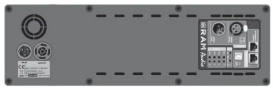
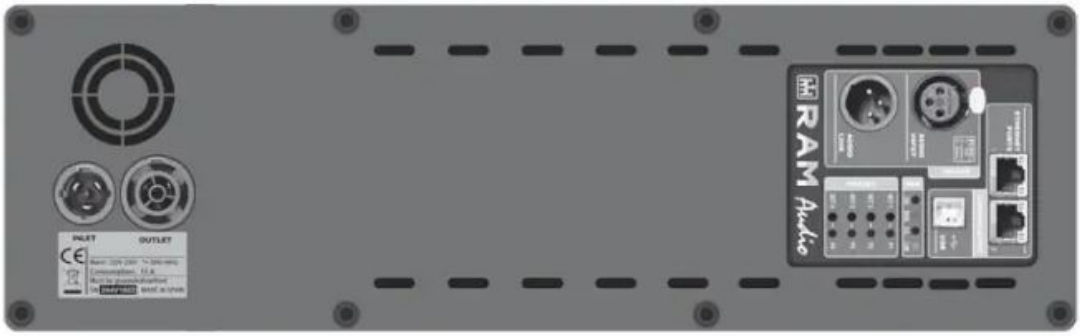


RAM Audio AS 1K5 ASYM Series Power Amplifiers User Manual

Contents

RAM Audio AS 1K5 ASYM Series Power Amplifiers



Product Information

The AS 1K5 and AS 2K3 are module assemblies designed for the installation of the ASYM module in an acoustic enclosure. The module is fixed to the enclosure using M4 or M5 screws and should be sealed with foam to prevent vibrations. The module can also be supplied with an optional rear metal case for added convenience. The AS 1K5 and AS 2K3 feature various connectors including female XLR connector for signal input, male XLR

connector for signal link, RJ45 Ethernet connectors, USB connector, and a powerCON True1 connection. The front panel includes LED indicators for power supply, input signal presence, DSP limiters, and maximum input/output levels. The modules also support quick preset functionality for easy output and input preset changes. Technical specifications of the AS 1K5 and AS 2K3 include different output power configurations depending on the selected channel, total harmonic distortion of 90%, damping factor of over 400, voltage gain between 26dB and 38dB, operational mains voltage range of 85-265V AC/50-60Hz, and high efficiency of over 90%. The modules have compact dimensions and a weight of 1.5 kg.

