

# SONIFEX

Redbox Audio Distribution Amplifiers

2016  
Catalogue





## RB-AES4B3 Quad 3 Way Passive AES3ID Splitter BNC Connectors



**Category:** Audio Distribution Amplifiers.

**Product Function:** 4 sets of: 1 input, 3 output AES3id distribution amplifier.

**Typical Applications:** Distribution of AES3id source to 3 mixing consoles.

**Features:** No power needed, can apply 75Ω termination to unconnected outputs.

The RB-AES4B3 is a passive, quad “one-to-three” splitter housed in a 19” rack. Each bank is designed to split a single AES3ID digital audio source to up to three destinations, using female BNC connectors.

Particularly useful in a video production and broadcast environment, the RB-AES4B3 splits the input signal through high quality transformers.

75Ω termination can be applied, if desired, to unconnected outputs to maintain optimum carrier parameters.

The RB-AES4B3 requires no power to operate, ensuring your audio remains connected from source to destination(s) without interruption from power failures.

### Specification For RB-AES4B3

#### Audio Specification Cable Drive Capability

Cumulative cable drive capability of 100m of 75Ω coaxial cable at sample rates up to and including 96kHz.

#### Connections

Inputs: 4 x BNC female  
Outputs: 12 x BNC female

#### Equipment Type

RB-AES4B3 Quad 3 way passive AES3ID splitter with BNC connectors.

#### Physical Specification

Dimensions (Raw):	48cm (W) x 10.8cm (D) x 4.2cm (H) (1U)
Dimensions (Boxed):	58.5cm (W) x 22.5cm (D) x 7cm (H)
Weight:	Nett: 1.0kg Gross: 1.4kg Nett: 2.25lbs Gross: 3.0lbs





## RB-AES4X3 Quad 3 Way AES/EBU Splitter XLR Connectors

The RB-AES4X3 is a passive, quad “one-to-three” splitter housed in a 19” rack. Each bank is designed to split a single AES3 digital audio source to up to three destinations, using Neutrik XLR connectors.

The RB-AES4X3 provides solutions to a range of digital signal distribution problems, where correct termination is essential to

maintain signal integrity. The input signal is split through high quality transformers, and 110Ω termination can be applied, if desired, to unconnected outputs.

The RB-AES4X3 requires no power to operate, ensuring your audio remains connected from source to destination(s) without interruption from power failures.



Category: Audio Distribution Amplifiers.  
Product Function: 4 sets of: 1 input, 3

output AES3 distribution amplifier.  
**Typical Applications:** Distribution of AES3 source to 3 mixing consoles.  
**Features:** No power needed, can apply 110Ω termination to unconnected outputs, transformer based solution provides reliability.

### Specification For RB-AES4X3

#### Audio Specification Cable Drive Capability

The table below sets out the minimum signal amplitude required to drive 100m (cumulative) of 110Ω twisted pair cable, based on the sample rate of the digital audio:

Sample Rate	Minimum Signal Amplitude
32kHz	*2Vpk-pk
44.1kHz	*2Vpk-pk
48kHz	*2Vpk-pk
88.2kHz	5Vpk-pk
96kHz	5Vpk-pk

\* Minimum of 2Vpk-pk is defined by the AES3 format specification.

The table below sets out the minimum signal amplitude required to drive 30m (cumulative) of 110Ω twisted pair cable, based on the sample rate of the digital audio:

Sample Rate	Minimum Signal Amplitude
176.4kHz	3Vpk-pk
192kHz	3Vpk-pk

#### Connections

Inputs: 4 x XLR 3 pin female  
Outputs: 12 x XLR 3 pin male

#### Equipment Type

RB-AES4X3 Quad 3 way AES/EBU splitter with XLR connectors

#### Physical Specification

Dimensions (Raw):	48cm (W) x 10.8cm (D) x 4.2cm (H)(1U)
Dimensions (Boxed):	58.5cm (W) x 22.5cm (D) x 7cm (H)
Weight:	23" (W) x 8.9" (D) x 2.8" (H)
	Nett: 1.0kg    Gross: 1.4kg
	Nett: 2.25lbs    Gross: 3.0lbs





## RB-MS4X3 Quad 3 Way Passive Microphone Splitter



### Typical Applications:

To share microphones between radio/TV/production studios.

