

U120:1M Mixer amplifier 120W, 1 channel



- Versatile inputs: 4 inputs - 2 aux and 2 mic/line options with phantom power support
- Full power output supporting 4 Ω , 8 Ω , 70 V and 100 V
- EMG override input, ensuring critical messages are heard clearly
- Contact override for call station with 2-tone chime for attention-grabbing alerts
- Selectable 120 Hz high-pass filters to customize audio output and eliminate unwanted low-frequency noise
- Space-saving compact 1/2 rack design, providing versatility without compromising performance
- Voice-over ducking that automatically adjusts background music volume for clear voice communication
- Remote power OFF (Stand by), enhancing energy efficiency

Introducing the U120:1M, a 120 W mixer amplifier designed to cater to the demands of small to medium-sized installations, where paramount considerations include quality, performance, and unwavering reliability. This mixer amplifier is ideal for background music and crystal-clear voice announcement applications, making it a perfect fit for diverse environments such as bars, restaurants, retail outlets, educational institutions, houses of worship, museums, galleries, transport hubs, and conference centers. Thanks to its compact size, standing just one rack unit high and half rack wide, the U120:1M presents numerous installation possibilities, even in space-constrained settings. Included brackets facilitate both single and dual rack-mount configurations, while desktop and under-counter installations are equally viable. When rack-mounted side by side, two

amplifiers can seamlessly inhabit a single rack unit, optimizing space utilization and effectively doubling both channel count and output power.

Functions

Advanced amplification technology

Incorporates class-D amplification topology for superior energy efficiency, product quality, and reliability compared to traditional linear power supply and class-AB amplification.

Compact form factor

Half rack, 1U enclosure ensures space-saving installation without compromising performance.

Full power at low and high impedance

Supports 70V, 100V, 4 Ω , and 8 Ω speaker systems, offering versatility in system design.

Phantom power

Facilitates microphone operation with power supplied to both microphone inputs.

VOX Ducking

Prioritizes voice input, enhancing clarity during announcements or speeches.

Remote power

Enables remote power ON/OFF functionality via contact closure, enhancing operational convenience.

Bass and treble adjustment

Allows fine-tuning of audio output with dedicated bass and treble adjustment controls.

High-pass filter

Available 120 Hz high-pass filters to tailor audio output according to application requirements.

Flexible mounting options

Offers versatile mounting possibilities including rack mount, side-by-side rack mount, table-top, or under-table mounting, facilitated by included brackets and accessories.

Emergency input

Features 100 V and Line In emergency input with level selection, ensuring critical messages are delivered clearly.

Protection

Equipped with overload and short circuit protection, along with a limiter to safeguard both the amplifier and loudspeaker against accidental overdriving. A temperature-controlled fan ensures optimal cooling without generating acoustic noise at lower output levels.

Accessible front controls

Conveniently adjust output gain, input gain per channel, and bass and treble settings directly from the front panel for effortless customization.

Technical specifications

Electrical

Mains power supply	
U120:1M	
Voltage	100 VAC - 240 VAC, 50/60 Hz
Power consumption	
• Standby (Remote OFF active)	1.25 W
• Idle mode LoZ amp mode (4 Ω / 8 Ω)	9 W / 12 W

Mains power supply	
• Idle mode HiZ amp mode (70 V / 100 V)	14 W / 18 W
• 1/8 rated output power	40 W
Remote power (ON/OFF Stand by)	2-pin, Eurostyle, contact closure

Performance	
Frequency response, -3 dB ref. 1 kHz	
• Any input to output	<20 Hz – 20 kHz
• EMG input to output	<20 Hz – 15 kHz
• Any input to LINE output	<10 Hz – 60 kHz
Distortion	<0.5% @rated output power, 1 kHz
Output stage topology	Class D
Equalization	
• Bass shelving	±12 dB / 100 Hz
• Treble shelving	±12 dB / 10 kHz
Filter	
• LO-CUT permanently	f=20 Hz, 12 dB/oct.
• HI-PASS (HPF) switchable, can be activated	f=120 Hz, 12 dB/oct.

