaker lines
CONTROLS	On/off, A/B input switcher and 12-position independent volume control
DIMENSIONS	430 x 58 x 158 mm depth. 1.5 U 19" rack
WEIGHT	2.8 kg
ACCESSORIES	Mounts for 19" rack assembly

Mounts for assembly of the amplifier series FS and MA in a 19" rack.



FSA-20

CHARACTERISTICS	Mounts for assembly in 19" rack, mods. FS-2002M, FS-2005-SR, FS-2061, FS-2121, FS-2126E and FS-2241E.
WEIGHT	0.2 kg

FSA-22

CHARACTERISTICS	Mounts for assembly in 19" rack, mod. FS-2481E.
WEIGHT	0.3 kg

FSA-28

CHARACTERISTICS	Mounts for assembly in 19" rack, equipment with dimensions 272 x 44.5 mm height
WEIGHT	0.2 kg

MA-N

CHARACTERISTICS	Mounts for assembling equipment with dimensions 433 x 89 mm height in a 19" rack.
WEIGHT	0.2 kg

MA-2N

CHARACTERISTICS	Mounts for 19" U rack assembly of mods. MA-66, MA-125, MA-125Z, MA-125GU, MA-245, MA-245Z and MA-245GU.
WEIGHT	0.2 kg

MA-3N **N!**

CHARACTERISTICS	Mounts for assembling mod. MA-45RU in a 19" rack
WEIGHT	0.6 kg

MICROPHONES FOR PA SYSTEMS

FONESTAR

Dynamic desktop microphones.



	FDM-629	FDM-629-DIN5 N!	FDM-629-P N!
CHARACTERISTICS	Desktop microphone. Stylish design.	Desktop microphone. Stylish design.	Desktop microphone. Stylish design.
CAPSULE	Unidirectional dynamic	Unidirectional dynamic	Unidirectional dynamic
RESPONSE	100-18 000 Hz	100-18 000 Hz	100-18 000 Hz
SENSITIVITY	-64 dB ±3 dB (V/Pa) at 1 kHz	-64 dB ±3 dB (V/Pa) at 1 kHz	-64 dB ±3 dB (V/Pa) at 1 kHz
IMPEDANCE	600 Ω	600 Ω	600 Ω
BUTTON	3 positions: press on, fixed on and off	3 positions: press on, fixed on and off Double circuit	3 positions: press on, fixed on and off Double circuit
HEIGHT	Total: 36 cm with tube, gooseneck and destop base	Total: 36 cm with tube and goosneck and desktop base	Total: 36 cm with tube and gooseneck and desktop base
CABLE	1.7 m with 6.3 mm mono plug connector Unbalanced line	1.7 m with DIN 5 connector for contact closure using button Unbalanced line	1.7 m with 6.3 mm mono jack connector and stripped ends for contact closure using button to activate priority or musical chimes Unbalanced line
WEIGHT	0.9 kg	0.9 kg	0.9 kg
COMPATIBILITY	For priority through signal level in FONESTAR amplifiers mods. MA-65GU, MA-65RGUB, MA-460BZ, MA-125Z, MA-245Z, MA-125GU, MA-125RGUB, MA-245GU, MAZ-4250E, MAZ-4160, MAZ-4480 and MX-4000	For musical chimes and priority in FONESTAR amplifiers models FS-2002M, FS-2005-SR, FS-2061 and FS-2121	For priority through contact closure in FONESTAR amplifiers models FS-2035, MA-460BZ, FS-2061, FS-2121, MAZ-4160, MAZ-4250E, MAZ-4480 and MX-4000

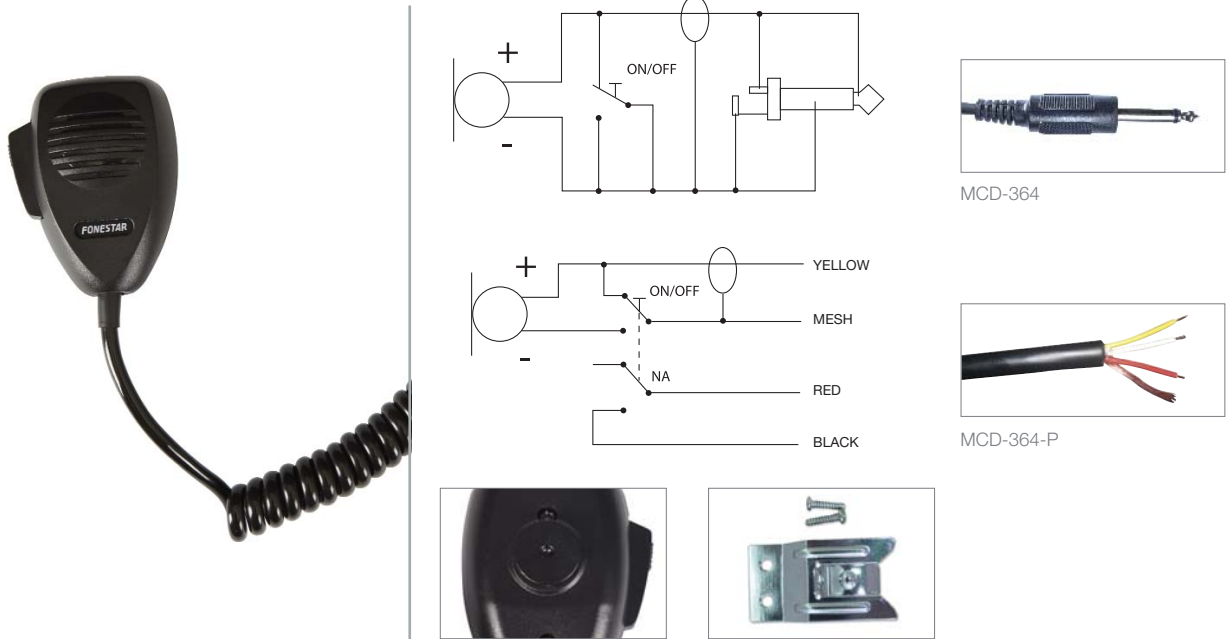
MICROPHONES FOR PA SYSTEMS

Dynamic desktop microphones.



	FDM-625	FDM-625-DIN5	FDM-625-P
CHARACTERISTICS	Desktop microphone.	Desktop microphone.	Desktop microphone.
CAPSULE	Unidirectional dynamic	Unidirectional dynamic	Unidirectional dynamic
RESPONSE	80-12,000 Hz	80-12,000 Hz	80-12,000 Hz
SENSITIVITY	-50 dB (V/Pa) at 1 kHz	-50 dB (V/Pa) at 1 kHz	-50 dB (V/Pa) at 1 kHz
IMPEDANCE	600 Ω	600 Ω	600 Ω
BUTTON	3 positions: push to talk, push to lock and off	3 positions: push to talk, push to lock and off Double circuit	3 positions: push on, locked on and off Double circuit
HEIGHT	Total: 360 mm with 14 mm Ø gooseneck and desktop base	Total: 360 mm with 14 mm Ø gooseneck and desktop base	Total: 360 mm with 14 mm Ø gooseneck and desktop stand
CABLE	1.5 m extendable with 6.3 mm mono plug connector. Unbalanced line	1.5 m extendable with DIN-5 connector for contact closure using push button Unbalanced line	1.5 m extendable with 6.3 mm mono plug connector and stripped ends for contact closure using push button to activate priority or chimes Unbalanced line
WEIGHT	0.8 kg	0.8 kg	0.8 kg
COMPATIBILITY	For priority depending on signal level in FONESTAR amplifiers, mods. MA-65GU, MA-65RGUB, MA-460BZ, MA-125Z, MA-245Z, MA-125GU, MA-125RGUB, MA-245GU, MAZ-4250E, MAZ-4160, MAZ-4480 and MX-4000	For chimes and priority in FONESTAR amplifiers mods. FS-2002M, FS-2005-SR, FS-2061 and FS-2121	For priority through contact closure in FONESTAR amplifiers, mods. FS-2035, MA-180BP, MA-460BZ, FS-2061, FS-2121, MAZ-4160, MAZ-4250E, MAZ-4480 and MX-4000

Hand-held radio microphones. PTT function [push to talk], version with on/off switch and version with double circuit on/off and contact closure.



	MCD-364 N!
CHARACTERISTICS	Communications microphone.
CAPSULE	Omnidirectional dynamic
RESPONSE	100-6000 Hz
SENSITIVITY	-68 dB (V/Pa) at 1 kHz
IMPEDANCE	500 Ω to 1 kHz
PUSH BUTTON	PTT function (push to talk)
CABLE	2 m coiled cable with 6.3 mm mono jack connector
DIMENSIONS	55 x 75 x 30 mm depth
WEIGHT	0.2 kg
ACCESSORIES	Hanger on the back, metal screwable clip mount with screws

	MCD-364-P N!
CHARACTERISTICS	Communications microphone.
CAPSULE	Omnidirectional dynamic
RESPONSE	100-6000 Hz
SENSITIVITY	-68 dB (V/Pa) at 1 kHz
IMPEDANCE	500 Ω to 1 kHz
PUSH BUTTON	Double circuit: PTT function (push to talk) and contact closure
CABLE	2 m coiled stripped ends with 1 shielded audio conductor and 2 conductors for contact closure
DIMENSIONS	55 x 75 x 30 mm depth
WEIGHT	0.2 kg
ACCESSORIES	Hanger on the back, metal screwable clip mount with screws

Desktop microphone with chimes and preamplifier.

	MCH-205
CHARACTERISTICS	Desktop microphone with chime generator and preamplifier
CAPSULE	Electret condenser
RESPONSE	22-16,000 Hz
SENSITIVITY	-29 dB (V/Pa) at 1 kHz
IMPEDANCE	600 Ω
OUTPUTS	Pre-amplified: 1 balanced line, XLR 10-230 mV 1 unbalanced line, 6.3 mm jack 10-110 mV
SWITCH	On/off
CONTROLS	Mic. Volume and tone volume
INDICATOR	LED power ring and push button
GENERATOR	4 tones: 440, 554, 659 and 880 Hz
POWER SUPPLY	15 V DC with adapter included
DIMENSIONS	Height: 380 mm Base: 130 x 155 mm depth
WEIGHT	0.7 kg
ACCESSORIES	1.5 m cable with 6.3 mm mono jack connectors Windshield



MICROPHONES FOR PA SYSTEMS

Desktop microphone with message recorder/player in MP3 format for live paging or recorded message playback, with chimes.



USBMP3MPEG

MCH-221D

CAPSULE	Unidirectional electret condenser
RESPONSE	Microphone: 100-12,000 Hz/Music: 50-15,000 Hz
SENSITIVITY	-40 dB (V/Pa) at 1 kHz
AUDIO INPUT	3.5 mm jack, stereo line level
SPEAKER	For monitoring recording and listening of transmitted messages
MESSAGE RECORDING	With microphone or audio input Up to 89 messages, 60 minutes of audio (64 MB)
CONTROLS	On/off switch To activate musical tones Push button with PTT (push-to-talk) or PTL (hands-free) function Numbered keypad and record, preview, play and cancel/end
INDICATORS	2 digit screen. LED power, mic., record, preview, play and cancel/end indicators
CABLES	USB 1.1; includes CD with W98 driver (not necessary for WXP and others) and paging in MP3 format
OUTPUTS	1 balanced mic., balanced 6.3 mm jack, 600 Ω 1 stereo headphones, 3.5 mm jack
POWER SUPPLY	230 V AC, 0.06 A max. /9 V DC, 200 mA with adapter included
DIMENSIONS	Gooseneck microphone: 350 mm Base: 150 x 45 x 150 mm depth
WEIGHT	1 kg
ACCESSORIES	Mini-USB B to USB A cable, 1m 6.3 mm stereo jack cable to male XLR, 5 m Windshield



Desktop communication microphone with amplifier for small P. A. installations, paging, waiting rooms, counters, etc.



MCA-1010 W RMS

CHARACTERISTICS	Microphone with amplifier for small P. A. systems, paging, waiting rooms, counters, etc.
CAPSULE	Unidirectional electret condenser
POWER	10 W RMS (at 4 Ω)
RESPONSE	80-12 000 Hz
INDICATORS	LED power indicator
CONTROLS	On/off power switch Volume Push button for PTT function (push-to-talk)
IMPEDANCE	4-16 Ω, spring terminals
POWER SUPPLY	230 V AC, 12 W
DIMENSIONS	Gooseneck microphone: 350 mm Amplifier base: 165 x 65 x 145 mm depth
WEIGHT	1.2 kg
ACCESSORIES	Windshield
OPTIONAL	Also available in push button version for PTL (hands-free) function PLEASE ENQUIRE

Counter intercom system composed of a desktop intercom microphone and an external section to ease communication through counter windows, glass partitions or windows in box offices, banks, offices, control points, private accesses, car parks, etc.



GM-20P

CHARACTERISTICS	Two-way window intercom microphone
CAPSULE	Unidirectional electret condenser
CONTROLS	Desktop intercom: On/off PTL function (hands-free) and PTT (push-to-talk) Volume control Electret or dynamic microphone selector Exterior intercom: 'Call' push button.
FUNCTIONS	Noise barrier in desktop intercom microphone
INDICATORS	LED 'power' indicator in desktop and exterior intercom
CONNECTORS	XLR for desktop intercom microphone 2 x RCA and 3.5 mm jack for exterior intercom
POWER SUPPLY	230 V AC/9 V DC with adapter included
CABLE	3 m cable, external intercom
DIMENSIONS	Desktop intercom: 100 x 60 x 180 mm depth Microphone gooseneck: 360 mm height Exterior intercom: 85 mm Ø x 30 mm height
WEIGHT	0.9 kg
ACCESSORIES	Windshield Velcro and screws for installation
OBSERVATIONS	Exterior intercom installed using Velcro or screws in 50 mm Ø holes

PORTABLE PA EQUIPMENT. FOR VEHICLES

Portable P. A. systems for street vendors, advertising, etc. Quick installation in vehicles.



PEM-63 SIREN, MICROPHONE AND AUX. INPUT.

1 FS-70: Amplifier, 60 W maximum	1 MCD-364: Dynamic communications microphone	2 FE-149: Horn speakers, 40 W maximum
WEIGHT: 6.5 kg		
ACCESSORIES: Loudspeaker cable and 12 V DC lighter connection		



PEM-79 USB PLAYER, SIREN, MICROPHONE AND AUX. INPUT.

1 FS-75U: Amplifier with USB player, 60 W maximum	1 MCD-364: Dynamic communications microphone	2 FE-149: Horn speakers, 40 W maximum
WEIGHT: 6.5 kg		
ACCESSORIES: Loudspeaker cable and 12 V DC lighter connection		



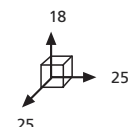
PEM-81 USB PLAYER, SIREN, MICROPHONE AND AUX. INPUT.

1 FS-75U: Amplifier with USB player, 60 W maximum	1 MCD-364: Dynamic communications microphone	2 FE-1210: Horn speakers, 30 W maximum
WEIGHT: 5.1 kg		
ACCESSORIES: Loudspeaker cable and 12 V DC lighter connection		

USB MP3 MPEG



30 W



PEM-73 USB PLAYER, MICROPHONE AND AUX. INPUT.

1 MA-35U: Amplifier with USB player, 30 W maximum

1 MCD-364: Dynamic communications microphone

2 FE-107: Horn speakers, 30 W maximum

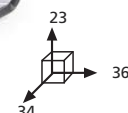
WEIGHT: 5.8 kg

ACCESSORIES: Loudspeaker cable and 12 V DC lighter connection

USB MP3 MPEG



30 W



PEM-75 USB PLAYER, MICROPHONE AND AUX. INPUT

1 MA-35U: Amplifier with USB player, 30 W maximum

1 MCD-364: Dynamic communications microphone

2 FE-149: Horn speakers, 40 W maximum

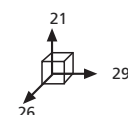
WEIGHT: 8.2 kg

ACCESSORIES: Loudspeaker cable and 12 V DC lighter connection

USB MP3 MPEG



30 W



PEM-77 USB PLAYER, MICROPHONE AND AUX. INPUT.

1 MA-35U: Amplifier with USB player, 30 W maximum

1 MCD-364: Dynamic communications microphone

2 FE-1210: Horn speakers, 30 W maximum

WEIGHT: 6.8 kg

ACCESSORIES: Loudspeaker cable and 12 V DC lighter connection

PORTABLE PA EQUIPMENT. FOR VEHICLES

Portable P. A. systems for street vendors, advertising, etc. Quick installation in vehicles.



PEM-82 CD/USB PLAYER, MICROPHONE AND AUX. INPUT.

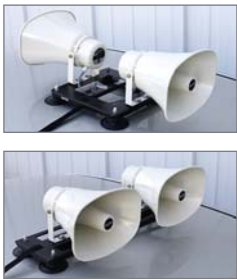
1 MA-18CDU: Amplifier with CD/USB player, 27 W maximum	1 MCD-364: Dynamic communication microphone	2 FE-107: Horn speakers, 30 W maximum
WEIGHT: 6.7 kg		
ACCESSORIES: Speaker cables and 12 V DC lighter connection		



PEM-84 USB/SD RECORDER/PLAYER, FM RADIO, MICROPHONE AND AUX. INPUT.

1 MA-30RGU: Amplifier with USB/SD/FM recorder/player, 45 W maximum	1 MCD-364: Dynamic communication microphone	2 FE-149: Horn speakers, 40 W maximum
WEIGHT: 9.1 kg		
ACCESSORIES: Speaker cables and 12 V DC lighter connection		

Mounts for loudspeakers.



SAV-4

CHARACTERISTICS	Square mount for loudspeakers with suction pads and adjustable safety strap. For installation on the roof of a vehicle. With holes for loudspeaker, mods. FE-1210, FE-107, FE-149 or similar. Easy to mount and dismount quickly on any type of vehicle.
DIMENSIONS	31 x 5 x 31 cm depth
WEIGHT	1.7 kg



SAV-6

CHARACTERISTICS	Rectangular mount for loudspeakers with suction pads and adjustable safety strap. For installation on the roof of a vehicle. With holes for loudspeakers, mods. FE-1210, FE-107, FE-149 or similar and a 3m cable to connect loudspeakers. Easy to mount and dismount quickly on any type of vehicle.
DIMENSIONS	66 x 5 x 18 cm depth
WEIGHT	2.1 kg



CSTV-3

CHARACTERISTICS	Safety belt with tightening mechanism to secure TV/monitors of 14" to 29" to the wall mount.
LENGTH	3 m x 25 mm width
COLOUR	Black
ACCESSORIES	Safety accessory for STV series TV wall mounts

PORTABLE PA EQUIPMENT. MEGAPHONES

FONESTAR

Line of **megaphones** with and without siren.