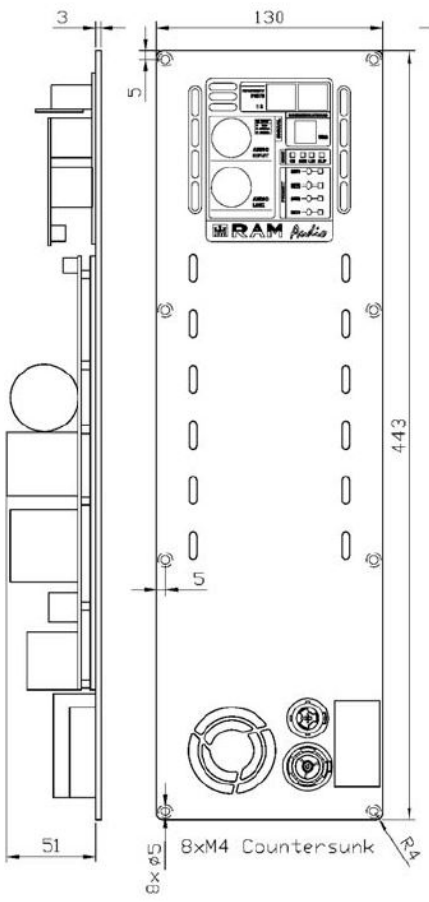
Module Assembly

Installation Requirements

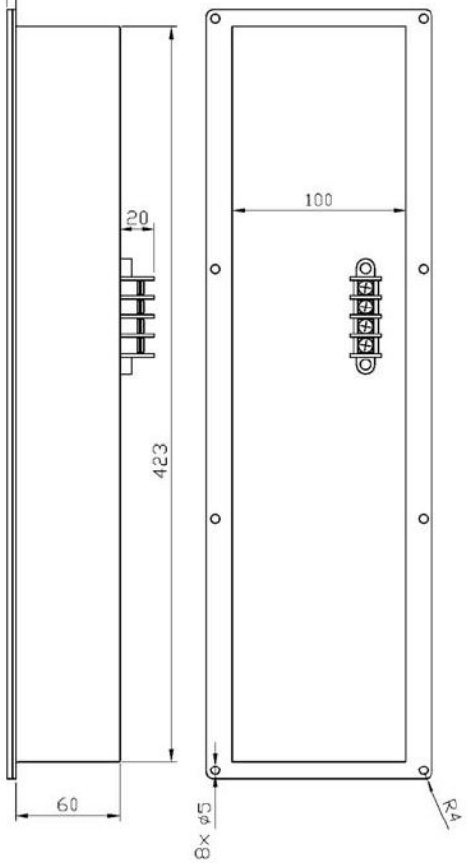
1. For the installation of the ASYM module, you need an internal chamber inside the acoustic enclosure, separate from the chamber where the speaker is mounted. If preferred, the ASYM module can be supplied with a rear metal case for this purpose, avoiding having to make this space airtight.
2. The module is fixed to the enclosure with 8 M4 or M5 screws, sealing foam should be placed in the joint between the module and the box to avoid vibrations (it is not advisable to put foam in the joint between the module and the optional rear metal case).
3. In the drawings below you can see: (1) the external dimensions of the module (front/profile), (2) the optional rear metal case, and also (3) the recommended machining of the acoustic enclosure.

