



MA246/-R/-MR Mixing Amplifier

APart



APart introduces the MA246: an amplifier that brings a new dimension to 100 V zone mixing amplifiers. This 6-zone unit can be used stand-alone, or as the core of an expandable sound system.

Because the MA246 offers independent source selection for zones 1 and 2-6, it can be used as a multi-source zoning system. Zone 1 is a fully independent pre-amplified zone and allows the installer to use an external power amplifier to amplify it. It is especially useful for large areas that require many speakers, like factory production areas. This has the particular advantage that the installer can use the external amplifier to suit his power needs for that particular zone.

Zones 2 to 6 can be individually volume controlled using the integrated speaker volume controls. Zones number 5 and 6 are 70-volt outputs, these are compatible with 100-volt speakers, but by nature, these outputs will have a slightly reduced output level, meant for the 'quiet' zones in a multi-zone system.

MA246 has four balanced inputs on Euroblock. Microphone input 1 is optimized to be used with our *MICPAT-6*, a selective 6-zone paging microphone, designed especially for use with the MA246. This microphone is the master microphone. Maximum five of these microphones can be switched in parallel on this single input. If you want to prevent the backgroundmusic from interrupting in the other zones when paging one or more zones with the *MICPAT6*, use an external 100V power amplifier (e.g. a PA2240BP or PA240P). In that case the external amplifier will power the paging message, while the MA246 will power the background music in the other zones. All the switching is done automatically!

Microphone inputs 2 - 4 are designed to be used with our *MICPAT-2* (2 zone groups) microphone or any other microphone depending on the application. On the MA246, you can preset 2 paging groups to be paged with mic 2 - 4.

Further the MA246 is equipped with 4 line inputs that can be selected via a rotary switch. As said before, Zone 1 can have a different line source selected compared to zones 2 - 6

There are 6 different priority levels on the MA246. When any priority has been activated, integrated 24VDC supply output (max 0.6A) can switch priority relays of loudspeaker attenuators or other devices.

In case of mains power failure, the MA246 can be powered via the 24V DC power input. If an external 24V UPS is connected to the unit, the amplifier will automatically switch to it.



Professional installers will also appreciate the possibility to use an external amplifier as a paging amp. Suppose zones 2 and 3 should not receive paging messages, meaning there should always be background music. In this situation, the installer can use an external amplifier for paging. When a paging call is sent out, zones 2 and 3 will stay connected to the internal amplifier and will continue to receive background music. The other zones will hear the paging message. The MA246 will disconnect these zones from the internal amp and will send the paging message to the external amp. When paging is finished, these zones will be switched back automatically to the internal amp. [To learn more about selective paging with the MA246, check page 6 of this technical sheet.](#)

When required, it is even possible to use a 2-channel amplifier (e.g. the PA2240BP) as external amplifier, with one channel assigned to power zone 1 of the MA246, while the second channel of the external amplifier is used to power paging messages.

MA246 is available with a built-in tuner (MA246R), with tuner and CD-player + memory stick and SD/MMC slot for audio, MP-3 and WMA playback (MA246MR).

TECHNICAL SPECIFICATIONS

GENERAL SPECS

Output power rating RMS:	240 watt
Frequency response 100 volt out:	40 - 25 kHz +1/-3dB
Total harmonic distortion :	<0,3% @ -6dB, 1kHz
Frequency response line output zone 1 :	20 - 30 kHz +1/-3dB
Bass tone control zone 2-6:	+8/- 8dB @ 100Hz
Treble tone control zone 2-6:	+8/-8dB @ 10kHz
Tone control mic/line 1-4:	from 100Hz/+3dB, 10kHz/-6dB to 100Hz/-9dB, 10kHz/+4dB

S/N ratio (20Hz-20kHz)	
amplifier in:	>95dB
line in:	>80dB
mic in:	>65dB

Indicator LED's

zone paging :	6 x yellow led
muted by priority :	1 x red led
Limiter activity :	1 x red led
Signal 100% :	1 x yellow led
Signal -25dB :	1 x green led
Power on :	1 x green led
Protection active :	1 x red (also lights up during power on)

Zone controls : Individual volume and source selection for zone 1 line output
5 x 100 volt volume controls for zone 2-6



TECHNICAL SPECIFICATIONS

Source controls:

Music selector zone 2-6
Music selector zone 1
music level control zone 2-6
mic/line 2-4 volume control all zones
Master level control zone 2-6
Master level control zone 1
Chime level control (back panel)
Emergency level control (back panel)
Emergency vox on/off/level control: setting inside the unit

Power supply:	230VAC/50-60Hz MAX 800 VA
Mains fuse rating:	T6,3AL250V (inside mains connector on back panel)
Emergency supply fuse:	T20AL250V (inside the unit)
Priority output fuse:	0,6A resettable autofuse

Weight net MA246 - MA246R - MA246MR: 13,6 kg - 13,8 kg - 14,4 kg
Dimensions: 430(w) x 88 (h) x 360 (d) - 2 HE, 19" brackets included
Operating temperature and humidity: -10 to +45°C/up to 90% RH non condensing