MF-95S



MF-80



MF-80S



MF-111S

CHARACTERISTICS	Megaphone with siren.	Megaphone.	Megaphone with siren.	Megaphone with siren.
POWER	6 W, 10 Wp	5 W, 8 Wp	5 W, 8 Wp	12 W, 20 Wp
POWER SUPPLY	6 x LR6-AA batteries	6 x R6-AA batteries	6 x R6-AA batteries	8 x LR14-C batteries
DIMENSIONS	18.5 cm Ø x 31 cm length	15 cm Ø x 24 cm length	15 cm Ø x 24 cm length	23 cm Ø x 37 cm length
WEIGHT	1 kg	0.7 kg	0.7 kg	1.6 kg



MF-200S



MF-215S



MF-300S

CHARACTERISTICS	Megaphone with siren.	Megaphone with siren and hand-held microphone.	Megaphone with siren and hand-held microphone.
MICROPHONE	-	Hand-held with coiled cable	Hand-held with coiled cable
POWER	16 W, 20 Wp	15 W, 25 Wp	20 W, 25 Wp
POWER SUPPLY	8 x R14-C batteries Input for 12 V DC	8 x R14-C batteries	8 x R14-C batteries Input for 12 V DC
DIMENSIONS	23 cm Ø x 36 cm length	23 cm Ø x 35 cm length	23 cm Ø x 38 cm length
WEIGHT	1.7 kg	1.8 kg	1.9 kg
OPTIONAL	CL-16: Power supply cable with lighter connector for vehicles	-	CL-16: power supply cable with lighter connector for vehicles

CL-16

CHARACTERISTICS	Power supply cable with connectors for operating at 12 V DC in vehicles for models MF-200S and F-300S.
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PORTABLE PA EQUIPMENT. MEGAPHONES

Portable megaphone, 25 W maximum, with siren and USB/SD/MP3 player. Powered by batteries or 12 V DC input.



USB SD MP3 MPEG

MF-114SU **N!**

CHARACTERISTICS	Megaphone with siren and USB/SD/MP3 player.
POWER	25 W maximum, 10 W RMS
POWER SUPPLY	8 x LR14-C batteries 12 V DC input, 5.5 x 2.1 mm connector
DIMENSIONS	23 cm Ø x 37 cm length
WEIGHT	1 kg

Portable megaphone, 25 W maximum, with siren, USB/SD/MP3 player and 15-second message recorder.

Powered by rechargeable lithium battery included, batteries or 12 V DC input.



Li REC USB SD MP3 MPEG

MF-600SGU **N!**

CHARACTERISTICS	Megaphone with siren, USB/SD/MP3 player, 15-second recorder, rechargeable lithium battery and hand-held microphone.
MICROPHONE	Hand-held with coiled cable
POWER	25 W maximum, 10 W RMS
POWER SUPPLY	Rechargeable lithium battery, 1300 mAh (included) Rechargeable battery life: over 3 hours at maximum volume Battery charge time: 2 hours approximately 8 x LR14-C batteries 12 V DC input, 5.5 x 2.1 mm connector
DIMENSIONS	23 cm Ø x 34 cm length
WEIGHT	1.3 kg

Range of **high power megaphones**, far reaching.



RS-68

CHARACTERISTICS	Stand for megaphones, mods. MF-350S, MF-450S and MF-455W and personal amplification equipment, mods. ASH-25 and ASH-35. Manufactured in extra-resistant metal with black finish.
HEIGHT	Adjustable: 132 to 210 cm
WEIGHT	3.2 kg

MF-350S

MF-450S

VHF

MF-455W

CHARACTERISTICS	High power megaphone with siren	High power megaphone with siren.	High power megaphone with siren and wireless hand-held microphone
MICROPHONE	Communications microphone with coiled cable	Communications microphone with coiled cable	Communication microphone with coiled cable and wireless hand-held microphone
POWER	20 W, 35 Wp	30 W, 45 Wp	30 W, 45 Wp
POWER SUPPLY	8 x LR14-C batteries and input for 12 V DC	10 x LR20-D batteries and input for 12 V DC	10 x LR20-D batteries and input for 12 V DC
INPUTS	-	1 auxiliary for cassette, CD, etc., 3.5 mm jack	1 auxiliary for cassette, CD, etc., 3.5 mm jack
RECEIVER	-	-	VHF 174-194 MHz for microphone
TRANSMITTER	-	-	Hand-held wireless microphone VHF 174-194 MHz
DIMENSIONS	30 cm Ø x 46 cm length	35 cm Ø x 50 cm length	35 cm Ø x 50 cm length
WEIGHT	2.7 kg	3.3 kg	3.4 kg
ACCESSORIES	Power supply cable with lighter connector for vehicles	Power supply cable with lighter connector for vehicles 3.5 mm stereo to mono jack adapter	Power supply cable with lighter connector for vehicles 3.5 mm stereo to mono jack adapter
OPTIONAL	RS-68: stand	RS-68: stand	RS-68: stand

PORTABLE PA EQUIPMENT. COMPACT AMPLIFIERS

Compact personal waistband amplification systems with hands-free microphone headset. Specially suitable for amplifying the voice in presentations, guided tours, sporting activities, teaching, etc. Reaching approximately 70 m in favourable conditions. It includes a charge function for rechargeable batteries, robust microphone with good grip and a connector with thread to avoid accidental disconnections.



REC USB SD MP3 MPEG

FAP-10 10 W max.

FAP-12GU 10 W max.

CHARACTERISTICS	Compact personal waistband amplification system. Class D amplifier, 10 W. Auxiliary input. Powerful. Very lightweight.	Compact personal waistband amplification system. Class D amplifier, 10 W. USB/SD/MP3 player/recorder. Powerful. Very lightweight.
POWER	Adapter: 10 W maximum, 7 W RMS Batteries: 8 W maximum, 6 W RMS	Adapter: 10 W maximum, 7 W RMS Batteries: 8 W maximum, 6 W RMS
SPEAKERS	2 1/2" Neodymium magnet	2 1/2" Neodymium magnet
RESPONSE	270-20 000 Hz ±10 dB	270-20 000 Hz ±10 dB
MICROPHONE	Hands-free unidirectional electret condenser headset 1.2 m cable. 3.5 mm mono jack connector with thread.	Hands-free unidirectional electret condenser headset 1.2 m cable. 3.5 mm mono jack connector with thread
INPUTS	1 electret mic., 3.5 mm mono jack with thread 3000 Ω 70 mV 1 auxiliary, 3.5 mm stereo jack 2000 Ω 150 mV	1 electret mic., 3.5 mm mono jack with thread 3000 Ω 70 mV
OUTPUTS	-	Earphones, 3.5 mm stereo jack
CONTROLS	Volume and on/off	Volume on/off USB recorder/player
INDICATORS	Power on/off Battery charger	Power on/off Battery charger
POWER SUPPLY	9 V DC, 6 x 1.5V R6-AA alkaline batteries or rechargeable with adapter/charger included (12 V DC) Life with alkaline batteries: 8 hours for voice/6 hours for music Rechargeable battery charging time: approximately 10 hours.	9 V DC, 6 x LR6-AA 1.5 V alkaline or rechargeable batteries with adapter/charger included (12 V DC) Life with alkaline batteries: 8 hours for voice/6 hours for music Rechargeable battery charging time: approximately 10 hours.
DIMENSIONS	190 x 90 x 65 mm depth	190 x 90 x 65 mm depth
WEIGHT	0.3 kg (without batteries)	0.4 kg (without batteries)
ACCESSORIES	Carrying belt	Carrying belt

Compact personal waistband amplifier.

FAP-5

5 W max.

CHARACTERISTICS	Compact personal waistband amplifier.
POWER	5 W maximum, 3 W RMS
SPEAKER	2 1/2", 4 Ω
RESPONSE	100-15 000 Hz
MICROPHONE	Hands-free dynamic headset
INPUTS	1 dynamic mic.
CONTROLS	Volume, on/off
INDICATORS	Power on/off Battery charger
POWER SUPPLY	9 V DC, 6 x LR6-AA 1.5 V alkaline or rechargeable batteries with adapter/charger included (12 V DC) Duration with alkaline batteries: Over 6 hours Rechargeable battery charge time: approx. 10-14 hours
DIMENSIONS	180 x 80 x 65 mm depth
WEIGHT	0.4 kg (without batteries)
ACCESSORIES	Carrying belt



PORTABLE PA EQUIPMENT. PERSONAL AMPLIFIERS

Portable amplifiers with wireless microphone and VHF receiver, 174 to 194 MHz. Perfect amplifier systems for teachers, lecturers, salesmen, exhibitions, etc.



ASH-25

20 W max.
VHF

CHARACTERISTICS	Portable amplifier with wireless belt-pack transmitter and tie-clip microphone and microphone headset. Amplifier, 20 W maximum. VHF 174 to 194 MHz receiver for mic. incorporated. Tie-clip microphone with wireless belt-pack. Microphone headset for noisy environments. Charger incorporated for rechargeable wireless microphone batteries, 6LR61 9V and LR6-AA 1.5V
POWER	20 W maximum
SPEAKER	6 1/2" high performance
RESPONSE	100-15 000 Hz
INPUTS	2 x 600 Ω microphones and auxiliary
OUTPUTS	For recording/auxiliary
POWER SUPPLY	230 V AC, 12 V DC or with 8 R20-D batteries Duration with alkaline batteries: over 18 hours
DIMENSIONS	220 x 270 x 145 mm depth
WEIGHT	3.3 kg
OPTIONAL	RS-68: stand



ASH-35

20 W max.
VHF

CHARACTERISTICS	Portable amplifier with wireless hand-held microphone Amplifier, 20 W maximum. VHF 174 to 194 MHz receiver for mic. incorporated. Wireless hand-held microphone with high quality unidirectional dynamic capsule. Charger incorporated for rechargeable wireless microphone batteries, 6LR61 9V and LR6-AA 1.5V
POWER	20 W maximum
SPEAKER	6 1/2" high performance
RESPONSE	100-15 000 Hz
INPUTS	2 x 600 Ω microphones and auxiliary
OUTPUTS	For recording/auxiliary
POWER SUPPLY	230 V AC, 12 V DC or with 8 R20-D batteries Duration with alkaline batteries: over 18 hours
DIMENSIONS	220 x 270 x 145 mm depth
WEIGHT	3.3 kg
OPTIONAL	RS-68: stand

PORTABLE PA EQUIPMENT. PERSONAL AMPLIFIERS

Portable amplifiers with wireless microphone and VHF receiver.

Perfect amplifier system for teachers, lecturers, salesmen, exhibitions, etc.

15 W RMS

VHF

+

REC

USB

SD

MP3

MPEG



ASH-26GU

ASH-36GU

ASH-52GU

CHARACTERISTICS	Portable amplifier, 15 W RMS 1 VHF receiver with 1 wireless tie-clip and headset microphone USB/SD/MP3 player/recorder Priority in wireless microphone Charger for the internal battery included and rechargeable batteries, for wireless microphones 6R61/6F22 9 V and 2 X R6-AA 1.5 V, incorporated	Portable amplifier, 15 W RMS 1 VHF receiver with 1 hand-held wireless microphone USB/SD/MP3 player/recorder Priority in wireless microphone Charger for the internal battery included and rechargeable batteries for wireless microphones 6R61/6F22 9V and 2 x LR6-AA 1.5V, incorporated.	Portable amplifier, 15 W RMS 2 VHF receivers with 1 wireless hand-held microphone and 1 wireless tie-clip and head-set microphone. USB/SD/MP3 player/recorder Charger for the internal battery included and rechargeable wireless microphone batteries 6R61/6F22 9 V and 2 X R6-AA 1.5 V, incorporated
POWER	AC: 15 W RMS DC: 12 W RMS Battery: 12 W RMS	AC: 15 W RMS DC: 12 W RMS Battery: 12 W RMS	AC: 15 W RMS DC: 12 W RMS Battery: 12 W RMS
SPEAKERS	6 1/2" the whole range	6 1/2" the whole range	6 1/2" in the whole range
RESPONSE	20-20 000 Hz ± 3 dB	20-20 000 Hz ± 3 dB	20-20 000 Hz ± 3 dB
INPUTS	2 unbalanced mics., 6.3 mm jack 600-10 000 Ω 3.5 mV 1 mono auxiliary, 6.3 mm jack 47 000 Ω 100 mV	2 unbalanced mics., 6.3 mm jack 600-10 000 Ω 3.5 mV 1 mono auxiliar, 6.3 mm jack 47 000 Ω 100 mV	2 unbalanced mics., 6.3 mm jack 600-10 000 Ω 3.5 mV 1 mono auxiliary, 6.3 mm jack 47 000 Ω 100 mV
OUTPUTS	1 mono rec out, 6.3 mm jack 1 V	1 mono rec out, 6.3 mm jack 1 V	1 mono rec out, 6.3 mm jack 1 V
PRIORITY	Mic. 1 and wireless mic. depending on signal level, selectable	Mic. 1 and wireless mic. depending on signal level, selectable	Mic. 1 and wireless mics. depending on signal level, selectable
POWER SUPPLY	230 V AC, 60 W and 12 V DC, 3.5 A and internal rechargeable battery (included) Duration of rechargeable battery: Over 3 hours at maximum volume Battery charge time: 10 hours, approximately	230 V AC, 60 W and 12V DC, 3.5 A and internal rechargeable battery (included) Duration with rechargeable battery: Over 3 hours at max. volume Battery charge time: 10 hours, approximately	230 V AC, 60 W and 12 V DC, 3.5 A and internal rechargeable battery (included) Duration of rechargeable battery: Over 3 hours Battery charge time: 10 hours, approximately
DIMENSIONS	212 x 282 x 150 mm depth	212 x 282 x 150 mm depth	212 x 282 x 150 mm depth
WEIGHT	4.8 kg	4.8 kg	4.8 kg
OPTIONAL	RS-68: Stand	RS-68: stand	RS-68: stand

Portable amplifier with VHF wireless microphone systems. Class D amplifier, lightweight and energy efficient. USB/MP3 player. Internal lithium battery included and transport trolley. Perfect for teachers, salesmen, traders, exhibitions, aerobics, etc.

100 W RMS
VHF
Li
USB
MP3
MPEG


ASH-101U **N!**

CHARACTERISTICS	Portable amplifier, 100 W RMS. Class D energy efficient and lightweight amplifier circuit. 1 VHF receiver with 1 wireless hand-held microphone. USB/MP3 player. Rechargeable lithium battery. Transport trolley. Hole in the base for 35 mm tube.
POWER	100 W RMS Bass: 80 W RMS Treble: 20 W RMS AC: 100 W RMS Battery: 50 W RMS
SPEAKERS	1 x 8" woofer: 38 mm coil 1 x 1" tweeter
RESPONSE	65-20 000 Hz
INPUTS	1 balanced mic./line, combo (XLR and 6.3 mm jack) 1 unbalanced mic., combo (XLR and 6.3 mm jack) 1 auxiliary, 2 x RCA
OUTPUTS	1 line out, 6.3 mm jack
PRIORITY	Mic. 1 and wireless mic. through signal level, selectable
POWER SUPPLY	100-240 V AC and internal rechargeable lithium battery 4400 mAh (included) Rechargeable battery life: 4 hours Battery charge time: 8 hours approximately
DIMENSIONS	277 x 415 x 256 mm depth
WEIGHT	9 kg

ASH-102U **N!**

CHARACTERISTICS	Portable amplifier, 100 W RMS. Class D energy efficient and lightweight amplifier circuit. 2 VHF receivers with 1 wireless hand-held microphone and a second wireless microphone to choose from: hand-held, tie-clip or headset. USB/MP3 player. Rechargeable lithium battery. Transport trolley. Hole in the base for 35 mm tube.
POWER	100 W RMS Bass: 80 W RMS Treble: 20 W RMS AC: 100 W RMS Battery: 50 W RMS
SPEAKERS	1 x 8" woofer: 38 mm coil 1 x 1" tweeter
RESPONSE	65-20 000 Hz
INPUTS	1 balanced mic./line, combo (XLR and 6.3 mm jack) 1 unbalanced mic., combo (XLR and 6.3 mm jack) 1 auxiliary, 2 x RCA
OUTPUTS	1 line out, 6.3 mm jack
PRIORITY	Mic. 1 and wireless mics. through signal level, selectable
POWER SUPPLY	100-240 V AC and internal rechargeable lithium battery 4400 mAh (included) Rechargeable battery life: 4 hours Battery charge time: 8 hours approximately
DIMENSIONS	277 x 415 x 256 mm depth
WEIGHT	9.4 kg

PORTABLE PA EQUIPMENT. PERSONAL AMPLIFIERS

Portable amplifier with VHF wireless microphone systems. Class D amplifier, lightweight and energy efficient. USB/MP3 player. Internal lithium battery included and transport trolley. Perfect for teachers, salesmen, traders, exhibitions, aerobics, etc.

200 W RMS

VHF



USB

MP3

MPEG



ASH-201U **N!**

ASH-202U **N!**

CHARACTERISTICS	Portable amplifier, 200 W RMS. Class D energy efficient and lightweight amplifier circuit. 1 VHF receiver with 1 wireless hand-held microphone. USB/MP3 player. Rechargeable lithium battery. Transport trolley. Hole in the base for 35 mm tube.	Portable amplifier, 200 W RMS. Class D energy efficient and lightweight amplifier circuit. 2 VHF receivers with 1 wireless hand-held microphone and 1 second wireless microphone to choose from: hand-held, tie-clip or headset. USB/MP3 player. Rechargeable lithium battery. Transport trolley. Hole in the base for 35 mm tube.
POWER	200 W RMS Bass: 135 W RMS Treble: 65 W RMS AC: 200 W RMS Battery: 80 W RMS	200 W RMS Bass: 135 W RMS Treble: 65 W RMS AC: 200 W RMS Battery: 80 W RMS
SPEAKERS	1 x 10" woofer: 38 mm coil 1 x 1" tweeter	1 x 10" woofer: 38 mm coil 1 x 1" tweeter
RESPONSE	65-20 000 Hz	65-20 000 Hz
INPUTS	1 unbalanced mic./line, combo (XLR and 6.3 mm jack) 1 unbalanced mic., combo (XLR and 6.3 mm jack) 1 auxiliary, 2 x RCA	1 unbalanced mic./line, combo (XLR and 6.3 mm jack) 1 unbalanced mic., combo (XLR and 6.3 mm jack) 1 auxiliary, 2 x RCA
OUTPUTS	1 line out, 6.3 mm jack	1 line out, 6.3 mm jack
PRIORITY	Mic. 1 and wireless mic. through signal level, selectable	Mic. 1 and wireless mic. through signal level, selectable
POWER SUPPLY	100-240 V AC and internal rechargeable lithium battery 4400 mAh (included) Rechargeable battery life: 4 hours Battery charge time: 8 hours approximately	100 - 240 V AC and internal rechargeable lithium battery 4400 mAh (included) Rechargeable battery life: 4 hours Battery charge time: 8 hours approximately
DIMENSIONS	380 x 612 x 370 mm depth	380 x 612 x 370 mm depth
WEIGHT	18.6 kg	18.6 kg

PA LOUDSPEAKERS. COLUMN SPEAKERS

FONESTAR

Column speakers for indoor P.A. where a reduced format is needed with minimum visual impact. Special 3" loudspeakers, excellent response for playing the voice clearly.