Dimension

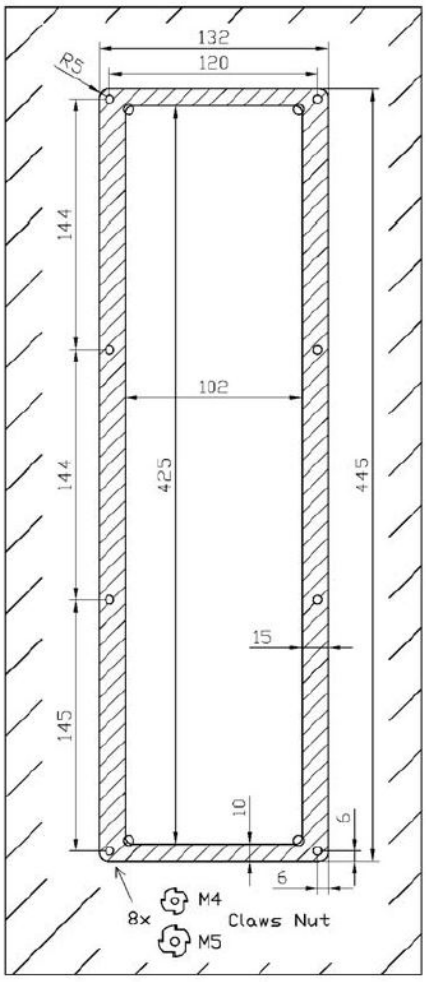
(1) Profile-Front Dimensions



(2) Optional Aluminium Case



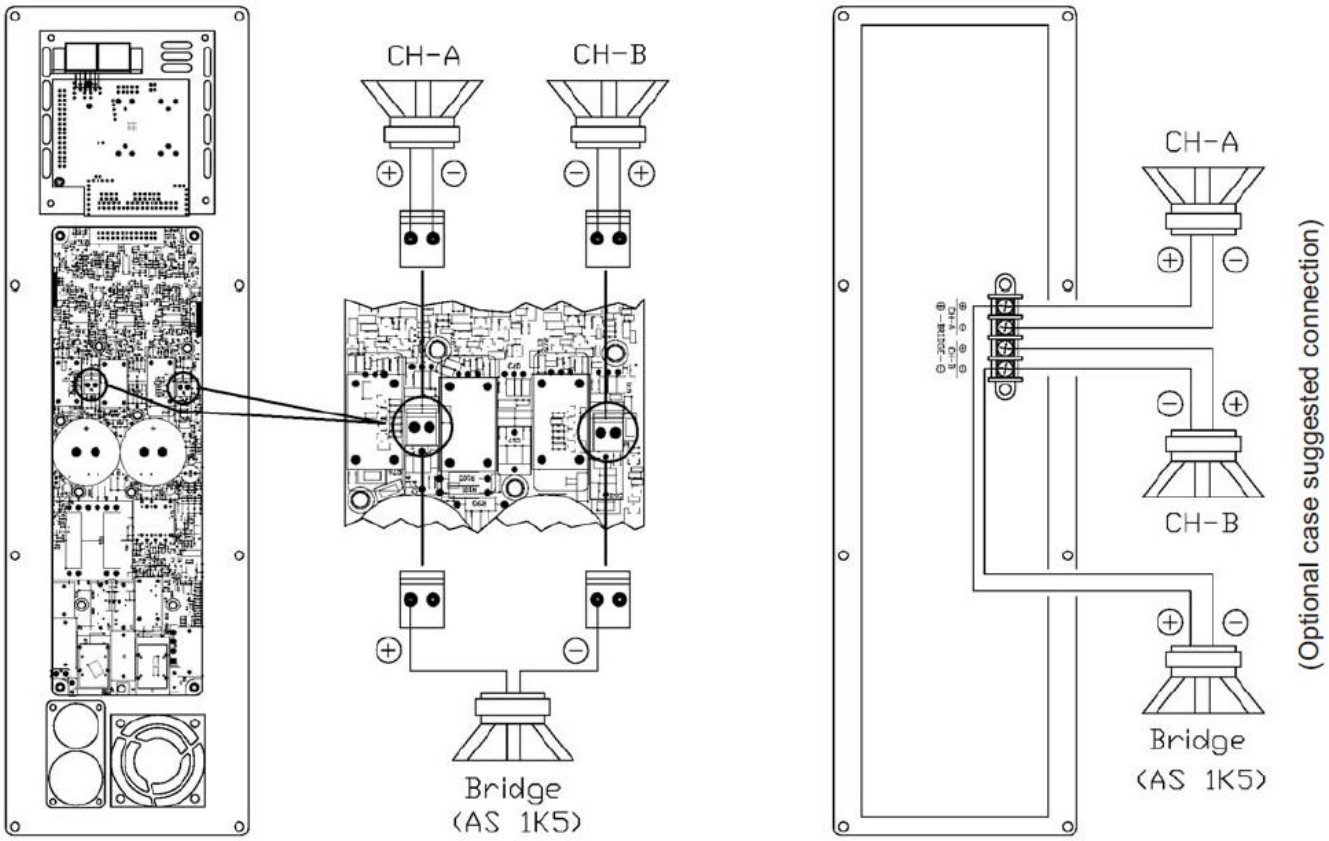
(3) Cabinet Mechanization



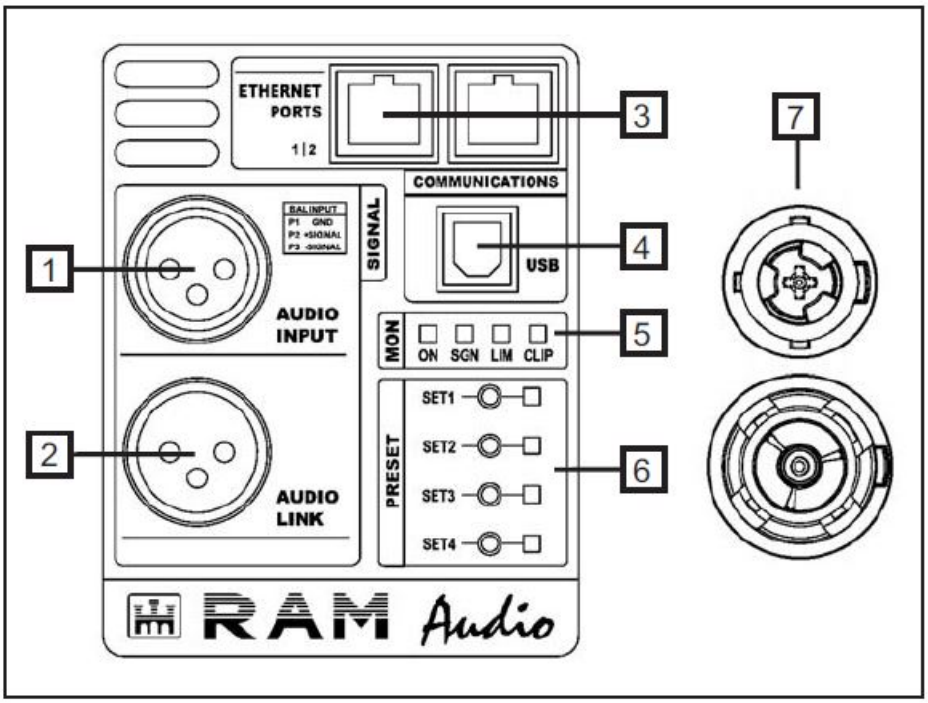
Connection and Description

Speakers Connection

The connection of the speakers to the module is done using two JST VHR-2N connectors provided. A cable should be crimped to the terminals (1.25mm2 section maximum) and placed on the connector box, so that the metallic tab fits into place.
The connection is as follows:



Front Panel Description



1. **Signal Input:** Female XLR Connector for signal input.
2. **Signal Link:** Male XLR Connector for signal link.
3. **Ethernet Connectors:** RJ45, two ports Ethernet switch.
4. **USB Connector:** B type USB connection.
5. **LED ON:**power supply ON. Blinking indicates StandBy mode.
    - **LED SIGNAL:** input signal presence indication.
    - **LED LIMIT:** lights when the DSP limiters are working.
    - **LED CLIP:** the maximum input or output has been reached.
6. **Quick Preset:** press the button for 3 seconds to change the desired output preset, or double click for the input preset.
    - **ON:** press SET1 button for 2s to turn on (in StandBy mode).
    - **LEVEL:** push SET 3-4 buttons simultaneously to enter LEVEL mode (both LEDs light up). Then use 3 and 4 to change level.
7. **Mains connection:** inlet and outlet powerCON True1 connection. It works also as a main switch, as it is a connector with breaking capacity.