General	
Front status LEDs	
• Protect (Red)	Protection
• Peak (Red)	1 dB before clip (input and output)
• Signal (Green)	Input and output signal
• Call (Green)	EMG / priority trigger / Vox input active
• Power (Green)	Power on condition
DIP switches	EMG (HiZ/Line level), Two-tone Chime (ON/OFF), HPF (120 Hz), VOX (ON/OFF), Phantom power (+48 V/OFF) Output (HiZ/LoZ), Amp mode (70 V/100 V; 4Ω/8Ω)
Protections	
• Amplifier	Audio limiters, high temperature, DC, HF, short circuit, over current protection
• Switching mode power supply	Mains over/under voltage protection, inrush current limiter, mains over current, high temperature
• Remote power OFF	Contact closure

Inputs	
Number of inputs	2 mic/line, 2 aux, EMG (priority input)
Sensitivity with all level controls in max. position	
• MIC / Call station	-68 dBu (300 μ V)
• AUX (only L or R)	-11.8 dBu (200 mV)
• AUX (Stereo) (L and R)	-17.8 dBu (100 mV)
Maximum input level	
• LINE / MIC	+7.5 dBu
• AUX (L or R)	+22 dBu
• AUX (L and R)	+16 dBu
• EMG (EMG line)	+11.5 dBu
• EMG (HiZ 100 V)	+44.5 dBu
Input impedances	
MIC / Call station	10 k Ω
AUX	4.7 k Ω
EMG (Line)	>15 k Ω
EMG (HiZ)	>470 k Ω
LINE / MIC1 input	
Type	LINE / MIC, call station, contact override with chime
Connector	3-pin XLR, balanced / 5-pin Eurostyle, balanced (3 pin for input, 2 pin for trigger)
Dynamic range	60 dB (Mic gain min – max)
Equivalent input noise	<-115 dBu
Phantom power supply, switchable	48 V DC
LINE / MIC2 input	
Type	Mic/Line, VOX ducker override
Connector	3-pin XLR, balanced
VOX Ducking	Ducking control 0 dB – 45 dB
VOX Threshold	-60dBu – +8 dBu, adjustable via MIC2 level control
Dynamic range	60 dB (Mic gain min – max)
Equivalent input noise	<-115 dBu
Phantom power supply, switchable	48 V DC
AUX1 input	
Type	Line
Connector	RCA (cinch), stereo converted to mono, unbalanced
AUX2 input	
Type	Line
Connector	RCA (cinch), stereo converted to mono, unbalanced
EMG Input	
Type	Line; 100 V
Connector	2-pin, balanced