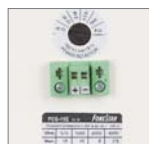


FCS-15E

FCS-20E

FCS-30E

	FCS-15E	FCS-20E	FCS-30E
CHARACTERISTICS	Low impedance column speaker with 100 V line transformer.		
POWER	15 W	20 W	30 W
SPEAKERS	4 x 3"	6 x 3"	8 x 3"
RESPONSE	200-14,000 Hz	200-14,000 Hz	200-14,000 Hz
IMPEDANCE	High Z 100 V line: 670 Ω (15 W) 1,000 Ω (10 W) 2,000 Ω (5 W) 4,000 Ω (2.5 W) Low Z: 8 Ω	High Z 100 V line: 500 Ω (20 W) 670 Ω (15 W) 1,000 Ω (10 W) 2,000 Ω (5 W) Low Z: 8 Ω	High Z 100 V line: 330 Ω (30 W) 500 Ω (20 W) 1,000 Ω (10 W) Low Z: 8 Ω
SENSITIVITY	87 dB at 1 W/1 m	88 dB at 1 W/1 m	89 dB at 1 W/1 m
DISPERSION	140° H x 40° V	140° H x 40° V	140° H x 40° V
SWITCH	W selector in high Z, low Z and off	W selector in high Z, low Z and off	W selector in high Z, low Z and off
CONNECTORS	Euroblock	Euroblock	Euroblock
COLOUR	Ivory, RAL-1013	Ivory, RAL-1013	Ivory, RAL-1013
DIMENSIONS	9 x 50 x 9 cm depth	9 x 67.5 x 9 cm depth	9 x 85 x 9 cm depth
WEIGHT	2.6 kg	3.7 kg	4.7 kg
ACCESSORIES	Adjustable fixing mounts		



FCS-15E/FCS-20E/
FCS-30E

Column speakers for P. A. with stylish format and compact size with reduced visual impact. Excellent acoustic features, high quality audio and directivity allowing you to guide the audio to the audience area. Manufactured in aluminium with 2" moisture resistant loudspeakers.



FCS-16

FCS-21

	FCS-16	FCS-21
CHARACTERISTICS	Low impedance column speaker with 100 V line transformer. High quality audio and reduced visual impact.	
POWER	15W	20W
SPEAKERS	6 x 2"	12 x 2"
RESPONSE	152-20,000 Hz	152-20,000Hz
IMPEDANCE	High Z 100 V line: 670 Ω (15W) 1,000 Ω (10W) 2,000 Ω (5W) 4,000 Ω (2.5W) Low Z: 8 Ω	High Z 100 V line: 500 Ω (20W) 670 Ω (15W) 1,000 Ω (10W) 2,000 Ω (5W) Low Z: 8 Ω
SENSITIVITY	88 dB at 1 W/1 m	89 dB at 1W/1m
DISPERSION	130° H x 55°	140° h x 30° V
SWITCHES	W selector in high Z, low Z and off	W Selector in high Z, low Z and 'off'
CONNECTORS	Screw terminals	Screw terminals
MATERIAL	Grey anodized aluminium	Grey anodized aluminium
DIMENSIONS	7 x 46.7 x 9 cm depth	7 x 83.6 x 9 cm depth
WEIGHT	2.2 kg	3.3 kg
ACCESSORIES	Adjustable fixing mounts	

PA LOUDSPEAKERS. COLUMN SPEAKERS

Column speakers manufactured in enamelled aluminium. Excellent playback quality. Splashproof, IP-44.

IP-44



FCS-257		FCS-120C		FCS-200C	
CHARACTERISTICS		Column Speaker with 100 V line transformer.			
POWER	15 W	12 W		20 W	
SPEAKERS	2 polypropylene 5 x 7". Broadband	4 x 3"		7 x 3"	
RESPONSE	100-16 000 Hz	100-14 000 Hz		100-14 000 Hz	
IMPEDANCE	100, 70 and 25 V high Z lines 100 V line: 670 Ω (15 W) 1330 Ω (7.5 W) 2670 Ω (3.75 W) 5000 Ω (2 W) 10000 Ω (1 W)	100, 70 and 25 V high Z line 100 V line: 833 Ω (12 W) 1666 Ω (6 W) 3333 Ω (3 W) 6666 Ω (1.5 W)		100, 70 and 25 V high Z line 100 V line: 500 Ω (20 W) 1000 Ω (10 W) 2000 Ω (5 W) 4000 Ω (2.5 W)	
SENSITIVITY	96 dB at 1 W/1 m	94 dB at 1 W/1 m		95 dB at 1 W/1 m	
DISPERSION	140° H x 45° V	140° H x 35° V		140° H x 35° V	
SWITCH	W selector in high Z	W Selector in high Z		W selector in high Z	
PROTECTION	IP-44	IP-44		IP-44	
MATERIAL	Ivory enamel aluminium, RAL-1013	Silk grey enamel aluminium, RAL-9002		Silk grey enamel aluminium, RAL-9002	
DIMENSIONS	16.9 x 46.5 x 11.2 cm depth	10.6 x 40.5 x 7.5 cm depth		10.6 x 61.9 x 7.5 cm depth	
WEIGHT	3.7 kg	2.2 kg		3.5 kg	
ACCESSORIES		Adjustable fixing mounts			

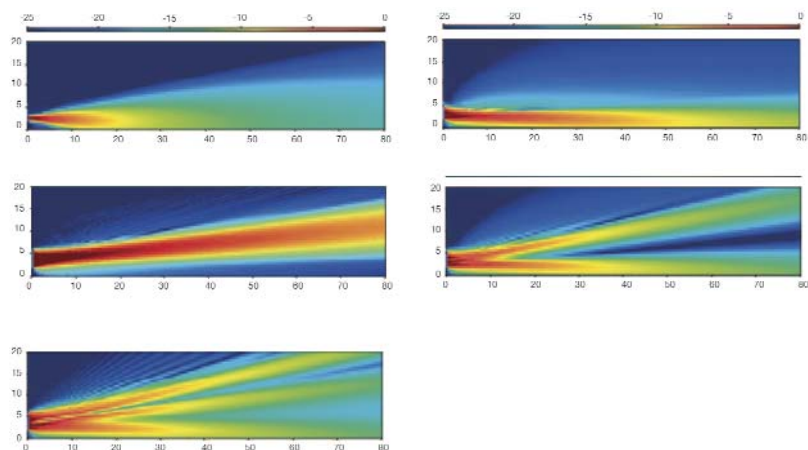
RELATED PRODUCTS

SAL-700P
Adjustable wall mounts for loudspeakers, column speakers, etc
Page 205.



Column speaker designed for voice applications and background music in areas with high reverberation.

Configurable directivity pattern using software, acoustic centre selection, aperture angle, inclination and shape of the sound beam. Up to 3 sound beams. Class D multichannel amplifier incorporated with high power, audio quality and elevated s/n ratio. Digital signal processor [DSP]. Remote control through the local area network [LAN]. Suitable for P. A. installations, professional audio or voice activated evacuation systems.



FCS-1200D

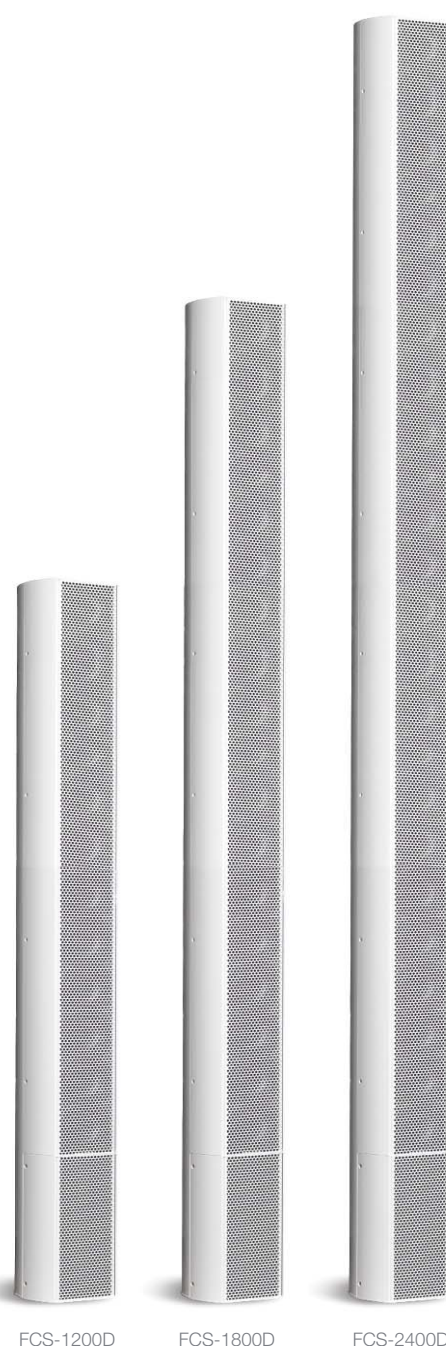
FCS-1800D



FCS-2400D



CHARACTERISTICS	Column speaker with configurable directivity pattern. Class D multichannel amplifier. 32 bits digital signal processor (DSP). Configurable directivity pattern using software. Connection with emergency power supply source. Remote control through the local area network (LAN) using software.		
AMPLIFIER	12 processing channels 12 x 70 W RMS class D	18 processing channels 18 x 70 W RMS class D	24 processing channels 24 x 70 W RMS class D
LOUDSPEAKERS	12 x 4 1/4" double cone aluminium, damp-proof	18 x 4 1/4" aluminium double cone, damp-proof	24 x 4 1/4" aluminium double cone, damp-proof
INPUTS	2 balanced lines, XLR 600 Ω 775 mV 1 Ethernet, RJ 45 1 control RS-485, Sub-D		
OUTPUTS	1 balanced line, XLR 600 Ω 775 mV 2 contact opening for failure indication		
FUNCTION	Adjustable directivity: acoustic centre, aperture angle (5° - 20°), inclination (5° - 25°), shape (symmetrical/asymmetrical) Up to 3 sound beams 7-band parametric equalization Noise gate Delay of up to 1000 ms Peak limiter with adjustable level Mute Amplifier, input signal and emergency power supply source supervision LED cut off, limiter and noise gate indicator		
RESPONSE	90-18,000 Hz		
S/N RATIO	> 110 dB		
DISPERSION	Vertical: 5 to 25°, adjustable through software Horizontal: 145°		
MAXIMUM SPL	93 $\pm$ 1 dB		
POWER SUPPLY	115-240 V AC 211 W, 16-27 V DC 8.5 A	115-240 V AC 277 W, 16-27 V DC 11 A	115-240 V AC 343 W, 16-27 V DC 14 A
DIMENSIONS	17.7 x 196.8 x 18 cm depth	17.7 x 237x 18 cm depth	17.7 x 304.2 x 18 cm depth
WEIGHT	27 kg	38 kg	48 kg
COLOUR	White, RAL-9016		
ACCESSORIES	Fixing mounts		



FCS-1200D

FCS-1800D

FCS-2400D

PA LOUDSPEAKERS. HORN SPEAKERS. RE SERIES

Horn speakers, RE series, with horn and rectangular mouth. Manufactured in aluminium.

For general use in all types of indoor and outdoor P. A. installations.



	RE-85	RE-116	RE-158
CHARACTERISTICS	Low impedance horn speaker.		
POWER	15 W maximum	25 W maximum	40 W maximum
RESPONSE	250-8500 Hz	220-9500 Hz	200-10 000 Hz
IMPEDANCE	8 Ω	8 Ω	8 Ω
SENSITIVITY	103 dB at 1 W/1 m	105 dB at 1 W/1 m	108 dB at 1 W/1 m
DISPERSION	120° H x 60° V	120° H x 60° V	120° H x 60° V
MATERIAL	Aluminium	Aluminium	Aluminium
COLOUR	Grey	Grey	Grey
DIMENSIONS	21 x 14.5 x 20 cm depth	26 x 17 x 25 cm depth	38 x 22 x 34 cm depth
WEIGHT	1 kg	1.2 kg	2.1 kg

Horn speaker, RE series, with horn and rectangular mouth. Manufactured in ABS.

For general use in all types of P. A. installations. Moisture-resistant.



	RE-86
CHARACTERISTICS	Low impedance horn speaker.
POWER	30 W maximum
RESPONSE	260-9000 Hz
IMPEDANCE	8 Ω
SENSITIVITY	107 dB at 1 W/1 m
DISPERSION	110° H x 60° V
MATERIAL	ABS
COLOUR	White
DIMENSIONS	20 x 12 x 23 cm depth
WEIGHT	1 kg

Horn speakers, RE series, with horn and round mouth. Manufactured in aluminium. Suitable for all types of indoor and outdoor P. A. installations. Wide range of models, dimensions and powers.



	RE-66	RE-88	RE-120
CHARACTERISTICS	Low impedance horn speaker.		
POWER	15 W maximum	15 W maximum	40 W maximum
RESPONSE	300-8000 Hz	250-8000 Hz	220-9500 Hz
IMPEDANCE	8 Ω	8 Ω	8 Ω
SENSITIVITY	104 dB at 1 W/1 m	104 dB at 1 W/1 m	108 dB at 1 W/1 m
DISPERSION	125°	115°	110°
MATERIAL	Aluminium	Aluminium	Aluminium
COLOUR	Grey	Green	Grey
DIMENSIONS	15 cm Ø x 16 cm depth	20 cm Ø x 19 cm depth	30 cm Ø x 31 cm depth
WEIGHT	0.8 kg	1 kg	1.9 kg

Horn speakers, RE series with compact horn and round mouth.

RE-55

CHARACTERISTICS	Low impedance horn speaker.
POWER	10 W maximum
RESPONSE	350-8000 Hz
IMPEDANCE	8 Ω
SENSITIVITY	98 dB at 1 W/1 m
SOUND PRESSURE	-
DISPERSION	125°
MATERIAL	Aluminium
COLOUR	Grey
DIMENSIONS	13 cm $\varnothing$ x 12 cm depth
WEIGHT	0.4 kg



RE-41

CHARACTERISTICS	Low impedance horn speaker.
POWER	40 W maximum
RESPONSE	350-8000 Hz
IMPEDANCE	8 Ω
SENSITIVITY	106 dB at 1 W/1 m
SOUND PRESSURE	118 dB at maximum power at 1 m
DISPERSION	110°
MATERIAL	ABS
COLOUR	Black
DIMENSIONS	10.5 cm $\varnothing$ x 10.5 cm depth
WEIGHT	1 kg



RE-63 **N!**

CHARACTERISTICS	Low impedance horn speaker.
POWER	60 W maximum
RESPONSE	200-7000 Hz
IMPEDANCE	16 Ω
SENSITIVITY	108 dB at 1W/1m
DISPERSION	115°
MATERIAL	Aluminium
COLOUR	Grey
DIMENSIONS	12.5 cm $\varnothing$ x 20.5 cm depth
WEIGHT	2 kg



RE-115S

CHARACTERISTICS	Compact high power horn speaker, specially designed for sirens, alarms, etc.
POWER	200 W maximum, 100 W RMS
RESPONSE	300-7000 Hz
IMPEDANCE	11 Ω
SENSITIVITY	110 dB at 1 W/1 m
SOUND PRESSURE	126 dB at maximum power at 1 m
DISPERSION	120°
MATERIAL	Aluminium
COLOUR	Black
DIMENSIONS	15 cm $\varnothing$ x 17 cm depth
WEIGHT	2.9 kg

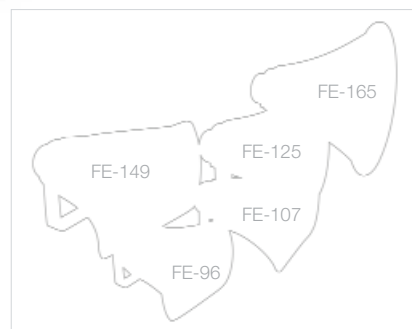


PA LOUDSPEAKERS. HORN SPEAKERS. FE SERIES

Horn speakers, FE series with horn, manufactured in aluminium.

Robust construction in lightweight, resistant aluminium.

Suitable for indoor and outdoor P. A. installations.



	FE-96	FE-107	FE-149	FE-125	FE-165
CHARACTERISTICS	Low impedance horn speaker.				
POWER	25 W maximum	30 W maximum	40 W maximum	40 W maximum	40 W maximum
RESPONSE	300-9000 Hz	250-7500 Hz	250-7500 Hz	250-7500 Hz	250-7500 Hz
IMPEDANCE	8 Ω	8 Ω	8 Ω	8 Ω	8 Ω
SENSITIVITY	103 dB at 1 W/1 m	104 dB at 1 W/1 m	106 dB at 1 W/1 m	106 dB at 1 W/1 m	107 dB at 1 W/1 m
DISPERSION	115° H x 60° V	135° H x 95° V	130° H x 90° V	130°	120°
MATERIAL	Aluminium	Aluminium	Aluminium	Aluminium	Aluminium
COLOUR	Grey	Grey	Grey	Grey	Grey
DIMENSIONS	21 x 15 x 20 cm depth	23.5 x 17.5 x 25 cm depth	35 x 23 x 33.5 cm depth	31 cm Ø x 28 cm depth	40 cm Ø x 36 cm depth
WEIGHT	0.8 kg	1 kg	2.2 kg	1.9 kg	2.1 kg

Horn speakers, FE series with horn, manufactured in ABS and aluminium.

Highly resistant to knocks, adverse weather conditions, etc.

High quality and excellent frequency response for professional indoor and outdoor P.A. installations.

IP-66



	FE-1110	FE-1210	FE-1310
CHARACTERISTICS	Low impedance horn speaker.		
POWER	15 W maximum	30 W maximum	30 W maximum
RESPONSE	280-12,500 Hz	250-12,500 Hz	250-12 500 Hz
IMPEDANCE	8 Ω	8 Ω	8 Ω
SENSITIVITY	105 dB at 1 W/1 m	107 dB at 1 W/1 m	107 dB at 1 W/1 m
DISPERSION	145° H x 95° V	140° H x 90° V	130°
PROTECTION	IP-66	IP-66	IP-66
MATERIAL	ABS	ABS	ABS/Aluminium
COLOUR	Ivory	Ivory	Ivory
DIMENSIONS	22 x 16 x 23 cm depth	29 x 21 x 26 cm depth	26 cm Ø x 26 cm depth
WEIGHT	1.1 kg	1.5 kg	1.5 kg

IP-66


	FE-1150T	FE-1250T	FE-1350T
CHARACTERISTICS	Horn speaker with 100 V line transformer.		
POWER	15 W maximum	30 W maximum	30 W maximum
RESPONSE	280-12,500 Hz	250-12,500 Hz	250-12,500 Hz
IMPEDANCE	High Z 100 V line: 670 Ω (15 W), 1,000 Ω (10 W) 2,000 Ω (5 W), 3,300 Ω (3 W) 10,000 Ω (1 W)	High Z 100 V line: 330 Ω (30 W), 670 Ω (15 W) 1,000 Ω (10 W), 2,000 Ω (5 W) 3,300 Ω (3 W), 10,000 Ω (1 W)	High Z 100 V line: 330 Ω (30 W), 670 Ω (15 W) 1,000 Ω (10 W), 2,000 Ω (5 W) 3,300 Ω (3 W), 10,000 Ω (1 W)
SENSITIVITY	105 dB at 1 W/1 m	107 dB at 1 W/1 m	107 dB at 1 W/1 m
DISPERSION	145° H x 95° V	140° H x 90° V	130°
SWITCH	W selector in high Z	W selector in high Z	W selector in high Z
PROTECTION	IP-66	IP-66	IP-66
MATERIAL	ABS	ABS	ABS/Aluminium
COLOUR	Ivory	Ivory	Ivory
DIMENSIONS	22 x 16 x 23 cm depth	29 x 21 x 26 cm depth	26 cm $\varnothing$ x 26 cm depth
WEIGHT	1.3 kg	1.7 kg	1.7 kg

Horn speaker, FE series manufactured in ABS. Compact size. Possibility to flush mount.