Technical Specifications

DSP Specifications

- **Overall:**
    - High-performance 96kHz 120dB 32 bits AD/DA converters
    - 64 bit double-precision 96kHz DSP process
    - 0.6ms minimum process latency time
      Up to 2000 taps custom FIR process
- **Input Section:**
    - 2 independent inputs sections for user and advanced levels
    - Gain, Mute and Phase inversion
    - **Input Delay:** up to 40 meters
    - **Input EQ:** 10+10 PEQ (Parametric, Shelving, LP, HP, BP, SB, AP)
    - 1 or 2 inputs in SB 6K Tri model
- **Output Section:**
    - **Crossover Filters:** FIR and IIR (up to 48dB/oct, Butterworth / Linkwitz-Riley / Bessel)
    - **Output Delay:** up to 40 meters (116ms) per channel
    - **Output IIR EQ:** 12 filters per channel (Parametric, Shelving, LP, HP, BP, SB, AP)
    - **Output FIR EQ:** 20 filters per channel (Parametric, Shelving, LP, HP, BP, SB, AP), or Custom up to 2000 taps
    - RMS and Peak limiter per channel
    - Optional virtual gain/delay control in user level

RAM_OCS Control

- **Control & Monitor:**
    - Standby mode for remote turn-on

- Real time impedance monitor
- Stby., Signal, Lim, Clip, Temp and Prot monitor
- Input, Output, Temperature and Current meters

- **Communications:**
  - Two ports Ethernet switch for daisy chain connection
  - USB 2.0, Type B connector
- **Overall:**
  - 20 Manufacturer preset memories library
  - 5 User preset memories library
  - 4 Quick Preset selection
  - Manufacturer/Installer/User passwords
  - Independent selectable output power per channel (Z dependant)
  - User control groups for virtual Eq (20 filters), Gain and Delay
  - Zone management for library, stand-by and alerts information
  - Smaart® analysis software integration

Amplifier Specifications

Output Power Configuration	**AS 2K3**		**AS 1K5**	
(Selectable by channel)	**CH-A**	**CH-B**	**CH-A**	**CH-B**
8 ohm	1500W	400W	400W	400W
4 ohm	1500W	750W	750W	750W
2 ohm	750W	750W	750W	750W
Bridge 8 ohm	-		1500W	
Bridge 4 ohm	-		1500W	
Total Harmonic Distortion	<0.05%		<0.05%	
Efficiency	>90%		>90%	
Damping Factor (20-500Hz @8Ω)	>400		>400	
Voltage Gain	26dB-38dB		26dB-38dB	
Operational Mains voltage	85-265V AC/50-60Hz		85-265V AC/50-60Hz	
Consum. @4Ω, 1/8 r.p., 230V AC	1.7 A		1.2 A	
Power Factor	>0.95		>0.95	
Efficiency	>90%		>90%	
Dimensions				
External Plate WxH	130x443 mm		130x443 mm	
Internal Enclosure WxHxD	100x423x55 mm		100x423x55 mm	
Occupied Volume (optional case)	2 l		2 l	
Weight	1.5 kg		1.5 kg	
Connections:	XLR Input, XLR Link, powerCON True1 in-out, USB, 2x RJ45, barrier strip (in optional case)			
Protections:	Turn-on transients, Over-heating, DC, RF, Short-circuit, mismatched loads, ICL™, PMS™			

The exclamation point inside an equilateral triangle indicates the existence of internal components whose substitution may affect safety. The lighting and arrowhead symbol warns about the presence of uninsulated dangerous voltage. To avoid fire or electrocution risk do not expose the unit to rain or moisture. To avoid electric shock, do not open the unit. No user-serviceable parts inside. In the case of dysfunction, have the unit checked by qualified agents. Class I device.

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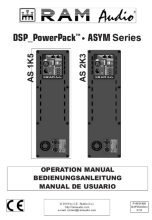
Documents / Resources

	RAM Audio AS 1K5 ASYM Series Power Amplifiers [pdf] User Manual AS 1K5, AS 2K3, AS 1K5 ASYM Series Power Amplifiers, AS 1K5, ASYM Series Power Amplifiers, Power Amplifiers, Amplifiers

References

- RAM Audio - Professional Power Amplifiers