OUTPUTS

Zone 1: Line level output, balanced 0 dB on euroblock connector

Zone 2-6 : 100V outputs, zone 5 and 6 are limited to 70V compatible with 100V speakers. MAX240 watt total power in 100V (180 Watts max in 1 zone). Preselectable output levels: 5 steps + off + automatic bypass (priority). Minimum load impedance all zones summed: 41,66 ohms

Zone 2-6 outputs on euroblock connector, amplifier power can be supplied by internal or external amp (selectable with paging mode switch at the back panel)

Separate speaker out:	50V/70V/100V and low impedance on euroblock
Rec out (MA246R/MR only):	1V
Tuner out (MA246MR only):	300 mV
Pre amp out zone 2-6:	1 V
Phantom power:	18 VDC
Pre amp out zone 1:	1 V balanced on euroblock/100 ohm output impedance
Paging amp out:	2 V balanced on euroblock/100 ohm output impedance
Priority out:	24VDC, max 0,6A
Chime:	2 tone chime activated by contact closure



INPUTS

MIC/LINE 1
Sensitivity mic/line: balanced input on euroblock
variable 3mV to 2V
Impedance: 600 ohm
S/N mic/line: >65dB/>80dB
Phantom power: NA
Frequency response: 80Hz - 15 kHz (+1/-3dB) speech eq
Muting activated by contact: mutes inputs with lower priority by more than 40dB

MIC/LINE 2-4 balanced inputs on euroblock

Sensitivity mic/line: variable 1,5mV to 200mV
Impedance: 600 ohm
S/N mic/line: >65dB/>80dB
Phantom power: 18 VDC
Frequency response: 80Hz - 15kHz (+1/-3dB) speech eq
Muting activated by contact: > 40dB; priority according to priority table

EMERGENCY INPUT transformer coupled balanced input on euroblock

Sensitivity: 1V
Impedance: 600 ohm
S/N: >80dB
Frequency response: 100Hz - 20 kHz (+1/-3dB)
Muting: Activated by contact or vox (selectable inside the unit)

Emergency has highest priority and mutes all other inputs by more than 40 dB. The signal is also present on the preamp out,

AUX 1 - 2 unbalanced stereo input on RCA

Sensitivity: 500mV
Impedance: 22 kilo ohm
S/N: >80dB
Frequency response: 40 - 25 kHz +1/-3dB, Signal is internally mixed to mono

AUX 3 - 4 unbalanced mono input on RCA

Sensitivity: 500mV
Impedance: 22 kilo ohm
S/N : >80dB
Frequency response: 40 - 25 kHz +1/-3dB



TUNER (MA246R/MR only)

Tuning range FM band:	87,5 - 108 MHz (100 kHz/50 kHz tuning step)
Tuning range AM band:	531 - 1602 kHz (9 kHz tuning step)
Aerial terminal AM:	AM antenna spring lock terminal
Aerial terminal FM:	75 ohm coax connector
Sensitivity FM:	1 μ V/75 ohm at 26 dB S/N
S/N FM band:	> 74 dB at 40 kHz deviation
Sensitivity AM:	40 μ V (26 dB S/N)
Harmonic distortion FM band:	< 0,1% at preamp and tuner output
Frequency response FM band:	30 Hz - 15 kHz (+1/-3 dB) at preamp and tuner output
Number of presets:	10 FM, 10 AM

CD/MP3/WMA (MA246MR only)

Frequency response:	20 Hz - 20 kHz (+0/-1 dB) at preamp output
Harmonic distortion:	< 0,01% at preamp output

Supported file types CD/CDR: PCM 16 bit/44,1 kHz, MP3 32 - 320 kbps, variable bit rate
Supported file types USB/CARD: MP3 32 - 320 kbps, variable bit rate, WMA
File system/capacity USB/CARD: FAT32 up to 32 gigabyte



SELECTIVE PAGING WITH THE MA246

SETUP	MA246(R)(MR) only	MA246(R)(MR) + paging amp	MA246(R)(MR) + zone 1 amp	MA246(R)(MR) + paging amp + zone 1 amp
5 zone individual volume control with priority bypass	YES	YES	YES	YES
6 zone operation with independent zone 1 source	NO	NO	YES	YES
selective paging	YES*	YES	YES*	YES
selective paging without background music interruption	NO	YES	NO	YES

*Selective paging without any background music in any zone is possible using the MA246(R)(MR) only, however, in this case, you will have to turn the zone 2 to 6 front volume control to the off position. In case a zone is being paged, the MA246(R)(MR) will bypass the volume control, causing the paging message to be heard in the selected zone(s).

If you want background music and selective paging without music interruption in the non paged zones, please use an external paging amp (PA240P, PA2240P...).

From the factory, there is no wire bridge as shown in the picture. That's because we want to encourage you to use the MA246 as a switching centre in high quality background music and paging systems where all zones are individually pageable without interrupting the music in the non paged zones. Most mixing amps from other brands don't offer you this luxury!



wire bridge in case of standalone use.