IP-66

FE-6ET **NI**

CHARACTERISTICS	Horn speaker with 100 V line transformer. Possibility to flush mount. Compact.
POWER	12 W maximum, 6 W RMS
RESPONSE	600-4000 Hz
IMPEDANCE	High Z 100 V line: 1650 Ω (6 W) 3300 Ω (3 W) 6700 Ω (1.5 W)
SENSITIVITY	100 dB at 1 W/1 m
DISPERSION	200°
PROTECTION	IP-66
MATERIAL	ABS
COLOUR	Ivory
DIMENSIONS	135 x 135 mm x 96 mm depth
WEIGHT	0.9 kg



PA LOUDSPEAKERS. HORN SPEAKERS. TI SERIES

Horn speakers, TI series with horn and round mouth, manufactured in aluminium.

Suitable for all types of indoor and outdoor PA installations in large areas.

Robust construction.



	TI-12	TI-14	TI-16
CHARACTERISTICS	Horn speaker with 100 V line transformer.		
POWER	25 W	25 W	50 W
RESPONSE	220-10,000 Hz	200-10,000 Hz	200-10,000 Hz
IMPEDANCE	100 V High Z line: 400 Ω (25 W) 500 Ω (20 W) 670 Ω (15 W) 1,000 Ω (10 W)	100 V High Z line: 400 Ω (25 W) 500 Ω (20 W) 670 Ω (15 W) 1,000 Ω (10 W)	100 V High Z line: 200 Ω (50 W) 250 Ω (40 W) 333 Ω (30 W) 500 Ω (20 W)
SENSITIVITY	107 dB at 1 W/1 m	107 dB at 1 W/1 m	108 dB at 1 W/1 m
DISPERSION	110°	110°	100°
MATERIAL	Aluminium	Aluminium	Aluminium
COLOUR	Grey	Grey	Grey
DIMENSIONS	30 cm $\varnothing$ x 36 cm depth	36 cm $\varnothing$ x 41 cm depth	41 cm $\varnothing$ x 44 cm depth
WEIGHT	2.4 kg	2.5 kg	2.8 kg

Horn speaker. TI series with horn and rectangular mouth. Manufactured in ABS.



TI-86

CAPSULE	Low impedance horn speaker with 100 V line transformer.
POWER	15 W
RESPONSE	260-9000 Hz
IMPEDANCE	100 V High Z line: 670 Ω (15 W), 1000 Ω (10 W) 1330 Ω (7.5 W), 2000 Ω (5 W) Low Z: 8 Ω
SENSITIVITY	105 dB at 1 W/1 m
DISPERSION	110° H x 60° V
SWITCH	W selector in high Z and low Z
MATERIAL	White ABS
DIMENSIONS	20 x 12 x 24 cm depth
WEIGHT	1.3 kg

PA LOUDSPEAKERS. HORN SPEAKERS. RD SERIES

FONESTAR

Horn speakers, RD series, manufactured in aluminium.
Suitable for all types of indoor and outdoor P.A. installations in large areas.
With a standard 1 3/8" thread for using together with the high power drivers in the RM series.



	RD-6	RD-14	RD-20	RD-26	RD-815
CHARACTERISTICS	Horn speaker with standard 1 3/8" thread for motor.				
DISPERSION	115°	110°	100°	100°	120° H x 60° V
MATERIAL	Aluminium	Aluminium	Aluminium	Aluminium	Aluminium
COLOUR	Grey	Grey	Grey	Green	Grey
DIFFUSER	12.5 cm Ø x 10 cm depth	36 cm Ø x 27 cm depth	51 cm Ø x 37 cm depth	66 cm Ø x 50 cm depth	38 x 20 x 27.5 cm depth
WEIGHT	0.5 kg	1.5 kg	2.1 kg	2.8 kg	1.6 kg

	RD-165	RD-205
CHARACTERISTICS	Horn speaker with standard 1 3/8" thread for motor.	
DISPERSION	110°	100°
MATERIAL	Aluminium	Aluminium
COLOUR	Grey	Grey
DIMENSIONS	41 cm Ø x 30 cm depth	51 cm Ø x 38 cm depth
WEIGHT	1.5 kg	1.9 kg

CHARACTERISTICS	Multi-motor horn speaker. Standard 1 3/8" thread for motors. Allows 4 RM series motors of 40 to 150 W with or without transformer. To be supplied with motors: PLEASE ENQUIRE.
MATERIAL	Aluminium
COLOUR	Grey
DIMENSIONS	46 cm Ø x 47.5 cm depth
WEIGHT	7 kg



PA LOUDSPEAKERS. MOTORS, RM SERIES

Drivers for horn speakers, RM series. Compact and robust drivers, with 1 3/8" standard thread to install with the RD series horns. Suitable for all types of indoor and outdoor P.A. installations in large areas. Large variety of models with different powers.



RM-40



RM-60



RM-62

CHARACTERISTICS	Low impedance driver for horn speaker with 1 3/8" standard thread		
POWER	40 W maximum	60 W maximum	60 W maximum
RESPONSE	180-6500 Hz	200-7000 Hz	150-6000 Hz
IMPEDANCE	16 Ω	16 Ω	16 Ω
SENSITIVITY	107 dB at 1 W/1 m	108 dB at 1 W/1 m	109 dB at 1 W/1 m
COLOUR	Grey	Grey	Grey
DIMENSIONS	110 mm Ø x 114 mm depth	115 mm Ø x 112 mm depth	114 mm Ø x 112 mm depth
WEIGHT	1.5 kg	1.9 kg	1.7 kg



RM-100



RM-102



RM-110S



RM-150

CHARACTERISTICS	Low impedance driver for horn speaker with 1 3/8" standard thread.	Low impedance driver for horn speaker with 1 3/8" standard thread.	Low impedance and high power driver specially designed for sirens, alarms, etc. for horn speaker with 1 3/8" standard thread.	Low impedance driver for horn speaker with 1 3/8" standard thread
POWER	100 W maximum	100 W maximum	100 W maximum	150 W maximum
RESPONSE	250-7500 Hz	100-10 000 Hz	260-8500 Hz	250-9000 Hz
IMPEDANCE	16 Ω	16 Ω	11 Ω (4.2 Ω DC)	16 Ω
SENSITIVITY	110 dB at 1 W/1 m	110 dB at 1 W/1 m	116 dB at 1 W/1 m	114 dB at 1 W/1 m
COLOUR	Grey	Grey	Black	Green
DIMENSIONS	123 mm Ø x 115 mm depth	120 mm Ø x 123 mm depth	116 mm Ø x 106 mm depth	115 mm Ø x 102 mm depth
WEIGHT	2.2 kg	2.1 kg	3.3 kg	3.2 kg


RM-35T

RM-60T

CHARACTERISTICS	Driver with 100 V line transformer for horn speaker, with 1 3/8" standard thread. Aluminium lid and plastic base.	
POWER	35 W	60 W
RESPONSE	150-6000 Hz	200-7000 Hz
IMPEDANCE	High Z 100 V line: 285 Ω (35 W), 500 Ω (20 W) 1000 Ω (10 W)	100 V High Z line: 166 Ω (60 W), 200 Ω (50 W) 250 Ω (40 W), 333 Ω (30 W)
SENSITIVITY	114 dB at 1 W/1 m	107 dB at 1 W/1 m
COLOUR	Grey (Cool Gray 6C)	Green
DIMENSIONS	130 mm Ø x 137 mm depth	115 mm Ø x 144 mm depth
WEIGHT	1.9 kg	2.2 kg


RM-61T

RM-75T

RM-80T

CHARACTERISTICS	Driver with 100 V line transformer for horn speaker, with 1 3/8" standard thread.		
POWER	60 W	75 W	80 W
RESPONSE	200-6000 Hz	200-7000 Hz	200-6000 Hz
IMPEDANCE	High Z 100 V line: 166 Ω (60 W), 250 Ω (40 W) 500 Ω (20 W)	100 V High Z line: 133 Ω (75 W), 166 Ω (60 W) 222 Ω (45 W), 333 Ω (30 W)	100 V High Z line: 125 Ω (80 W), 200 Ω (50 W) 285 Ω (35 W)
SENSITIVITY	110 dB at 1 W/1 m	108 dB at 1 W/1 m	110 dB at 1 W/1 m
COLOUR	Grey	Green	Grey
DIMENSIONS	110 mm Ø x 160 mm depth	114 mm Ø x 175 mm depth	110 mm Ø x 160 mm depth
WEIGHT	2.1 kg	3.4 kg	2.2 kg

PA LOUDSPEAKERS. SIRENS, RS SERIES

Electronic horn sirens.


RS-86

RS-41
RS-86
RS-41

CHARACTERISTICS	Electronic horn siren.	
SIREN	Double: one tone and high/low tone	
POWER	30 W	40 W
SENSITIVITY	108 dB at 1 W/1 m	117 dB at 1 W/1 m
DISPERSION	110° H x 60° V	110°
POWER SUPPLY	12 V DC, 1 A	12 V DC, 1 A
MATERIAL	ABS	ABS
COLOUR	White	Black
DIMENSIONS	20 x 12 x 23 cm depth	10.5 cm Ø x 10.5 cm depth
WEIGHT	1.4 kg	1 kg

PA LOUDSPEAKERS. SOUND PROJECTORS

Sound projectors of different shapes and powers, with easy to install fixing systems.

Their characteristics make them suitable for indoor and outdoor P.A. installations, with excellent musical and vocal response. Weatherproof, standard IP depending on models.



IP-65

PF-15T

IP-66

PF-17T

IP-65

PF-23T

CHARACTERISTICS	Sound projector with 100 V line transformer and low impedance.	Sound projector with 100, 70, and 50 V line transformer.	Sound projector with 100 V line transformer.
POWER	15 W	6 W	15 W
SPEAKER	6" Hi-Fi	5" Hi-Fi	5 1/4" Hi-Fi
RESPONSE	120-15 000 Hz	150-15 000 Hz	80-20,000 Hz
IMPEDANCE	High Z 100 V line: 670 Ω (15 W) 1250 Ω (8 W) 2500 Ω (4 W) 5000 Ω (2 W) Low Z: 8 Ω	High Z 100 V line: 1650 Ω (6 W) 3300 Ω (3 W) 6700 Ω (1.5 W)	High Z 100 V line: 670 W (15 W) 1,000 Ω (10 W) 2,000 Ω (5 W)
SENSITIVITY	92 dB at 1 W/1 m	95 dB at 1 W/1 m	90 dB at 1 W/1 m
SOUND PRESSURE	-	-	100 dB at maximum power at 1 m
DISPERSION	150°	150°	80°
SWITCH	W Selector, high Z, low Z and off	-	-
PROTECTION	-	IP-66	IP-65
MATERIAL	IP-65	ABS. Hermetic casing	Hermetic casing. ABS
COLOUR	ABS. Hermetic casing	Ivory	Light grey
DIMENSIONS	Ivory and black grille	180 mm $\varnothing$ x 200 mm depth	200 x 174 x 315 mm depth
WEIGHT	175 mm $\varnothing$ x 265 mm depth	1.7 kg	2.5 kg
ACCESSORIES	2.3 kg	Adjustable fixing mount	Adjustable fixing mount


IP-65
IP-44
IP-46
PF-16T
PF-19T
PF-18T

CHARACTERISTICS	Sound projector with 100 V line transformer and low impedance.	Sound projector with 100, 70 and 50 V line transformer.	Sound projector with 100, 70 and 50 V line transformer.
POWER	15 W	20 W	30 W
SPEAKERS	6 1/2" Hi-Fi	6 1/2" Hi-Fi	5" Hi-Fi
RESPONSE	100-15 000 Hz	100-20,000 Hz	125-15 000 Hz
IMPEDANCE	High Z 100 V line: 670 Ω (15 W) 1000 Ω (10 W) 2000 Ω (5 W) 4000 Ω (2.5 W) Low Z: 8 Ω	High Z 100 V line: 500 Ω (20 W) 1,000 Ω (10 W) 2,000 Ω (5 W)	High Z 100 V line: 330 Ω (30 W) 670 Ω (15 W) 1300 Ω (7.5 W)
SENSITIVITY	92 dB at 1 W/1 m	94 dB at 1 W/1 m	101 dB at 1 W/1 m
DISPERSION	150°	150°	140°
SWITCH	W selector in high Z, low Z and off	-	-
PROTECTION	IP-65	IP-44	IP-46
MATERIAL	ABS. Hermetic casing	Hermetic casing. ABS	Hermetic casing. ABS
COLOUR	Ivory	Ivory	Ivory
DIMENSIONS	200 mm $\varnothing$ x 250 mm depth	180 mm $\varnothing$ x 251 mm depth	275 x 225 x 255 mm depth
WEIGHT	2.4 kg	2.3 kg	3.5 kg
ACCESSORIES	Adjustable fixing mount	Adjustable fixing mount	Adjustable fixing mount

PA LOUDSPEAKERS. SOUND PROJECTORS

Sound projectors of different shapes and powers, with easy to install fixing systems. Their characteristics make them suitable for indoor and outdoor P.A. installations, with excellent musical and vocal response.

Weatherproof, standard IP depending on models.



IP-44

2 x 5 1/2"

PF-20T

IP-44

2 x 6 1/2"

PF-21T

IP-65

2 x 5 1/4"

PF-22T

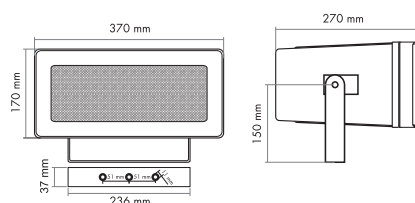
CHARACTERISTICS	Bidirectional sound projector with 100, 70 and 50 V line transformer.	Bidirectional sound projector with 100, 70 and 50 V line transformer.	Bidirectional sound projector with 100 V line transformer.
POWER	15 W	20 W	20 W
SPEAKERS	2 x 5 1/2" Hi-Fi	2 x 6 1/2" Hi-Fi	2 x 5 1/4" Hi-Fi
RESPONSE	140-20 000 Hz	100-20,000 Hz	80-20,000 Hz
IMPEDANCE	High Z 100 V line: 670 Ω (15 W) 1300 Ω (7.5 W) 2600 Ω (3.75 W)	High Z 100 V line: 500 Ω (20 W) 1 000 Ω (10 W) 2 000 Ω (5 W)	High Z 100 V line: 500 Ω (20 W) 670 Ω (15 W) 1,000 Ω (10 W)
SENSITIVITY	92 dB at 1 W /1 m	94 dB at 1 W/1 m	90 dB at 1 W/1 m
SOUND PRESSURE	-	-	100 dB at maximum power at 1 m
DISPERSION	150° bidirectional	150° bidirectional	80° bidirectional
PROTECTION	IP-44	IP-44	IP-65
MATERIAL	Hermetic casing. ABS	Hermetic casing. ABS	Hermetic casing. ABS
COLOUR	Ivory	Ivory	Light grey
DIMENSIONS	150 mm Ø x 196 mm depth	180 mm Ø x 251 mm depth	457 x 200 x 174 mm depth
WEIGHT	2.4 kg	2.9 kg	3.4 kg
ACCESSORIES	Adjustable fixing mount	Adjustable fixing mount	Adjustable fixing mount

Sound projectors.

Far reaching and low audio dispersion.

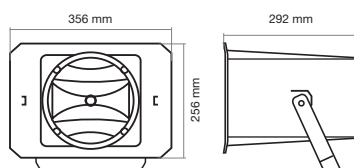
Quality audio, recommended for outdoors.

IP-66 weatherproof.



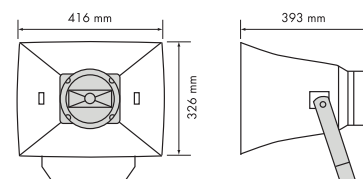
IP-66

PF-30T



IP-66

PF-35T



IP-66

PF-60T

CHARACTERISTICS	Sound projector with 100 V line transformer and low impedance.	Sound projector with horn and 100 V line transformer.	Sound projector with 100 V line transformer. High quality finish.
POWER	30 W RMS	75 W maximum, 50 W RMS	90 W maximum, 60 W RMS
SPEAKERS	1 x 5" woofer, treated to be weatherproof	1 x 6" weather proof woofer 1 x 1" tweeter	1 x 6 1/2" PP woofer, weatherproof 1 x 1" high performance tweeter
RESPONSE	100-10 000 Hz	90-20 000 Hz	80-20,000 Hz
IMPEDANCE	High Z 100 V line: 330 Ω (30 W) 670 Ω (15 W) 1330 Ω (7.5 W) 2660 Ω (3.8 W) Low Z: 8 Ω	100 V high Z line: 200 Ω (50 W) 330 Ω (30 W) 670 Ω (15 W)	High Z 100 V line: 166 Ω (60 W) 330 Ω (30 W) 670 Ω (15 W) 1,300 Ω (7.5 W)
SENSITIVITY	90 dB at 1 W/1 m	99 dB at 1 W/1 m	98 dB at 1 W/1 m
DISPERSION	100° H x 85° V	90° H x 80° V	70° H x 70° V
PROTECTION	IP-66	IP66	IP-66
MATERIAL	ABS. Hermetic casing	ABS. Hermetic casing	Hermetic casing. ABS
COLOUR	Ivory	Grey	Grey.
DIMENSIONS	440 x 240 x 360 mm depth	356 x 256 x 292 mm depth	416 x 326 x 393 mm depth.
WEIGHT	2.6 kg	3.5 kg	6.9 kg
ACCESSORIES	Adjustable fixing mount	Adjustable fixing mount	Adjustable fixing mount.

PA LOUDSPEAKERS. LOUDSPEAKERS

High power loudspeaker manufactured in wood. 100 V line transformer and low impedance. High quality components with excellent audio.



SBH-250T

CHARACTERISTICS	Loudspeaker with 100 V line transformer and 8 Ω low impedance. Manufactured in reinforced wood. Highly resistant granulated paint finish. Steel front grille and protective foam. Suspension points. Hole in the base for a 35 mm tube.
POWER	300 W maximum, 150 W RMS
SPEAKER	2 x 5" woofer with ferrite magnet 1 compression motor: 1" throat
RESPONSE	100 - 18,000 Hz
IMPEDANCE	High Z 100 V line: 200 Ω (50 W) 400 Ω (25 W) 1,000 Ω (10 W) Low Z: 8 Ω
SENSITIVITY	92 dB at 1W/1 m
SOUND PRESSURE	117 dB at maximum power at 1 m
DISPERSION	90° H x 60° V (-6 dB)
CROSSOVER	2 ways
CONNECTORS	2 x 4-contact speaker connectors (1 +, 1 -) Spring terminals
SUSPENSION POINTS	2 x M 8 points
COLOUR	Black
DIMENSIONS	210 x 450 x 230 mm depth
WEIGHT	10.5 Kg
OPTIONAL	SAL-567N and SAL-568N: wall mount, 35 mm tube

PA LOUDSPEAKERS. AMBIENT SERIES

FONESTAR

Compact loudspeakers, AMBIENT series. Specially designed for P.A applications and background music. They are a solution for installations in public places, such as restaurants, cafeterias, supermarkets, shopping centres, etc. High power and resistant loudspeakers with 100 V line transformer, compact size with excellent finish. The loudspeakers include a wall support with adjustable arm and steel safety cable allowing easy installation and positioning of the loudspeakers.