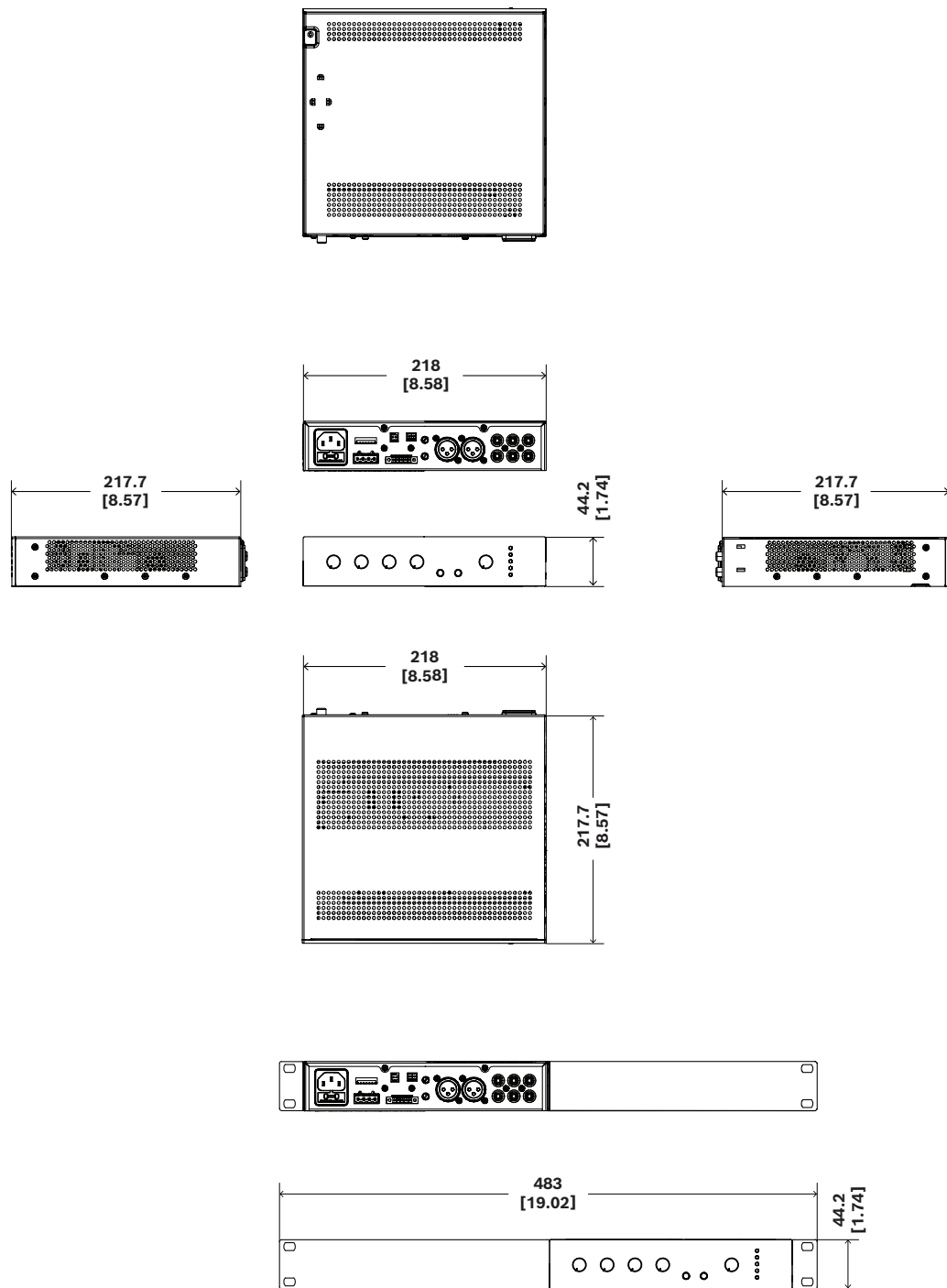
Loudspeaker output									
Connector	4-pin Eurostyle (2 pin for LoZ, 2 pin for HiZ)								
Output power according IHF-A-202 (Dynamic-Headroom, burst 1kHz / 20ms on / 480ms off / low level -20dB)	120 W								
Max output voltage, 1 kHz, THD=0.5%, no load	<table border="1"> <thead> <tr> <th>4 Ω</th> <th>8 Ω</th> <th>70 V</th> <th>100 V</th> </tr> </thead> <tbody> <tr> <td>22 V_{RMS}</td> <td>32 V_{RMS}</td> <td>71 V_{RMS}</td> <td>102 V_{RMS}</td> </tr> </tbody> </table>	4 Ω	8 Ω	70 V	100 V	22 V _{RMS}	32 V _{RMS}	71 V _{RMS}	102 V _{RMS}
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Signal to noise ratio (A-weighted, ref. to rated output power)	>100 dB								

Mechanical

Enclosure	
IEC protection class	Class I (grounded)
Dimensions (HxWxD), without accessories	44.2 mm x 218 mm x 217.7 mm (1.74 in x 8.6 in x 8.57 in)
Color in RAL	RAL 9017 Traffic black
Net weight (without accessories)	1.9 kg (4.18 lb)
Net weight (with accessories)	2.4 kg (5.29 lb)
Shipping weight	2.8 kg (6.17 lb)
Mounting	Stand-alone; 19" rack; rack side-by-side; half 19" rack; table-top; under-table

Environmental

Climatic conditions	
Cooling concept	Four-stage-fans (Off / Slow / Medium / Fast)
Operating temperature	-5°C – 45°C (23°F – 113°F)
Storage temperature	-40°C – 70°C (-40°F – 158°F)



mm [in]