### Features:

- Passive transformer design.
- Ground lift switch.
- External or looped phantom power inputs.
- Line level -30dB pad.

**Category:** Audio Distribution Amplifiers.

**Product Function:** To split up to 4 microphone or line level signals to 3 independent outputs each.

The RB-MS4X3 is a passive, quad, “one-to-three” splitter housed in a 19” rack. Each bank is designed to split a single microphone or line source to up to three destinations, using Neutrik XLR connectors. Cable connections are located on the rear panel, with recessed controls and indicators available to the user on the front panel, allowing quick and easy access to setup parameters.

### Wide Signal Range Capability

The RB-MS4X3 uses high quality audio transformers that are capable of accepting input levels of up to +18dBu, making the splitter useful in both microphone and line level splitting applications. A 30dB pad can be applied to the input, allowing a line level signal to be interfaced into a microphone input with suitable levels and the correct termination.

### Versatile Phantom Powering Options

The RB-MS4X3 offers three methods of providing phantom power to a microphone connected to its input:



- From the external +48VDC power connector.
- From a microphone amplifier connected to output 1 (direct).
- From a microphone amplifier connected to output 2 (phantom loopback).

Controlling which method is used to provide phantom power is easy with front panel switches and indicators. It is possible to concurrently power a microphone using any two of the above methods without degrading audio performance, thus providing power supply redundancy.

### Ground Loop Hum Elimination

Ground loop hum problems can be quickly eliminated using the front panel toggle switches to lift pin 1 of the output connectors (output 2 and 3 only).

### Specification For RB-MS4X3

#### Audio Specification

Test	Conditions	Results
Frequency Response:	<ul style="list-style-type: none"> <li>• Ref. -6dBu, 1kHz</li> <li>• Source impedance = 150Ω</li> <li>• Load impedance = 10kΩ</li> </ul>	10Hz - 30kHz ±0.5dB
Total Harmonic Distortion:	<ul style="list-style-type: none"> <li>• Ref. +3dBu, 50Hz</li> <li>• Source impedance = 150Ω</li> <li>• Load impedance = 10kΩ</li> </ul>	0.02%
Total Harmonic Distortion 0.1%:	<ul style="list-style-type: none"> <li>• Ref. 0.1%THD+N, 50Hz</li> <li>• Source impedance = 150Ω</li> <li>• Load impedance = 10kΩ</li> </ul>	+13dBu
Total Harmonic Distortion 1%:	<ul style="list-style-type: none"> <li>• Ref. 1%THD+N, 50Hz</li> <li>• Source impedance = 150Ω</li> <li>• Load impedance = 10kΩ</li> </ul>	+18dBu
Common Mode Rejection Ratio:	<ul style="list-style-type: none"> <li>• Ref. 20kHz</li> <li>• Source impedance = 600Ω</li> <li>• Load impedance = 10kΩ</li> </ul>	>60dB

#### Connections

Inputs:	4 x XLR 3 pin female
Outputs:	12 x XLR 3 pin male
DC Phantom Power Input:	+48V DC, 2.5mm socket

#### Equipment Type

RB-MS4X3	Quad 3 way microphone splitter
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#### Physical Specification

Dimensions (Raw):	48cm (W) x 10.8cm (D) x 4.2cm (H) (1U) 19" (W) x 4.3" (D) x 1.7" (H) (1U)
Dimensions (Boxed):	58.5cm (W) x 22.5cm (D) x 7cm (H) 23" (W) x 8.9" (D) x 2.8" (H)
Weight:	Nett: 1.5kg Gross: 1.9kg Nett: 3.3lbs Gross: 4.2lbs