	AMBIENT-20T	AMBIENT-20BT
CHARACTERISTICS	Pair of compact Hi-Fi loudspeakers with 100V line transformer. Loudspeaker with shielded magnet. Bass reflex reinforcement system.	Pair of compact Hi-Fi loudspeakers with 100V line transformer. Loudspeaker with shielded magnet. Bass reflex reinforcement system.
POWER	40 W maximum, 20 W RMS	40 W maximum, 20 W RMS
SPEAKERS	1 x 3" PP woofer, 20.4 mm coil with shielded magnet	1 x 3" PP woofer, 20.4 mm coil with shielded magnet
RESPONSE	132-20,000 Hz	132-20,000 Hz
IMPEDANCE	High Z 100 V line: 500 Ω (20 W) 1,000 Ω (10 W) 2,000 Ω (5 W)	High Z 100 V line: 500 Ω (20 W) 1,000 Ω (10 W) 2,000 Ω (5 W)
SENSITIVITY	85 dB at 1 W/1 m	85 dB at 1 W/1 m
SWITCH	W selector in high Z	W selector in high Z
CONNECTORS	Spring terminals	Spring terminals
COLOUR	Black	White
DIMENSIONS	115 x 175 x 107 mm depth	115 x 175 x 107 mm depth
WEIGHT	2 x 1.2 kg	2 x 1.2 kg
ACCESSORIES	Wall mount with adjustable arm and steel safety cable	Wall mount with adjustable arm and steel safety cable



RELATED PRODUCTS



MA-30RGU
P.A. amplifier with USB/SD/MP3 recorder/player and digital FM tuner. 4 W maximum, 30 W RMS
Page 15.



MAX-62
P. A. amplifier with 6 auxiliary inputs. 90 W maximum, 60 W RMS
Page 17

PA LOUDSPEAKERS. 4FIRE SERIES

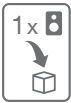
Fireproof Hi-Fi loudspeaker. Exceptional sound quality. Manufactured in auto-extinguishable UL94V0 ABS with metal grille and fireproof components, ceramic connectors, cables made with flame retardant material and thermal fuse. Adjustable mount. Complies with the BS-5839 standard, suitable for installations in accordance with UNE-EN 60849 standard.



4FIRE-30T

BS-5839

EN 60849



CHARACTERISTICS	Fireproof Hi-Fi loudspeaker with 100 V line transformer and low impedance.
STANDARD	BS-5839 part 8 and EN 60849
POWER	30 W
SPEAKERS	1 x 51/4 " woofer 1 x 1" tweeter
RESPONSE	80-20,000 Hz
IMPEDANCE	High Z 100 V line: 333 Ω (30W) 667 Ω (15W) 1,333 Ω (7.5 W) 2,667 Ω (3.75 W) Low Z: 8 Ω
SENSITIVITY	89 dB at 1 W/1 m
SOUND PRESSURE	104 dB at maximum power
DISPERSION	180° at 1 kHz, 80° at 4 kHz
MATERIAL	Self-extinguishing ABS UL94V0, metal grille, ceramic connectors, cables made from flame retardant material and thermal fuse. Double hole for cable input and output.
SWITCH	W Selector in high Z and low Z
CROSSOVER	Treble filter
CONNECTORS	Screw terminals with protective metal box
COLOUR	Black
DIMENSIONS	190 x 250 x 215 mm depth
WEIGHT	2.8 kg
ACCESSORIES	Adjustable fixing mounts

PA LOUDSPEAKERS. PRISMA SERIES

FONESTAR

Weatherproof PRISMA series. Compact high quality, high power Hi-Fi loudspeakers with installation mount. Perfect for outdoors, damp and marine environments.

IP-65 WEATHERPROOF



PRISMA-30TW
PRISMA-55TW



PRISMA-30BTW
PRISMA-55BTW



PRISMA-30TW PRISMA-30BTW PRISMA-55TW PRISMA-55BTW

1 x 	CHARACTERISTICS		Weatherproof hi-fi loudspeaker with 100 V line transformer and low impedance. Sunlight (UV) resistant casing. Aluminium grille with electrostatic paint. Protection against water and anti-corrosive materials.		Weatherproof hi-fi loudspeaker with 100 V line transformer and low impedance. Sunlight (UV) resistant casing. Aluminium grille with electrostatic paint. Protection against water and anti-corrosive materials.	
	POWER	60 W maximum, 30 W RMS		100 W maximum, 50 W RMS		
	SPEAKERS	1 x 3" PP mica woofer 1 x 1" Mylar tweeter		1 x 5 1/4" polypropylene mica woofer 1 x 1" Mylar tweeter		
	RESPONSE	178-20 000 Hz		55-20,000 Hz		
	IMPEDANCE	High Z 100 V line: 670 Ω (15 W) 1000 Ω (10 W) 2000 Ω (5 W) 4000 Ω (2.5 W) 8000 Ω (1.25 W) Low Z: 8 Ω		100 V High Z line: 200 Ω (50 W) 250 Ω (40 W) 330 Ω (30 W) 500 Ω (20 W) 1,000 Ω (10 W) Low Z: 8 Ω		
	SENSITIVITY	80 dB at 1 W/1 m		85 dB at 1 W/1 m		
	SOUND PRESSURE	94 dB at maximum power at 1 m		102 dB ±2 dB at maximum power at 1m		
	DISPERSION	130°		130°		
	OPERATING TEMPERATURE	-20° to +80° C		-20° C to +100° C		
	SWITCH	W selector in high Z and low Z		W selector in high Z and low Z		
	PROTECTION	IP-65		IP-65		
	CROSSOVER	Treble filter		Treble filter		
	CONNECTORS	Spring terminals with protective cable cover		Spring terminals with protective cable grommet		
	COLOUR	Black	White	Black	White	
	DIMENSIONS	98 x 165 x 114 mm depth		157 x 230 x 170 mm depth		
	WEIGHT	1 kg		2.3 kg		
	ACCESSORIES	Adjustable stainless steel fixing mount		Adjustable stainless steel fixing mount		

PA LOUDSPEAKERS. PRISMA SERIES

Pairs of PRISMA series compact Hi-Fi loudspeakers with installation mount. Triangular design suitable for installing on all types of surfaces, specially in corners.



PRISMA-42T
PRISMA-82T



PRISMA-42T/PRISMA-42BT



PRISMA-42BT
PRISMA-82BT



PRISMA-82T/PRISMA-82BT

	PRISMA-42T	PRISMA-42BT	PRISMA-82T	PRISMA-82BT
CHARACTERISTICS	Pair of Hi-Fi loudspeakers with 100 V line transformer and low impedance.		Pair of Hi-Fi loudspeakers with 100 V line transformer and low impedance.	
POWER	40 W maximum, 20 W RMS		80 W maximum, 40 W RMS	
SPEAKERS	1 x 4" polypropylene woofer 1 x 1" dome tweeter		1 x 6 1/2" polypropylene woofer 1 x 1" dome tweeter	
RESPONSE	70-18,000 Hz		55-20,000 Hz	
IMPEDANCE	100 V High Z line: 625 Ω (16 W), 1,250 Ω (8 W) 2,500 Ω (4 W), 5,000 Ω (2 W) Low Z: 8 Ω		100 V High Z line: 330 Ω (30 W), 625 Ω (16 W) 1,250 Ω (8 W), 2,500 Ω (4 W) Low Z: 8 Ω	
SENSITIVITY	88 dB at 1 W/1 m		89 dB at 1 W/1 m	
SOUND PRESSURE	105 dB at maximum power		110 dB at maximum power	
DISPERSION	90°		90°	
SWITCH	W selector in high Z and low Z		W selector in high Z and low Z	
CROSSOVER	Treble filter		Treble filter	
CONNECTORS	Banana plugs/stripped ends		Banana plugs/stripped ends	
COLOUR	Black	White	Black	White
DIMENSIONS	160 x 210 x 130 mm depth		215 x 290 x 170 mm depth	
WEIGHT	2 x 1.9 kg		2 x 4.1 kg	
ACCESSORIES	Adjustable fixing mounts		Adjustable fixing mounts	



PRISMA-60T
PRISMA-90T
PRISMA-125T



PRISMA-60T/PRISMA-60BT



PRISMA-60BT
PRISMA-90BT
PRISMA-125BT



PRISMA-90T/PRISMA-90BT



PRISMA-125T/PRISMA-125BT

PRISMA-60T PRISMA-60BT

PRISMA-90T PRISMA-90BT

PRISMA-125T PRISMA-125BT

CHARACTERISTICS	Pair of hi-fi loudspeakers with 100 V line transformer and low impedance.	Pair of hi-fi loudspeakers with 100 V line transformer and low impedance.	Pair of hi-fi loudspeakers with 100 V line transformer and low impedance.
POWER	60 W maximum, 30 W RMS	90 W maximum, 60 W RMS	125 W maximum, 85 W RMS
SPEAKERS	1 x 3 1/2" woofer 1 x 1" tweeter	1 x 6 1/2" woofer 1 x 1" tweeter	1 x 8" woofer 1 x 1" tweeter
RESPONSE	80-20 000 Hz	60-20 000 Hz	40-20 000 Hz
IMPEDANCE	High Z 100 V line: 670 Ω (15 W), 1000 Ω (10 W) 2000 Ω (5 W), 4000 Ω (2.5 W) Low Z: 4 Ω	High Z 100 V line: 400 Ω (25 W), 500 Ω (20 W), 670 Ω (15 W), 1000 Ω (10 W) Low Z: 4 Ω	High Z 100 V line: 330 Ω (30 W), 500 Ω (20 W), 1000 Ω (10 W) Low Z: 8 Ω
SENSITIVITY	86 dB at 1 W/1 m	88 dB at 1 W/1 m	88 dB at 1 W/1 m
DISPERSION	130°	135°	135°
SWITCH	W selector in high Z, low Z and off	W selector in high Z, low Z and off	W selector in high Z, low Z and off
CROSSOVER	Treble filter	Treble filter	Treble filter
CONNECTORS	Spring terminals	Spring terminals	Spring terminals
COLOUR	Black White	Black White	Black White
DIMENSIONS	130 x 192 x 115 mm depth	215 x 290 x 172 mm depth	270 x 370 x 220 mm depth
WEIGHT	2 x 1.7 kg	2 x 3.8 kg	2 x 6.2 kg
ACCESSORIES	Adjustable fixing mounts	Adjustable fixing mounts	Adjustable fixing mounts

PA LOUDSPEAKERS. BS SERIES

Pairs of BS series Hi-Fi loudspeakers with installation mount.

Adjustable and elegant design. High quality audio, excellent finish, suitable for P.A. applications and background music.



BS-32T



BS-32T/BS-32BT



BS-32BT

	BS-32T	BS-32BT
CHARACTERISTICS	Pair of low impedance hi-fi loudspeakers with 100 V line transformer.	Pair of low impedance hi-fi loudspeakers with 100 V line transformer.
POWER	70 W maximum, 35 W RMS	70 W maximum, 35 W RMS
SPEAKERS	1 x 4" woofer 1 x 1" silk dome tweeter	1 x 4" woofer 1 x 1" silk dome tweeter
RESPONSE	100 - 20,000 Hz	100-20,000 Hz
IMPEDANCE	100 V high Z line: 625 Ω (16 W), 1,250 Ω (8 W), 2,500 Ω (4 W), 5,000 Ω (2 W) Low Z: 8 Ω	100 V high Z line: 625 Ω (16 W), 1,250 Ω (8 W), 2,500 Ω (4 W), 5,000 Ω (2 W) Low Z: 8 Ω
SENSITIVITY	89 dB at 1 W/1 m	89 dB at 1 W/1 m
SOUND PRESSURE	87 dB at maximum power	87 dB at maximum power
DISPERSION	70° H x 60° V	70° H x 60° V
SWITCH	W selector in high Z and low Z	W selector in high Z and low Z
CROSSOVER	2 ways	2 ways
CONNECTORS	Screw terminals	Screw terminals
COLOUR	Black	White
DIMENSIONS	135 x 240 x 136 mm depth	135 x 240 x 136 mm depth
WEIGHT	2 x 1.9 kg	2 x 1.9 kg
ACCESSORIES	Adjustable mounts	Adjustable mounts

BS series surface mount Hi-Fi loudspeakers.



BS-15T



BS-16T



BS-30BT



BS-31NT



	BS-15T	BS-16T	BS-30BT	BS-31NT
CHARACTERISTICS	Surface mount Hi-Fi loudspeaker with 100V line transformer.		Hi-Fi loudspeaker with 100 V line transformer and low impedance. 2-way loudspeaker system with bass reflex. Cylindrical design.	
POWER	15 W maximum, 10 W RMS	15 W maximum, 10 W RMS	30 W maximum, 15 W RMS	30 W maximum, 15 W RMS
SPEAKER	61/2" double cone Hi-Fi	61/2" double cone Hi-Fi	1 woofer, 4 x 6" 1 x 1/2" dome tweeter	1 woofer, 4 x 6" 1 x 1/2" dome tweeter
RESPONSE	150-15,000 Hz	150-15 000 Hz	150-20 000 Hz	150-20 000 Hz
IMPEDANCE	High Z 100 V line: 1,000 Ω (10 W), 2,000 Ω (5 W)	High impedance 100 V line: 1000 Ω (10 W), 2000 Ω (5 W)	High Z 100 V line: 670 Ω (15 W), 1000 Ω (10 W), 2000 Ω (5 W), 4000 Ω (2.5 W) Low Z: 8 Ω	High Z 100 V line: 670 Ω (15 W), 1000 Ω (10 W), 2000 Ω (5 W), 4000 Ω (2.5 W) Low Z: 8 Ω
SENSITIVITY	92 dB at 1 W/1 m	92 dB at 1 W/1 m	88 dB at 1 W/1 m	88 dB at 1 W/1 m
SOUND PRESSURE	101 dB at maximum power at 1 m	101 dB at maximum power at 1 m	99 dB at maximum power at 1 m	99 dB at maximum power at 1 m
SWITCHES	-	-	W selector in high Z, low Z and off	W selector in high Z, low Z and off
CROSSOVER	-	-	Treble filter	Treble filter
CONNECTORS	Spring terminals	Spring terminals	Spring terminals	Spring terminals
MATERIAL	HIPS (shock resistant)	ABS	-	-
COLOUR	White	White	White	Black with silver grille
DIMENSIONS	185 x 260 x 120 mm depth	240 x 350 x 100 mm depth	133 x 256 mm height	133 x 256 mm height
WEIGHT	1.3 kg	1.7 kg	2.1 kg	2.1 kg
ACCESSORIES	-	-	Adjustable fixing mount	Adjustable fixing mount

PA LOUDSPEAKERS. BSP SERIES

Pairs of BSP series extra-flat surface mount Hi-Fi loudspeakers, manufactured with special ultraslim speakers. Special slim and discreet design.



BSP-120

BSP-121

BSP-120T

BSP-121T

CHARACTERISTICS	Pair of ultraslim, low impedance hi-fi loudspeakers		Pair of extra-flat Hi-Fi loudspeakers with 100V line transformer and low impedance.	
POWER	30 W maximum, 20 W RMS	30 W maximum, 20 W RMS	30 W maximum, 20 W RMS	30 W maximum, 20 W RMS
SPEAKERS	1 x 5 1/4" extra-flat woofer: Neodymium magnet 1 tweeter	1 x 5 1/4" extra-flat woofer: Neodymium magnet 1 tweeter	1 x 5 1/4" extra-flat woofer: Neodymium magnet 1 tweeter	1 x 5 1/4" extra-flat woofer: Neodymium magnet 1 tweeter
RESPONSE	75-20 000 Hz	75-20 000 Hz	75-20,000 Hz	75-20 000 Hz
IMPEDANCE	4 Ω	4 Ω	High Z 100 V line: 1,650 Ω (6 W), 3,300 Ω (3 W) Low Z: 4 Ω	High Z 100 V line: 1,650 Ω (6 W), 3,300 Ω (3 W) Low Z: 4 Ω
SENSITIVITY	87 dB at 1 W/1 m	87 dB at 1 W/1 m	87 dB at 1 W/1 m	87 dB at 1 W/1 m
SOUND PRESSURE	98 dB at maximum power at 1 m	98 dB at maximum power at 1 m	98 dB at maximum power at 1 m	98 dB at maximum power at 1 m
CROSSOVER	Treble filter	Treble filter	Treble filter	2 ways
CONNECTORS	Spring terminals	Spring terminals	Spring terminals	Spring terminals
COLOUR	White	Black	White	Black
DIMENSIONS	184 x 272 x 37 mm depth	184 x 272 x 37 mm depth	184 x 272 x 37 mm depth	184 x 272 x 37 mm depth
WEIGHT	2 x 1 kg	2 x 1 kg	2 x 1.2 kg	2 x 1.2 kg

PA LOUDSPEAKERS. TRANSDUCER SPEAKER, TDO SERIES

FONESTAR

Hidden transducer loudspeaker. TDO series. When installed in a solid surface it becomes a speaker. Invisible, it can be used in different surfaces such as dry wall panels, drop ceilings, windows, furniture, etc. Recommended for background music in exhibition halls, shopping centres, bedrooms, offices...



TDO-25

CHARACTERISTICS	Hidden transducer speaker. Attached using screws or glue.
POWER	25 W RMS
MATERIAL	Neodymium magnet
RESPONSE	1,000-10,000 Hz
IMPEDANCE	8 Ω
SENSITIVITY	80 dB at 1 W/1 m
DIMENSIONS	72 x 85 x 35 mm height
WEIGHT	0.1 kg



PA LOUDSPEAKERS. EN 54 EVACUATION LOUDSPEAKERS

Ceiling loudspeakers with 100 V line transformer, round grille and fireproof case. EN 54 certified.



EN 54



GAT-507-EN

CHARACTERISTICS	Ceiling loudspeaker with 100 V line transformer, round grille and fireproof case.
STANDARD	EN 54-24 certified
POWER	6 W RMS
LOUDSPEAKER	5"
RESPONSE	100-17 500 Hz
IMPEDANCE	High Z 100 V line: 1666 Ω (6 W), 3333 Ω (3 W), 6666 Ω (1.5 W), 13 333 Ω (0.75 W), 40 000 Ω (0.25 W)
SENSITIVITY	95 dB at 1W/1m
DISPERSION	180°
MATERIAL	Steel
COLOUR	White
DIMENSIONS	190 mm Ø x 90 mm depth
HOLE	172 mm Ø
WEIGHT	1.1 kg



EN 54

GAT-606-EN

CHARACTERISTICS	Ceiling loudspeaker with 100 V line transformer, round grille and fireproof case.
STANDARD	EN 54-24 certified
POWER	6 W RMS
LOUDSPEAKER	6 1/2"
RESPONSE	110-20 000 Hz
IMPEDANCE	High Z 100 V line: 1666 Ω (6 W), 3333 Ω (3 W), 6666 Ω (1.5 W)
SENSITIVITY	92 dB at 1W/1m
DISPERSION	180°
MATERIAL	Steel
COLOUR	White, RAL-9016
DIMENSIONS	200 mm Ø x 74 mm depth
HOLE	178 mm Ø
WEIGHT	0.9 kg

PA LOUDSPEAKERS. CEILING LOUDSPEAKERS

Hi-Fi ceiling loudspeakers with rectangular grille and ABS case, for P. A. systems. High quality audio.