Fig. 1: Dimensions

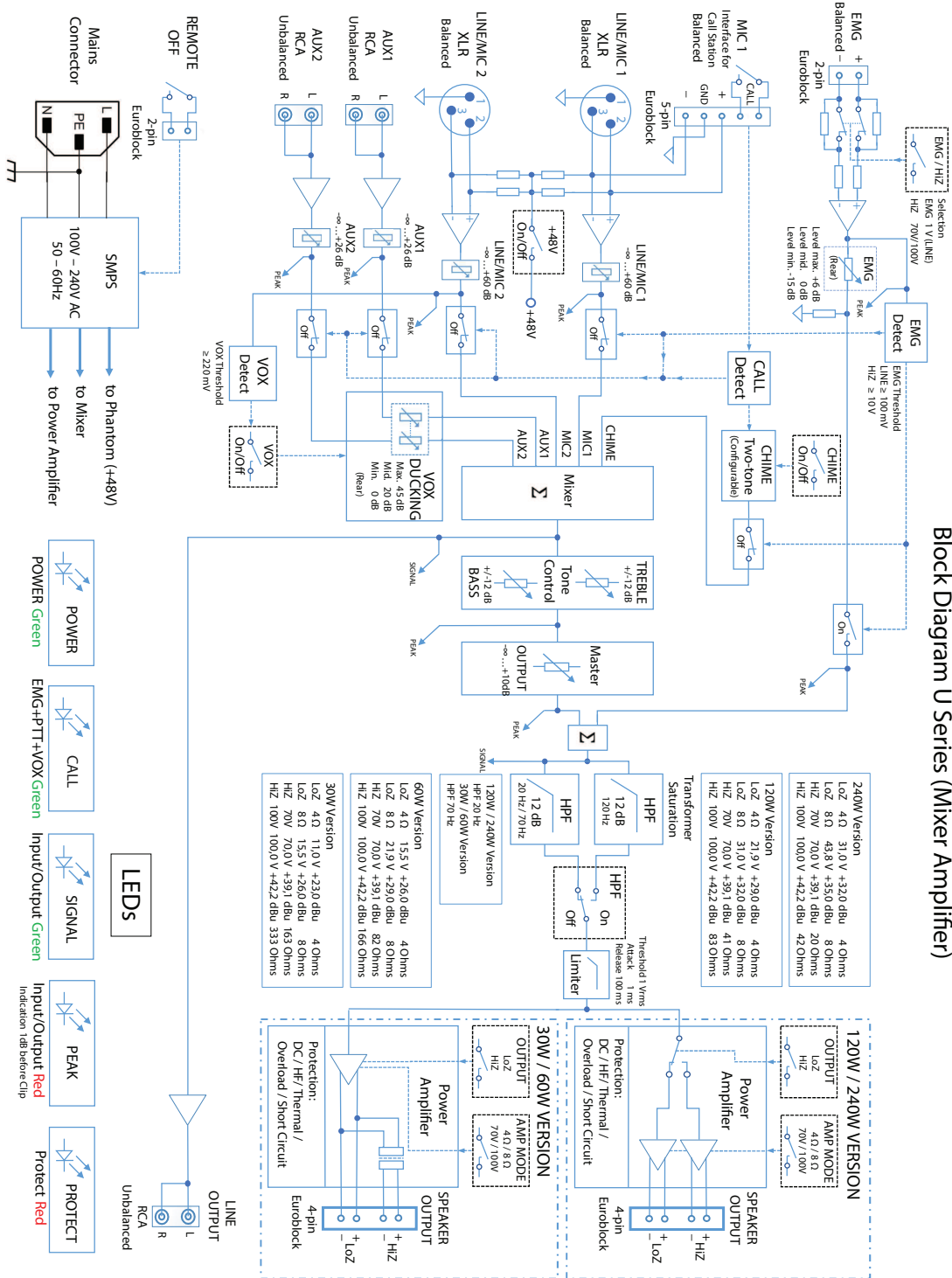


Fig. 2: Block diagram

Ordering information

U120:1M-CN Mixer amplifier 120W 1 channel, CN

1-channel, 120 W mixer amplifier

Order number **U120:1M-CN | F.01U.425.756**

U120:1M-EU Mixer amplifier 120W 1 channel, EU

1-channel, 120 W mixer amplifier

Order number **U120:1M-EU | F.01U.425.748**

U120:1M-US Mixer amplifier 120W 1 channel, US

1-channel, 120 W mixer amplifier

Order number **U120:1M-US | F.01U.425.752**

Accessories

PLE-1CS Call station, all-call

An all-zone call station with 2 m cable and lockable Euro style connector.

Order number **PLE-1CS | F.01U.066.940**

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