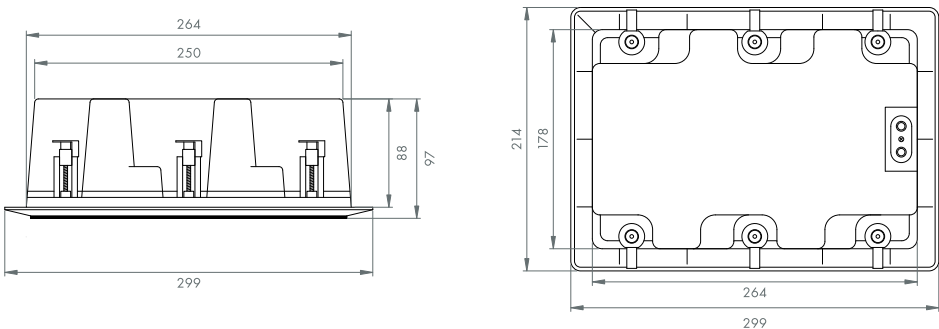


BS-41

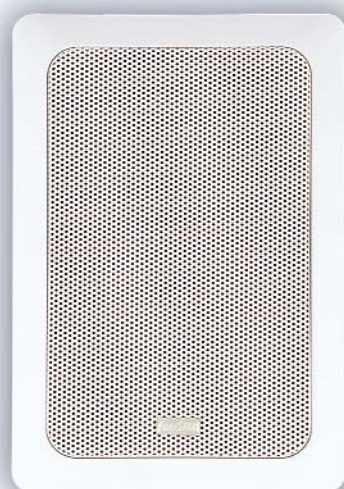
BS-41T

CHARACTERISTICS	Low impedance 2-way Hi-Fi ceiling loudspeaker, with rectangular grille and case.	2-way Hi-Fi ceiling loudspeaker, with 100V line transformer, rectangular grille and case.
POWER	40 W maximum, 20 W RMS	40 W maximum, 20 W RMS
SPEAKERS	1 x 5 1/4" polypropylene woofer 1 silk dome tweeter, adjustable	1 x 5 1/4" polypropylene woofer 1 silk dome tweeter, adjustable
RESPONSE	60-20 000 Hz	60-20 000 Hz
IMPEDANCE	8 Ω	High Z 100 V line: 500 Ω (20 W), 670 Ω (15 W), 1000 Ω (10 W), 2000 Ω (5 W)
SENSITIVITY	90 dB at 1 W/1 m	90 dB at 1 W/1 m
SOUND PRESSURE	99 dB at maximum power at 1 m	99 dB at maximum power at 1 m
SWITCHES	-	W selector in high Z and off
CROSSOVER	2 ways	2 ways
CONNECTORS	Spring terminals	Spring terminals
DISPERSION	132°	132°
MATERIAL	ABS and steel grille	ABS and steel grille
COLOUR	Matt white	Matt white
DIMENSIONS	214 x 299 x 97 mm depth	214 x 299 x 97 mm depth
HOLE	178 x 264 mm	1.7 kg
WEIGHT	1.7 kg	2.3 kg
	Quick installation system with catches	Quick installation system with catches

BS-41/BS-41T



Hi-Fi ceiling loudspeakers with rectangular grille, for P.A. systems. High quality audio.



BS-40



BS-40T

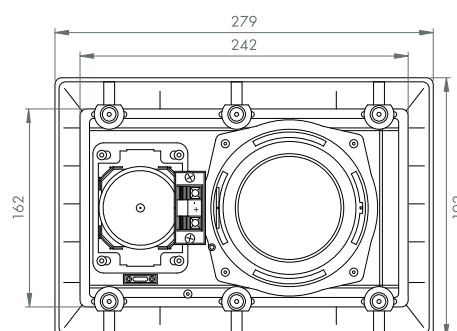
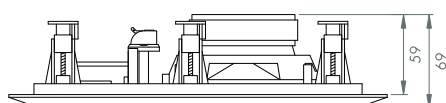
BS-40

CHARACTERISTICS	Low impedance 2-way Hi-Fi ceiling loudspeaker with rectangular grille.
POWER	40 W maximum, 20 W RMS
SPEAKERS	1 x 5 1/4" polypropylene woofer 1 x 1/2" tweeter
RESPONSE	60-20 000 Hz
IMPEDANCE	8 Ω
SENSITIVITY	90 dB at 1 W/1 m
SOUND PRESSURE	99 dB at maximum power at 1 m
CROSSOVER	Treble filter
CONNECTORS	Spring terminals
DISPERSION	132°
MATERIAL	ABS and steel grille
COLOUR	Matt white
DIMENSIONS	192 x 279 x 69 mm depth
HOLE	162 x 242 mm
WEIGHT	1.4 kg
	Quick installation system with catches

BS-40T

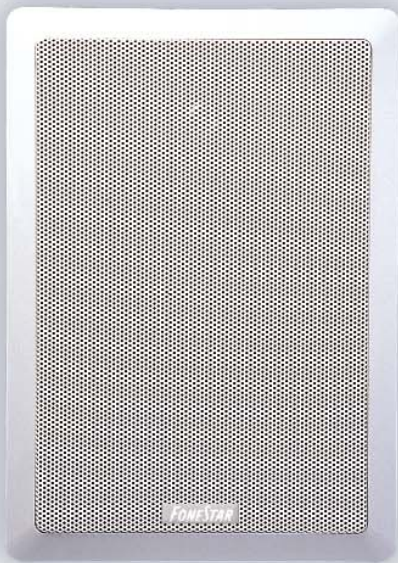
CHARACTERISTICS	2-way Hi-Fi ceiling loudspeaker, with 100 V line transformer and rectangular grille.
POWER	40 W maximum, 20 W RMS
SPEAKERS	1 x 5 1/4" polypropylene woofer 1 x 1/2" tweeter
RESPONSE	60-20 000 Hz
IMPEDANCE	High Z 100 V line: 500 Ω (20 W) 670 Ω (15 W) 1000 Ω (10 W) 2000 Ω (5 W)
SENSITIVITY	90 dB at 1 W/1 m
SOUND PRESSURE	99 dB at maximum power at 1 m
CROSSOVER	Treble filter
CONNECTORS	-
DISPERSION	132°
MATERIAL	ABS and steel grille
COLOUR	Matt white
DIMENSIONS	192 x 279 x 69 mm depth
HOLE	162 x 242 mm
WEIGHT	2 kg
	Quick installation system

BS-40/BS-40T



PA LOUDSPEAKERS. CEILING LOUDSPEAKERS

Hi-Fi ceiling loudspeakers with rectangular grille, for PA systems. High quality audio with excellent bass response.



BS-80



BS-80T

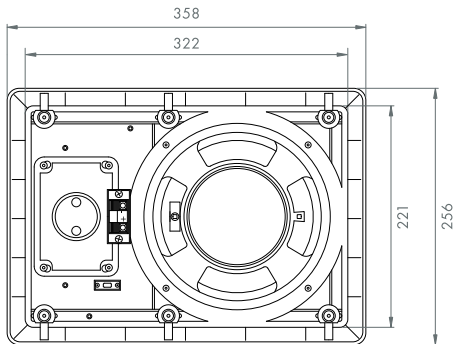
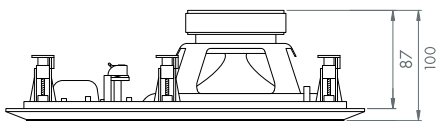
BS-80

CHARACTERISTICS	Low impedance 2-way Hi-Fi ceiling loudspeaker with rectangular grille.
POWER	80 W maximum, 40 W RMS
SPEAKERS	1 x 8" polypropylene woofer 1 Mylar dome tweeter, adjustable
RESPONSE	40-20,000 Hz
IMPEDANCE	8 Ω
SENSITIVITY	90 dB at 1 W/1 m
SOUND PRESSURE	100 dB at maximum power at 1 m
CROSSOVER	Treble filter
CONNECTORS	Spring terminals
DISPERSION	135°
MATERIAL	ABS and steel grille
COLOUR	Matt white
DIMENSIONS	256 x 358 x 100 mm depth
HOLE	221 x 322 mm
WEIGHT	2 kg
	Installation system using catches

BS-80T

	2-way Hi-Fi ceiling loudspeaker, with 100 V line transformer and rectangular grille.
POWER	80 W maximum, 40 W RMS
SPEAKERS	1 x 8" polypropylene woofer 1 Mylar dome tweeter, adjustable
RESPONSE	40-20,000 Hz
IMPEDANCE	High Z 100 V line: 250 Ω (40 W) 330 Ω (30 W) 500 Ω (20 W) 1,000 Ω (10 W)
SENSITIVITY	90 dB at 1 W/1 m
SOUND PRESSURE	100 dB at maximum power at 1m
CROSSOVER	Treble filter
CONNECTORS	-
DISPERSION	135°
MATERIAL	ABS and steel grille
COLOUR	Matt white
DIMENSIONS	256 x 358 x 100 mm depth
HOLE	221 x 322 mm
WEIGHT	2.9 kg
	Quick installation system

BS-80/BS-80T



Coaxial Hi-Fi ceiling speakers with square grille. For P.A. systems, with high quality audio.



GA-5041C

GA-6042C

CHARACTERISTICS	Low impedance coaxial Hi-Fi ceiling loudspeaker with square grille.	
POWER	40 W maximum	50 W maximum
SPEAKERS	5 1/4" coaxial Hi-Fi with adjustable dome tweeter	6 1/2" coaxial Hi-Fi with adjustable dome tweeter
RESPONSE	70-20 000 Hz	56-20,000 Hz
IMPEDANCE	8 Ω	8 Ω
SENSITIVITY	87 dB at 1 W/1 m	88 dB at 1 W/1 m
DISPERSION	130°	130°
MATERIAL	ABS and steel grille	ABS and steel grille
COLOUR	White	White
DIMENSIONS	215 x 215 x 89 mm depth	236 x 236 x 100 mm depth
HOLE	177 x 177 mm	204 x 204 mm
WEIGHT	1.3 kg	1.6 kg
	Installation system with catches	Installation system with catches



GAT-564C

GAT-664C

CHARACTERISTICS	Coaxial ceiling Hi-Fi loudspeaker with 100 V line transformer and square grille.	
POWER	40 W maximum	50 W maximum
SPEAKERS	5 1/4" coaxial Hi-Fi with adjustable dome tweeter	6 1/2" coaxial Hi-Fi with adjustable dome tweeter
RESPONSE	70-20 000 Hz	56-20,000 Hz
IMPEDANCE	High Z 100 V line: 1000 Ω (10 W) 2000 Ω (5 W) 4000 Ω (2.5 W) 8000 Ω (1.25 W)	High Z 100 V line: 500 Ω (20 W) 670 Ω (15 W) 1,000 Ω (10 W) 2,000 Ω (5 W) 4,000 Ω (2.5 W)
SENSITIVITY	87 dB at 1 W/1 m	88 dB at 1 W/1 m
DISPERSION	130°	130°
MATERIAL	ABS and steel grille	ABS and steel grille
COLOUR	White	White
DIMENSIONS	215 x 215 x 89 mm depth	236 x 236 x 100 mm depth
HOLE	177 x 177 mm	204 x 204 mm
WEIGHT	1.6 kg	2.1 kg
	Installation system with catches	Installation system with catches



PA LOUDSPEAKERS. CEILING LOUDSPEAKERS

Ceiling loudspeakers with round grille and ABS case.



GAT-330

GAT-411



GAT-330

GAT-411

GAT-330

GAT-411

CHARACTERISTICS	Ceiling loudspeaker with 100 V line transformer, round grille and case.	
POWER	3 W maximum	10 W maximum
SPEAKERS	3" Hi-Fi	4" Hi-Fi
RESPONSE	200-16 000 Hz	100-16 000 Hz
IMPEDANCE	High Z 100 V line: 3300 Ω (3 W), 6600 Ω (1.5 W), 13 300 Ω (0.75 W)	High Z 100 V line: 1000 Ω (10 W), 2000 Ω (5 W), 4000 Ω (2.5 W)
SENSITIVITY	84 dB at 1 W/1 m	88 dB at 1W/1m
DISPERSION	130°	130°
MATERIAL	ABS and steel grille	ABS and steel grille
COLOUR	Ivory	Ivory
DIMENSIONS	120 mm Ø x 105 mm height	142 mm Ø x 118 mm depth
HOLE	105 mm Ø	125 mm Ø
WEIGHT	0.6 kg	1 kg
	Quick installation system	Quick installation system

Ceiling loudspeakers with round grille and fireproof case.



GAT-66

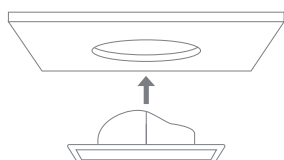
GAT-86

CHARACTERISTICS	Ceiling loudspeaker with 100 V line transformer, round grille and fireproof case.	
POWER	10 W maximum	10 W maximum
SPEAKERS	6 1/2" double cone Hi-Fi	8" double cone Hi-Fi
RESPONSE	100-18 000 Hz	60-18 000 Hz
IMPEDANCE	High Z 100 V line: 1660 Ω (6 W), 2500 Ω (4 W), 5000 Ω (2 W)	High Z 100 V line: 1660 Ω (6 W), 2500 Ω (4 W), 5000 Ω (2 W)
SENSITIVITY	90 dB at 1 W/1 m	90 dB at 1 W/1 m
SOUND PRESSURE	97 dB at maximum power at 1 m	97 dB at maximum power at 1 m
DISPERSION	135°	140°
MATERIAL	Steel, fireproof case	Steel, fireproof case
COLOUR	White	White
DIMENSIONS	220 mm Ø x 125 mm depth	265 mm Ø x 140 mm depth
HOLE	199 mm Ø	242 mm Ø
WEIGHT	1.3 kg	1.5 kg
	Quick installation system	Quick installation system

Ceiling loudspeakers with 100 V line transformer, square or round grille and fireproof case.



GAT-21FC



GAT-22F



GAT-21FC

GAT-22F

CHARACTERISTICS	Ceiling loudspeaker with 100 V line transformer, square grille and fireproof case. Crossover network with protection, 2 ways and bass reflex. Specially for installation in a round hole, making it easier to install and line up the grille.	Ceiling loudspeaker with 100 V line transformer, round grille and fireproof case. Crossover network with protection, 2 ways and bass reflex.
POWER	70 W maximum, 35 W RMS	70 W maximum, 35 W RMS
SPEAKERS	1 x 4" woofer 1 x 1 1/4" tweeter	1 x 4" woofer 1 x 1 1/4" tweeter
RESPONSE	60-20,000 Hz	60-20 000 Hz
IMPEDANCE	100 V High Z line: 625 Ω (16 W), 1,250 Ω (8 W), 2,500 Ω (4 W), 5,000 Ω (2 W), 10,000 Ω (1 W)	High Z 100 V line: 625 Ω (16 W), 1,250 Ω (8 W), 2500 Ω (4 W), 5,000 Ω (2 W), 10,000 Ω (1 W)
SENSITIVITY	90 dB at 1 W/1 m	90 dB at 1 W/1 m
DISPERSION	120°	120°
MATERIAL	Autoextinguishable ABS, steel grille, fireproof case, ceramic connectors, cables with flame retardant material and thermal fuse	Autoextinguishable ABS, steel grille, fireproof case, ceramic connectors, cables with flame retardant material and thermal fuse
COLOUR	White	White
DIMENSIONS	210 x 210 x 115 mm depth	210 mm Ø x 115 mm depth
HOLE	194 mm Ø	194 mm Ø
WEIGHT	1.9 kg	1.8 kg
	Installation system with catches Fixing system	Installation system with catches Fixing system

PA LOUDSPEAKERS. CEILING LOUDSPEAKERS

Ceiling loudspeaker with round grille and fireproof case.

Manufactured in autoextinguishable ABS UL94V0 with fireproof components, ceramic connectors, teflon cables resistant to high temperatures and thermal fuse. Quick installation system.



GAT-576

CHARACTERISTICS	Low impedance ceiling loudspeaker with 100V line transformer, low impedance, round grille and fireproof case.
POWER	30 W maximum, 20 W RMS
SPEAKERS	5 1/4" double cone Hi-Fi
RESPONSE	170-17,000 Hz
IMPEDANCE	High Z 100 V line: 625 Ω (16 W), 1,250 Ω (8 W), 2,500 Ω (4 W), 5,000 Ω (2 W) Low Z: 8 Ω
SENSITIVITY	88 dB at 1 W/1 m
DISPERSION	130°
MATERIAL	Autoextinguishable ABS UL94V0, steel grille, fireproof case, ceramic connectors, flame resistant cables and thermal fuse Double hole for cable input and output
COLOUR	White
DIMENSIONS	215 mm $\varnothing$ x 135 mm depth
CEILING HOLE	177 mm $\varnothing$
WEIGHT	1.4 kg
	Installation system with catches

Ceiling loudspeakers with round grille, for PA systems.

GA-5016

GAT-561

CHARACTERISTICS	Low impedance ceiling loudspeaker and round grille.	Ceiling loudspeaker with 100 V line transformer and round grille.
POWER	10 W maximum	10 W maximum
SPEAKERS	5 1/4" double cone Hi-Fi	5 1/4" double cone Hi-Fi
RESPONSE	120-18,000 Hz	135-18,000 Hz
IMPEDANCE	8 Ω	High Z 100 V line: 1,660 Ω (6 W) 3,330 Ω (3 W) 6,660 Ω (1.5 W)
SENSITIVITY	87 dB at 1 W/1 m	87 dB at 1 W/1 m
DISPERSION	130°	130°
MATERIAL	ABS and steel grille	ABS and steel grille
COLOUR	White	White
DIMENSIONS	204 mm Ø x 60 mm depth	204 mm Ø x 60 mm depth
HOLE	165 mm Ø	165 mm Ø
WEIGHT	0.6 kg	0.8 kg
Installation system with catches		

GA-6017

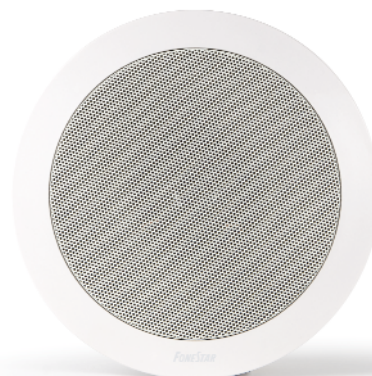
GAT-661

CHARACTERISTICS	Low impedance ceiling loudspeaker with round grille.	Ceiling loudspeaker with 100 V line transformer and round grille.
POWER	15 W maximum	15 W maximum
SPEAKERS	6 1/2" double cone Hi-Fi	6 1/2" double cone Hi-Fi
RESPONSE	110-16,000 Hz	125-15,000 Hz
IMPEDANCE	8 Ω	High Z 100 V line: 1,000 Ω (10 W) 2,000 Ω (5 W) 4,000 Ω (2.5 W) 8,000 Ω (1.25 W)
SENSITIVITY	88 dB at 1 W/1 m	88 dB at 1 W/1 m
DISPERSION	130°	130°
MATERIAL	ABS and steel grille	ABS and steel grille
COLOUR	White	White
DIMENSIONS	228 mm Ø x 70 mm depth	228 mm Ø x 70 mm depth
HOLE	194 mm Ø	194 mm Ø
WEIGHT	0.7 kg	1 kg
Installation system with catches		

GA-8018

GAT-811

CHARACTERISTICS	Low impedance ceiling loudspeaker with round grille.	Ceiling loudspeaker with 100 V line transformer and round grille.
POWER	15 W maximum	15 W maximum
SPEAKERS	8" double cone Hi-Fi	8" double cone Hi-Fi
RESPONSE	100-16,000 Hz	115-15,000 Hz
IMPEDANCE	8 Ω	High Z 100 V line: 1,000 Ω (10 W) 2,000 Ω (5 W) 4,000 Ω (2.5 W) 8,000 Ω (1.25 W)
SENSITIVITY	90 dB at 1 W/1 m	90 dB at 1 W/1 m
DISPERSION	130°	130°
MATERIAL	ABS and steel grille	ABS and steel grille
COLOUR	White	White
DIMENSIONS	274 mm Ø x 70 mm depth	274 mm Ø x 70 mm depth
HOLE	237 mm Ø	237 mm Ø
WEIGHT	1 kg	1.3 kg
Installation system with catches		



GA-5016/GA-6017/GA-8018



GAT-561/GAT-661/GAT-811



GA-6017/GA-8018/GAT-661/
GAT-811



GA-5016/GAT-561

PA LOUDSPEAKERS. CEILING LOUDSPEAKERS

Coaxial ceiling Hi-Fi loudspeakers with round grille, for P.A.



GA-5027/GA-6028/GA-8029



GAT-562/GAT-662/GAT-812

GA-5027

GAT-562

CHARACTERISTICS	Low impedance coaxial ceiling Hi-Fi loudspeaker with round grille.	Coaxial ceiling Hi-Fi loudspeaker with 100 V line transformer and round grille.
POWER	40 W maximum	20 W maximum
SPEAKER	5 1/4" coaxial Hi-Fi with tweeter	5 1/4" coaxial Hi-Fi with tweeter
RESPONSE	60-20 000 Hz	60-20 000 Hz
IMPEDANCE	8 Ω	High Z 100 V line: 1660 Ω (6 W) 3330 Ω (3 W) 6660 Ω (1.5 W)
SENSITIVITY	87 dB at 1 W/1 m	87 dB at 1 W/1 m
DISPERSION	130°	130°
MATERIAL	ABS and steel grille	ABS and steel grille
COLOUR	White	White
DIMENSIONS	204 mm Ø x 70 mm depth	204 mm Ø x 70 mm depth
CEILING HOLE	165 mm Ø	165 mm Ø
WEIGHT	1 kg	1.3 kg

Quick installation system with catches

GA-6028

GAT-662

CHARACTERISTICS	Low impedance coaxial ceiling Hi-Fi loudspeaker, with round grille.	Coaxial Hi-Fi ceiling loudspeaker with 100 V line transformer and round grille.
POWER	50 W maximum	25 W maximum
SPEAKER	6 1/2" coaxial Hi-Fi with tweeter	6 1/2" coaxial Hi-Fi with tweeter
RESPONSE	40-20 000 Hz	40-20 000 Hz
IMPEDANCE	8 Ω	High Z 100 V line: 1000 Ω (10 W) 2000 Ω (5 W) 4000 Ω (2.5 W) 8000 Ω (1.25 W)
SENSITIVITY	88 dB at 1 W/1 m	88 dB at 1 W/1 m
DISPERSION	130°	130°
MATERIAL	ABS and steel grille	ABS and steel grille
COLOUR	White	White
DIMENSIONS	228 mm Ø x 75 mm depth	228 mm Ø x 75 mm depth
CEILING HOLE	194 mm Ø	194 mm Ø
WEIGHT	1.2 kg	1.5 kg

Quick installation system with catches

GA-8029

GAT-812

CHARACTERISTICS	Low impedance coaxial Hi-Fi ceiling loudspeaker with round grille.	Coaxial Hi-Fi ceiling loudspeaker with 100 V line transformer and round grille.
POWER	60 W maximum	30 W maximum
SPEAKER	8" coaxial Hi-Fi with tweeter	8" coaxial Hi-Fi with tweeter
RESPONSE	30-20 000 Hz	30-20 000 Hz
IMPEDANCE	8 Ω	High Z 100 V line: 670 Ω (15 W) 1000 Ω (10 W) 2000 Ω (5 W) 4000 Ω (2.5 W)
SENSITIVITY	90 dB at 1 W/1 m	90 dB at 1 W/1 m
DISPERSION	130°	130°
MATERIAL	ABS and steel grille	ABS and steel grille
COLOUR	White	White
DIMENSIONS	274 mm Ø x 85 mm depth	274 mm Ø x 85 mm depth
CEILING HOLE	237 mm Ø	237 mm Ø
WEIGHT	1.4 kg	1.6 kg

Quick installation system with catches

Ceiling speakers with round grille and quick installation system with springs. For P.A.



GAT-566



GAT-666

GAT-566

GAT-666

CHARACTERISTICS	Ceiling speaker with 100 V line transformer and round grille.	
POWER	10 W maximum, 6 W RMS	10 W maximum, 6 W RMS
SPEAKERS	5" double cone	6" double cone
RESPONSE	110-15,000 Hz	110-15,000 Hz
IMPEDANCE	High Z 100 V line: 1,660 Ω (6 W) 3,330 Ω (3 W)	100 V High Z line: 1,660 Ω (6W) 3,330 Ω (3W)
SENSITIVITY	90 dB at 1 W/1 m	90 dB at 1 W/1 m
DISPERSION	130°	130°
MATERIAL	Steel	Steel
COLOUR	White	White
DIMENSIONS	200 mm $\varnothing$ x 57 mm depth	245 mm $\varnothing$ x 75 mm depth
HOLE	170 mm $\varnothing$	225 mm $\varnothing$
WEIGHT	0.7 kg	1 kg
	Quick installation system	Quick installation system

PA LOUDSPEAKERS. CEILING LOUDSPEAKERS

Ceiling speakers with round grille, for P.A.



GAT-500

N!

GAT-600

N!

GAT-800

N!

CHARACTERISTICS			
Ceiling speaker with 100 V line transformer and round grille.			
POWER	6 W RMS	10 W RMS	15 W RMS
LOUDSPEAKERS	5" double cone Hi-Fi	6 1/2" double cone Hi-Fi	8" double cone Hi-Fi
RESPONSE	90-16 000 Hz	130-15 000 Hz	100-15 000 Hz
IMPEDANCE	High Z 100 V line: 1660 Ω (6 W) 3330 Ω (3 W)	High Z 100 V line: 1000 Ω (10 W) 2000 Ω (5 W)	High Z 100 V line: 670 Ω (15 W) 1330 Ω (7.5 W)
SENSITIVITY	89 dB at 1 W/1 m	92 dB at 1 W/1 m	93 dB at 1 W/1 m
MATERIAL	ABS and steel grille	ABS and steel grille	ABS and steel grille
COLOUR	White	White	White
DIMENSIONS	176 mm Ø x 66 mm depth	190 mm Ø x 75 mm depth	235 mm Ø x 88 mm depth
HOLE	145 mm Ø	160 mm Ø	205 mm Ø
WEIGHT	0.8 kg	0.8 kg	1 kg
	Quick installation system	Quick installation system	Quick installation system

Ceiling speakers, halogen light sized and round grille. Quick installation system.

GA-254

CHARACTERISTICS	Low impedance ceiling speaker with round grille. Halogen lamp sized.
POWER	10 W maximum
SPEAKER	2"
RESPONSE	280-12 000 Hz
IMPEDANCE	8 Ω
SENSITIVITY	80 dB at 1 W/1 m
DISPERSION	100°
MATERIAL	Steel
FINISH	White
DIMENSIONS	80 mm Ø x 35 mm depth
CEILING HOLE	55 mm Ø
WEIGHT	0.1 kg



GA-254

GA-253

CHARACTERISTICS	Low impedance ceiling loudspeaker. Halogen light size. Metal, square frame and round grille.	Ceiling loudspeaker with 100 V line transformer. Metal, square frame and round grille. Halogen lamp size.
POWER	10 W maximum	10 W maximum
SPEAKER	3" Hi-Fi	3" Hi-Fi
RESPONSE	150-20 000 Hz	150-20 000 Hz
IMPEDANCE	8 Ω	High Z 100 V line: 1660 Ω (6 W), 2500 Ω (4 W), 5000 Ω (2 W)
SENSITIVITY	87 dB at 1 W/1 m	87 dB at 1 W/1 m
DISPERSION	120° at 1 kHz - 90° at 4 kHz	120° at 1 kHz, 90° at 4 kHz
MATERIAL	Steel	Steel
COLOUR	White	White
DIMENSIONS	103.5 x 103.5 x 50 mm depth	103.5 x 103.5 x 85 mm depth
CEILING HOLE	85 mm Ø	85 mm Ø
WEIGHT	0.4 kg	0.6 kg



GA-253

GAT-251

GA-258

CHARACTERISTICS	Ceiling loudspeaker, either low impedance or with 100 V line transformer. Halogen light size.	Ceiling loudspeaker with 100 V line transformer and round grille. Halogen light sized.
POWER	10 W maximum	10 W maximum
SPEAKER	2 1/2" Hi-Fi	2 1/2" Hi-Fi
RESPONSE	190-18,000 Hz	190-18,000 Hz
IMPEDANCE	8 Ω	High Z 100 V line: 1,660 Ω (6 W), 3,330 Ω (3 W), 6,660 Ω (1.5 W)
SENSITIVITY	86 dB at 1 W/1 m	86 dB at 1 W/1 m
DISPERSION	130°	130°
MATERIAL	ABS and steel grille	ABS and steel grille
COLOUR	White	White
DIMENSIONS	100 mm Ø x 70 mm depth	100 mm Ø x 80 mm height
CEILING HOLE	92 mm Ø	92 mm Ø
WEIGHT	0.4 kg	0.6 kg



GA-258

GAT-256

GA-259

CHARACTERISTICS	Low impedance ceiling loudspeaker. Halogen light size. Metal, round grille.	Ceiling loudspeaker with 100 V line transformer and round grille. Halogen light size.
POWER	10 W maximum	15 W maximum
SPEAKER	3" hi-fi	3" Hi-Fi
RESPONSE	130-20 000 Hz	130-20 000 Hz
IMPEDANCE	8 Ω	High Z 100 V line: 833 Ω (12 W), 1666 Ω (6 W), 3333 Ω (3 W)
SENSITIVITY	87 dB at 1 W/1 m	87 dB at 1 W/1 m
DISPERSION	120° at 1 kHz - 90° at 4 kHz	120° at 1 kHz, 90° at 4 kHz
MATERIAL	Steel	Steel
COLOUR	White	White
DIMENSIONS	105 mm Ø x 50 mm depth	105 mm Ø x 85 mm depth
CEILING HOLE	85 mm Ø	85 mm Ø
WEIGHT	0.4 kg	0.5 kg



GA-259

GAT-257

PA LOUDSPEAKERS. CEILING LOUDSPEAKERS

Ceiling speakers with round grille and quick installation system with springs, for P.A.



GA-255 N!

CHARACTERISTICS	Low impedance ceiling speaker with round grille.
POWER	15 W maximum
LOUDSPEAKERS	5" double cone Hi-Fi
RESPONSE	180-15 000 Hz
IMPEDANCE	8 Ω
SENSITIVITY	90 dB at 1 W/1 m
MATERIAL	ABS and steel grille
COLOUR	White
DIMENSIONS	160 mm Ø x 56 mm depth
HOLE	135 mm Ø
WEIGHT	0.4 kg
Quick installation system	

Ceiling speaker with round grille. Especially to be installed in aluminium, stainless steel or thin ceiling plates. 4 dismantable claws supplying a perfect grip for the speaker.



GAT-570

CHARACTERISTICS	Ceiling speaker with 100 V line transformer and round grille. Especially to be installed in aluminium, stainless steel or thin ceiling plates.
POWER	9 W maximum, 6 W RMS
SPEAKER	5" double cone Hi-Fi
RESPONSE	100-20,000 Hz
IMPEDANCE	100 V High Z line: 1,660 Ω (6 W), 2,500 Ω (4W), 5,000 Ω (2W)
SENSITIVITY	91 dB at 1 W/1m
SOUND PRESSURE	98 dB at maximum power at 1m
DISPERSION	120° at 1 kHz, 60° at 4 kHz
MATERIAL	Steel
COLOUR	Grey
DIMENSIONS	183 mm Ø x 58 mm depth
CEILING HOLE	170 mm Ø
WEIGHT	1 kg
Quick installation system with 4 claws	

Hi-Fi ceiling loudspeakers with round grille for P. A. Waterproof, anticorrosive material. UV protection. Weatherproof IP-65. Perfect for damp and marine environments.

IP-65 WEATHERPROOF



GAT-563W

GAT-663W

GAT-813W

CHARACTERISTICS	Coaxial Hi-Fi ceiling loudspeaker with 100 V line transformer, weatherproof.		
POWER	80 W maximum, 40 W RMS	90 W maximum, 45 W RMS	100 W maximum, 50 W RMS
SPEAKER	5 1/4" PP Mica coaxial Hi-Fi with tweeter	6 1/2" PP Mica coaxial Hi-Fi with tweeter	8" PP Mica coaxial Hi-Fi with tweeter
RESPONSE	65-20 000 Hz	60-20,000 Hz	50-20 000 Hz
IMPEDANCE	High Z 100 V line: 670 Ω (15 W), 1000 Ω (10 W), 2000 Ω (5W) 4000 Ω (2.5 W), 8000 Ω (1.25 W)	High Z 100 V line: 670 Ω (15 W), 1,000 Ω (10 W), 2,000 Ω (5W), 4,000 Ω (2.5 W), , 8,000 Ω (1.25 W)	High Z 100 V line: 670 Ω (15 W), 1000 Ω (10 W), 2000 Ω (5W) 4000 Ω (2.5 W), 8000 Ω (1.25 W)
SENSITIVITY	86 dB at 1 W/1 m	88 dB at 1 W/1 m	90 dB at 1 W/1 m
DISPERSION	120°	130°	135°
PROTECTION	IP-65	IP-65	IP-65
MATERIAL	ASA plastic chassis and grille (highly resistant plastic in extreme conditions)		
COLOUR	White	White	White
DIMENSIONS	203 mm Ø x 100 mm depth	225 mm Ø x 85 mm depth	250 mm Ø x 97 mm depth
HOLE	168 mm Ø	190 mm Ø	220 mm Ø
WEIGHT	1.1 kg	1.2 kg	1.2 kg
Quick installation system			

Subwoofer ceiling loudspeaker with round grille and fire-resistant steel case. Bass reflex radiation system for bass reinforcement in 100 V line installations.



GAT-1SUB

CHARACTERISTICS	Subwoofer ceiling loudspeaker with 100 V line transformer and low impedance, round grille and fireproof case. Bass reflex radiation system. Bass reinforcement in 100 V line installations.
POWER	90 W maximum, 60 W RMS
SPEAKERS	1 x 8" woofer
RESPONSE	40-170 Hz
IMPEDANCE	High Z 100 V line: 166 Ω (60 W), 333 Ω (30 W), 666 Ω (15 W) Low Z: 8 Ω
SENSITIVITY	86 dB at 1 W/1 m
CROSSOVER	-
SUSPENSION POINTS	4 points for hanging from the ceiling
MATERIAL	ABS, steel grille and fireproof case. Ceramic connectors
COLOUR	White
DIMENSIONS	350 mm $\varnothing$ x 320 mm depth
HOLE	309 mm $\varnothing$
WEIGHT	7.5 kg
ACCESSORIES	Chain for hanging Installation system with catches Fixing system

GAT-80SW **NI**

CHARACTERISTICS	Ceiling subwoofer loudspeaker, with 100 V line transformer and round grille. Bass reinforcement in 100 V line installations.
POWER	90 W maximum, 60 W RMS
SPEAKERS	1 X 8" woofer
RESPONSE	55-200 Hz -10 dB at 1W/1m
IMPEDANCE	High Z 100 V line: 166 Ω (60 W), 250 Ω (40 W), 500 Ω (20 W)
SENSITIVITY	89 dB at 1 W/1 m
CROSSOVER	Low-pass filter, 12 dB/oct.
SUSPENSION POINTS	-
MATERIAL	ABS and steel grille
COLOUR	White
DIMENSIONS	272 mm $\varnothing$ x 110 mm depth
HOLE	240 mm $\varnothing$
WEIGHT	2.6 kg
ACCESSORIES	- Installation system using hooks

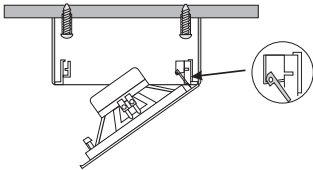
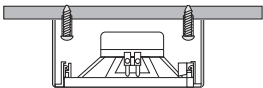
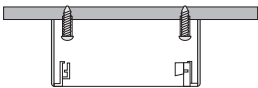
PA LOUDSPEAKERS. CEILING LOUDSPEAKERS

Surface mount ceiling loudspeaker with round grille.



GAT-96S

CHARACTERISTICS	Surface mount ceiling loudspeaker with 100 V line transformer and round grille.
POWER	6 W RMS
SPEAKERS	6 1/2" double cone
RESPONSE	110-20,000 Hz
IMPEDANCE	High Z 100 V line: 1,650 Ω (6 W), 3,300 Ω (3 W), 6,600 Ω (1.5 W), 13,300 Ω (0.75 W), 40,000 Ω (0.25 W)
SENSITIVITY	93 dB at 1 W/1 m
DISPERSION	130°
MATERIAL	ABS
COLOUR	White
DIMENSIONS	203 mm Ø x 90 mm depth
WEIGHT	0.9 kg
ACCESSORIES	Surface installation system



PA LOUDSPEAKERS. PENDANT SPEAKERS

Pendant speakers with horizontal omnidirectional dispersion for P.A. in large areas, sports centres, industrial warehouses, etc. With excellent results, avoiding reverberation and echo problems.



IP-44



EF-321

EF-331

CHARACTERISTICS	Pendant speaker with 100V line transformer and low impedance	
POWER	20 W	30 W
SPEAKER	5" Hi-Fi	6 1/2" Hi-Fi
RESPONSE	110-13000 Hz	100-15,000 Hz
IMPEDANCE	High Z 100 V line: 500 Ω (20 W) 1000 Ω (10 W) 2000 Ω (5 W) Low Z: 8 Ω	High Z 100 V line: 330 Ω (30 W) 660 Ω (15 W) 1,330 Ω (7.5 W) Low Z: 8 Ω
SENSITIVITY	90 dB at 1 W/1 m	94 dB at 1 W/1 m
DISPERSION	360° horizontal x 180° vertical	360° horizontal x 180° vertical
PROTECTION	IP-44	IP-44
MATERIAL	Extra-resistant ABS	Extra-resistant ABS
COLOUR	White	White
CABLE	5 m	5 m
DIMENSIONS	18 cm Ø x 16 cm height	26 cm Ø x 23 cm height
WEIGHT	1.8 kg	2.2 kg


EF-335

EF-355

CHARACTERISTICS	Pendant speaker with 100 V line transformer and low impedance	
POWER	35 W	55 W
SPEAKER	6 1/2" coaxial with tweeter dome	8" coaxial with tweeter dome
RESPONSE	80-17,000 Hz	60-18,000 Hz
IMPEDANCE	High Z 100 V line: 285 Ω (35 W) 670 Ω (15 W) 1,430 Ω (7 W) Low Z: Ω	High Z 100 V line: 180 Ω (55 W) 285 Ω (35 W) 670 Ω (15 W) 1,430 Ω (7 W) Low Z: 8 Ω
SENSITIVITY	92 dB at 1 W/1 m	92 dB at 1 W/1 m
SOUND PRESSURE	107 dB at maximum power at 1 m	109 dB at maximum power at 1 m
DISPERSION	360° horizontal x 180° vertical	360° horizontal x 180° vertical
MATERIAL	ABS	Fibreglass
DIMENSIONS	30 cm height x 38 cm width	49 cm height x 51 cm width
WEIGHT	3.9 kg	8.6 kg
ACCESSORIES	Mount for hanging	Mount for hanging
OPTIONAL	ST-35: wall or ceiling mount	-


ST-35

CHARACTERISTICS	Mount to be screwed to ceiling or wall for the installation of pendant speaker, mod. EF-335.
WEIGHT	0.3 kg
ACCESSORIES	Nuts and bolts included for installation

PA LOUDSPEAKERS. GARDEN

Garden loudspeakers, imitation rock for P.A. in gardens, parks, golf courses, hotels, shopping centres, etc. Weatherproof.



FR-650



FR-875

CHARACTERISTICS	Low impedance garden loudspeaker. Weatherproof	
POWER	100 W maximum, 50 W RMS	150 W maximum, 75 W RMS
SPEAKER	6 1/2"	8" double cone
RESPONSE	50-20 000 Hz	40-20 000 Hz
IMPEDANCE	8 Ω	8 Ω
SENSITIVITY	89 dB at 1 W/1 m	90 dB at 1 W/1 m
MATERIAL	Resin	Resin
DIMENSIONS	400 x 230 x 240 mm depth	430 x 280 x 280 mm depth
WEIGHT	3.8 kg	4 kg
	To adapt to a 100 V line, please enquire	To adapt to a 100 V line, please enquire

Garden loudspeaker with protected components. Weatherproof, IP-66.

IP-66



FR-525T

CHARACTERISTICS	Garden speaker with 100 V line transformer. Weatherproof.
POWER	25 W maximum
SPEAKER	1 x 5" woofer
RESPONSE	100-14 000 Hz
IMPEDANCE	100 V High Z line: 400 Ω (25 W) 800 Ω (12.5 W)
SENSITIVITY	90 dB at 1 W/1 m
DISPERSION	360°
PROTECTION	IP-66
MATERIAL	ABS
COLOUR	Green
DIMENSIONS	310 mm Ø x 350 mm height
WEIGHT	3.6 kg
ACCESSORIES	Mount for fixing to the floor

PA LOUDSPEAKERS. LOUDSPEAKERS FOR ASSEMBLY

FONESTAR

Loudspeakers for P.A.



UT-623

UT-65

47136

CX-830

CHARACTERISTICS	Low impedance speaker for sound system installation			
POWER	10 W maximum	15 W maximum	20 W maximum	30 W maximum
SPEAKER	6 1/2" double cone Hi-Fi	6 1/2" double cone Hi-Fi	8" double cone Hi-Fi	8" coaxial with 3" tweeter
RESPONSE	50-12 000 Hz	50-12 000 Hz	40-17 000 Hz	25-19000 Hz
IMPEDANCE	8 Ω	8 Ω	8 Ω	8 Ω
SENSITIVITY	90 dB at 1 W/1 m	89 dB at 1 W/1 m	89 dB at 1 W/1 m	92 dB at 1 W/1 m
SOUND PRESSURE	98 dB at maximum power at 1 m	97 dB at maximum power at 1 m	96 dB at maximum power at 1 m	102 dB at max power at 1 m
MAGNET	3 Oz	5.3 Oz	8 Oz	18 Oz
VOICE COIL	20 mm Ø	20 mm Ø	20 mm Ø	25 mm Ø
WEIGHT	0.3 kg	0.5 kg	0.7 kg	1.5 kg



46035

46036

CX-820T

CHARACTERISTICS	Loudspeaker with 100V line transformer for sound system installation.		
POWER	15 W maximum	20 W maximum	20 W maximum
SPEAKER	8" double cone Hi-Fi	8" double cone Hi-Fi	8" coaxial with 2" tweeter
RESPONSE	50-15000 Hz	40-17000 Hz	50-20000 Hz
IMPEDANCE	High Z 100 V line: 1000 Ω (10 W), 1330 Ω (7.5 W), 2000 Ω (5 W) 4000 Ω (2.5 W), 8000 Ω (1.25 W)	High Z 100 V line: 1000 Ω (10 W), 1330 Ω (7.5 W), 2000 Ω (5 W) 4000 Ω (2.5 W), 8000 Ω (1.25 W)	High Z 100 V line: 1000 Ω (10 W), 1330 Ω (7.5 W), 2000 Ω (5 W) 4000 Ω (2.5 W), 8000 Ω (1.25 W)
SENSITIVITY	90 dB at 1 W/1 m	91 dB at 1 W/1 m	90 dB at 1 W/1 m
SOUND PRESSURE	99 dB at max power at 1 m	101 dB at max power at 1 m	103 dB at max power at 1 m
MAGNET	5.3 Oz	8 Oz	10 Oz
VOICE COIL	20 mm Ø	20 mm Ø	25 mm Ø
WEIGHT	0.8 kg	1 kg	1.1 kg

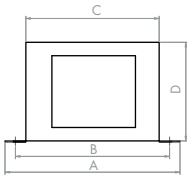
G12W

CHARACTERISTICS	Metal grille for 8" loudspeaker
COLOUR	White
DIMENSIONS	32 cm Ø
WEIGHT	0.6 kg
OBSERVATIONS	Attached to ceiling with 4 screws



PA LOUDSPEAKERS. LINE TRANSFORMERS

100 V line transformers for low impedance loudspeakers.



	POWER(100 V LINE)	IMPEDANCE	OUTPUTS	DIMENSIONS(mm)	WEIGHT
CV-175	5, 3, 2, 1, 0.5 W	2000, 3333, 5000, 10000, 20000 Ω	Low Z for 4-8 Ω speakers	A: 62, B: 53, C: 43, D: 35, E: 34	0.2 kg
CV-1710	100 V line: 10, 7.5, 5, 2.5, 1.25 W	1000, 1330, 2000, 4000, 8000 Ω	Low Z for 4-8 Ω speakers	A: 72mm, B: 60mm, C: 50mm, D: 42mm, E: 40mm.	0.3 kg
CV-1715	100 V line: 15, 10, 5, 2.5, 1.25 W	670, 1000, 2000, 4000, 8000 Ω	Low Z for 4-8 Ω speakers	A: 71mm, B: 60mm, C: 50mm, D: 42mm, E: 41mm	0.3 kg
CV-1716	100 V line: 16, 8, 4, 2 W	625, 1250, 2500, 5000 Ω	Low Z for 8 Ω speakers	A: 70 mm, B: 60 mm, C: 50 mm, D: 41 mm, E: 38 mm	0.3 kg
CV-1720	20, 15, 10, 5, 2.5 W	500, 670, 1000, 2000, 4000 Ω	Low Z for 4-8 Ω speakers	A: 71, B: 60, C: 50, D: 42, E: 42	0.3 kg
CV-1730	100 V line: 30, 20, 10 W	333, 500, 1000 Ω	Low Z for 4-8 Ω speakers	A: 82mm, B: 70mm, C: 60mm; D: 49mm, E: 47mm.	0.5 kg
CV-1740	100 V line: 40, 30, 20, 10 W	250, 333, 500, 1000 Ω	Low Z for 4-8 Ω speakers	A: 92mm, B: 80mm, C: 68mm, D: 57mm, E: 50mm.	0.7 kg
CV-1750	100 V line: 50, 40, 30, 20 W	200, 250, 333, 500 Ω	Low Z for 4-8 Ω speakers	A: 93mm, B: 82mm, C: 68mm, D: 57mm, E: 56mm.	0.9 kg
CV-1775	100 V line: 75, 60, 45 W	133, 166, 222 Ω	Low Z for 4-8 Ω speakers	A: 93mm, B: 82mm, C: 68mm, D: 57mm, E: 62mm.	1 kg
CV-17125	100 V line: 120, 60, 30 W	83, 166, 333 Ω	Low Z for 4-8 Ω speakers	A: 102mm, B: 91mm, C: 78mm, D: 67mm, E: 69mm.	1.5 kg

IP-44 WEATHERPROOF



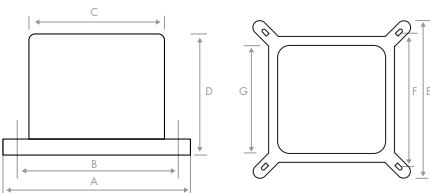
CV-1810W



CV-1815W

	POWER	IMPEDANCE	OUTPUTS	DIMENSIONS	WEIGHT	PROTECTION
CV-1810W	100 V line: 10, 7.5, 5, 2.5, 1.25 W	1000, 1330, 2000, 4000, 8000 Ω	Low Z for 8 Ω loudspeakers	A: 72mm, B: 62mm, C: 51mm, D: 54mm, E: 35mm.	0.2 kg	IP-44
CV-1815W	100 V line: 15, 10, 5, 2.5, 1.25 W	670, 1000, 2000, 4000, 8000 Ω	Low Z for 8 Ω speakers	A: 72mm, B: 62mm, C: 51mm, D: 54mm, E: 35mm.	0.2 kg	IP-44

100 V line to auxiliary line signal transformer.



	TF-7550	TF-75100
CHARACTERISTICS	100 and 70 V line transformer for low impedance speakers.	100 and 70 V line transformer for low impedance loudspeakers
POWER	50 W	100 W
OUTPUTS	Low Z for 4, 8 and 16 Ω speakers	Low Z for 4, 8 and 16 Ω speakers
DIMENSIONS	A: 111 mm, B: 96 mm; C: 89 mm; D: 72 mm; E: 107 mm; F: 92 mm G: 86 mm	A: 111 mm, B: 96 mm; C: 89 mm; D: 72 mm; E: 107 mm; F: 92 mm G: 86 mm
WEIGHT	1.9 kg	1.9 kg

	TFL-100
CHARACTERISTICS	100 V line to auxiliary line signal transformer. Adjustable output level. DC insulated input and output.
INPUTS	100 V line, euroblock
OUTPUTS	1 unbalanced auxiliary line, 1 x RCA and XLR 0-1.5 V adjustable
DIMENSIONS	157 x 60 x 90 mm depth
WEIGHT	0.6 kg

100 V line transformers for amplifiers. Converts the amplifier or low impedance [4-8 Ω] stereo power amp output into a high impedance output for speakers with 100 or 70 V line transformer. It allows you to connect low impedance and 100 V line speakers at the same time. Perfect for P.A applications and background music where a large number of speakers need to be connected to just one amplifier.



TFA-500

CHARACTERISTICS	100 V line transformers for amplifiers. Converts the amplifier or low impedance (4-8 Ω) stereo power amp output into a high impedance output for loudspeakers with 100 or 70 V line transformer. It allows you to connect low impedance and 100 V line loudspeakers at the same time.
POWER	Stereo: 500 + 500 W RMS Bridge mode: 1000 W RMS
RESPONSE	20-20 000 Hz
DISTORTION	Harmonic: < 0.1%
PROTECTION	Temperature, surge and RF filter
INDICATORS	Input signal
INPUTS	2 inputs, 4-8 Ω , screw terminals and banana plugs
OUTPUTS	Speakers: 100 and 70 V lines, screw terminals, stereo or mono bridge, selectable
DIMENSIONS	483 x 72 x 236 mm depth. Approximately 1.5 U 19" rack
WEIGHT	8.7 kg

PA LOUDSPEAKERS. ATTENUATORS

Flush or surface mount **attenuators** and accessories.



AT-51



AT-51S



PB-4



PB-8

CHARACTERISTICS	Low impedance attenuator. Wire-wound potentiometer 47 Ω with off.		Wire-wound potentiometer, 47 Ω with off.	
POWER	10 W maximum	10 W maximum	6 W maximum	10 W maximum
OUTPUTS	Low Z for 4-8 Ω speakers	Low Z for 4-8 Ω speakers	Low Z for 4-8 Ω speakers	Low Z for 4-8 Ω speakers
DIMENSIONS	Total: 82 x 82 x 55 mm depth Insert: 50 x 50 x 33 mm depth	Total: 82 x 82 x 62 mm depth	Total: 25 x 31 x 35 mm depth Insert: 25 x 31 x 15 mm depth	Total: 41 x 44 x 48 mm depth Insert: 41 x 44 x 28 mm depth
WEIGHT	0.1 kg	0.2 kg	-	-
	For square standard universal box Distance between screws: 60 mm	With box for surface installation	-	-

PA LOUDSPEAKERS. ATTENUATORS

Flush or surface mount **attenuators** and accessories.



AT-40



AT-40D



AT-50



M-26

CHARACTERISTICS	Mono attenuator. Attenuator control in L.	Stereo attenuator. Attenuator control in L.	Attenuator control in L.	Button-control for potentiometers mods. PB-4 and PB-8.
POWER	15 W maximum	15 + 15 W maximum	50 W maximum	-
OUTPUTS	For low Z 4-8 Ω speakers	For low Z 4-8 Ω speakers	For low Z 4-8 Ω speakers	-
DIMENSIONS	Total: 54 x 54 x 60 mm depth Insert: 41 x 45 x 31 mm depth	Total: 54 x 54 x 80 mm depth Insert: 41 x 43 x 53 mm depth	Total: 50 x 53 x 54 mm depth Insert: 50 x 53 x 33 mm depth	37 mm $\varnothing$



AT-1000B



AT-31



AT-31S



CHARACTERISTICS	Attenuator with low impedance transformer.	100 V line attenuator with resistance. 2-wire input and 3-wire priority systems.	100 V line attenuator with resistance. 2-wire input and 3-wire priority systems.
POWER	100 W maximum	10 W maximum	10 W maximum
INPUT	Low Z 8 Ω line	High Z 100 V line	High Z 100 V line
OUTPUT	Low Z for 8 Ω speakers	High Z 100 V line	High Z 100 V line
DIMENSIONS	Total: 85 x 85 x 73 mm depth Insert: 49 x 49 x 49 mm depth	Total: 82 x 82 x 55 mm depth Insert: 54 x 50 x 33 mm depth	Total: 82 x 82 x 62 mm depth
CONTROLS	10 attenuation positions and off	9 attenuation positions and off	9 attenuation positions and off
WEIGHT	0.3 kg For surface installation box mod. 46001	0.1 kg For square standard universal box Distance between screws: 60 mm	0.2 kg With box for surface installation Compatible with the Legrand Mosaic II series



AT-110R
AT-160R



AT-110R



AT-160R



AT-260SR



CHARACTERISTICS	100 V line attenuator with auto transformer and box for surface installation. 24 V relay for priority activation.	100 V line attenuator with auto transformer and box for surface installation. 24 V relay for priority activation.	6-line selection 100 V line attenuator with auto transformer and box for surface installation. 24 V relay for emergency input with priority selection.
POWER	10 W maximum	60 W maximum	60 W maximum
INPUTS	High Z 100 V line 24 V relay activation	High Z 100 V line 24 V relay activation	6 high Z 100 V line inputs High Z 100 V line emergency input 24 V relay activation
OUTPUTS	High Z 100 V line	High Z 100 V line	High Z 100 V line
DIMENSIONS	80 x 80 x 60 mm depth	80 x 80 x 60 mm depth	80 x 154 x 60 mm depth
CONTROLS	10 attenuation positions and off	10 attenuation positions and off	10 attenuation positions and off 6 input selection positions
WEIGHT	0.3 kg	0.3 kg	0.5 kg

AT-6
AT-12
AT-24
AT-48
AT-100



AT-6

AT-12

AT-24

AT-48

AT-100

CHARACTERISTICS		100 V line attenuator with auto-transformer. 2-wire input and 3-wire priority systems.			
POWER	6 W maximum	12 W maximum	24 W maximum	48 W maximum	100 W maximum
INPUTS	High Z 100 V line	High Z 100 V line	High Z 100 V line	High Z 100 V line	High Z 100 V line
OUTPUTS	High Z 100 V line	High Z 100 V line	High Z 100 V line	High Z 100 V line	High Z 100 V line
DIMENSIONS		Total: 85 x 85 x 70 mm depth Insert: 50 x 30 x 40 mm depth		Total: 85 x 85 x 75 mm depth Insert: 50 x 35 x 45 mm depth	Total: 85 x 85 x 75 mm depth Insert: 50 x 55 x 45 mm depth
CONTROLS	10 attenuation positions and off	10 attenuation positions and off	10 attenuation positions and off	10 attenuation positions and off	10 attenuation positions and off
WEIGHT	0.2 kg	0.2 kg	0.2 kg	0.3 kg	0.4 kg
		For a square standard universal box or surface installation box, mod. 46001 Distance between screws: 60 mm		For surface installation box, mod.46001. Distance between screws: 60 mm	

46001

CHARACTERISTICS	ABS surface installation box for attenuators, mods. AT-6, AT-12, AT-24, AT-48, AT-100 and AT-1000B.
DIMENSIONS	85 x 85 x 50 mm depth



PA LOUDSPEAKERS. IMPEDANCE METERS

Impedance meter for speakers or low impedance speaker lines, and 100 or 70 V line transformer.

An essential tool for P.A. installation. Allows the speaker line to be checked and measures the resulting impedance.

MI-21

CHARACTERISTICS	Impedance meter at 1 kHz for loudspeaker lines. Allows the impedance of loudspeaker lines to be checked and the necessary power in a 100 or 70 V line installation to be estimated, in order to choose the correct amplifier. 3 measurement scales: 200 Ω , 2 k Ω and 20 k Ω . Easy to read LCD screen. Power meter for 70 and 100 V line loudspeakers. Easy to use.
INPUTS	2 banana plugs to connect the measuring cables.
RESOLUTION (MEASUREMENT ACCURACY)	200 Ω : 0.1 Ω ($\pm 1\%$ ± 2) 2 k Ω : 1 Ω ($\pm 1\%$ ± 2) 20 k Ω : 10 Ω ($\pm 1\%$ ± 2)
POWER SUPPLY	9 V DC, 1 x 9V 6LR61 type battery
DIMENSIONS	86 x 182 x 38 mm depth
WEIGHT	0.4 kg
ACCESSORIES	Rubber protector 9 V 6LR61 type battery 2 sets of test leads: with alligator clip terminals and precision tips

