



Bel BCR-A4-4

Audio confidence monitor



User's Guide

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Bel Digital Audio Ltd.
Unit 3
Horwood Court
Bletchley
Milton Keynes
Bucks
MK11RD
Tel: 01908-641063
Email: info@beldigital.com
Web: www.beldigital.com

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Introduction

The BCR-A4-4 is a professional audio confidence monitor housed in a 1U rack. The unit features four amplifiers, four speakers and an analogue line output. The BCR-A4-4 will accept four pairs of analogue and four pairs of AES audio inputs.

Front panel controls

Several controls and connectors are located on the front panel, Fig 1.1, from left to right these are:

Balance/ Left level

In the stereo mode this control will adjust the balance between the left and right speakers. In the two-channel mode this control will adjust the left speaker output level. The mode can be selected by adjusting the links shown in Fig 1.3

Input selector

The audio input pair routed to the amplifiers and speakers can be selected using this switch. The first four positions are analogue inputs and the last four AES inputs.

Input level indicators

Two LED bar graph PPI displays indicate the current input level. The input level that shows 0dB on these bar graphs can be internally selected to be 0dB or -10dB. Fig 1.3. For AES sources 0dB input will show +3 dB on the bar graph.

AES lock indicators

Four LED indicators show the locked state of the four AES inputs.

Anti-phase indicator

A single LED will illuminate to indicate sustained anti-phase on the selected inputs.

Right level

This control adjusts the right speaker output level.

Headphone jack

A 6mm headphone jack is provided on the front panel. Inserting a jack plug will mute the speakers.

Power on indicator

Rear panel

Several connectors are provided on the rear panel, from left to right these are:

Mains input

This is a combination IEC connector, fuse and off/on switch.

Audio inputs

Two 25 way D type connectors are provided to receive the audio inputs. The first of these receives the AES/EBU digital audio input pairs 1 to 4. The second connector receives the analogue input pairs 1 to 4. These inputs are treated as stereo pairs or two independent channels as selected by the internal links. Fig 1.3.

Line outputs

Two male XLR type connectors are provided that carry a line level analogue audio output. The level on these connectors can be adjusted by selecting internal links. Fig 1.3.



Fig 1.1 BCR-A4-4 Front panel



Fig 1.2 BCR-A4-4 Rear panel

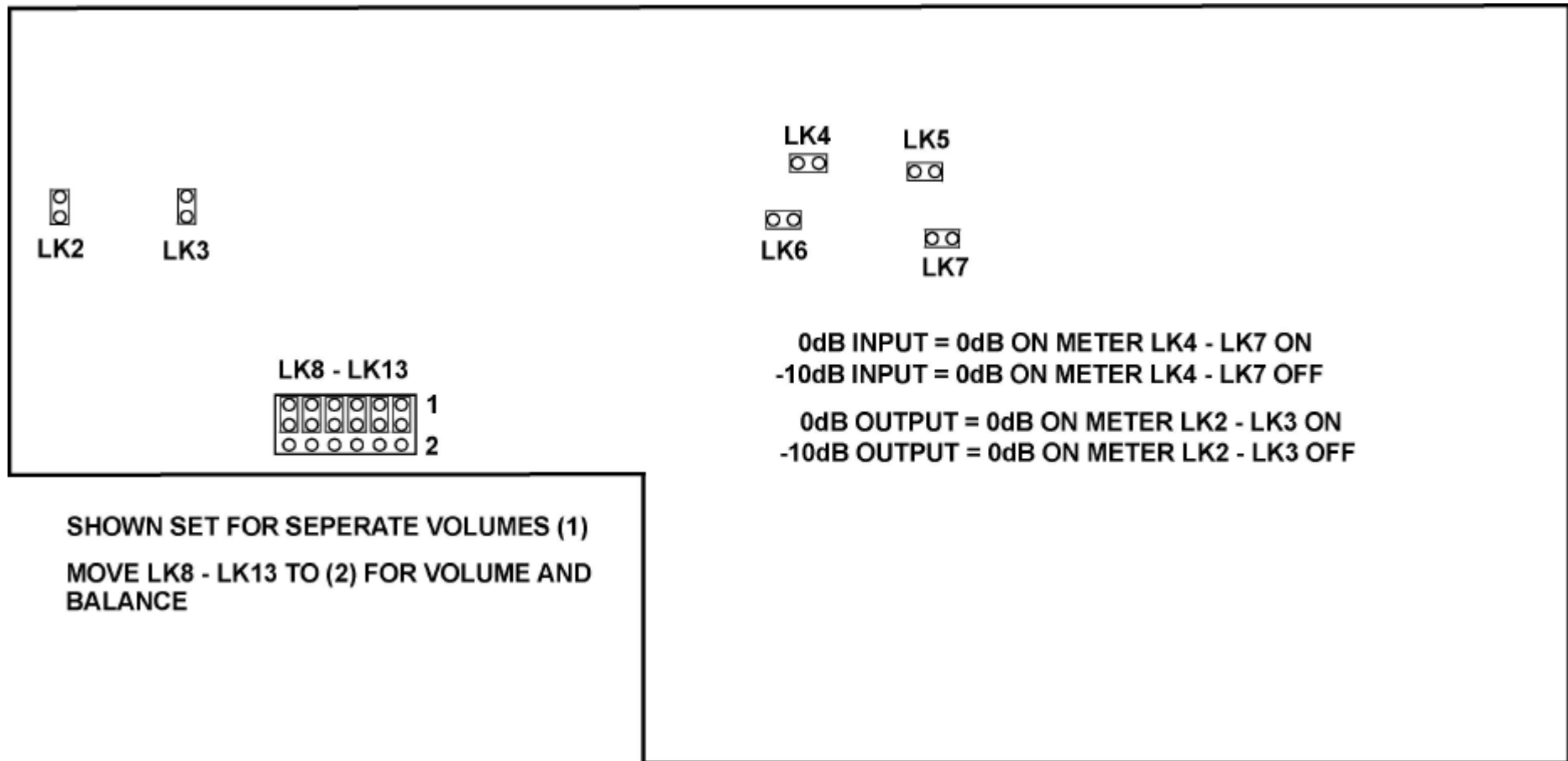


Fig 1.3 BCR-A4-4 link settings

Audio input pin connections

Analogue audio inputs

AES/EBU digital audio inputs

| Pin | Function | Pin | Function |
|-----|-----------|-----|----------|
| 1 | Left 1 + | 1 | AES 1 + |
| 2 | Left 1 - | 2 | AES 1 - |
| 3 | Ground | 3 | Ground |
| 4 | Left 2 + | 4 | AES 3 + |
| 5 | Left 2 - | 5 | AES 3 - |
| 6 | Ground | 6 | Ground |
| 7 | Left 3 + | 7 | Ground |
| 8 | Left 3 - | 8 | Ground |
| 9 | Ground | 9 | Ground |
| 10 | Left 4 + | 10 | Ground |
| 11 | Left 4 - | 11 | Ground |
| 12 | Ground | 12 | Ground |
| 13 | Ground | 13 | Ground |
| 14 | Ground | 14 | Ground |
| 15 | Right 1 + | 15 | AES 2 + |
| 16 | Right 1 - | 16 | AES 2 - |
| 17 | Ground | 17 | Ground |
| 18 | Right 2 + | 18 | AES 4 + |
| 19 | Right 2 - | 19 | AES 4 - |
| 20 | Ground | 20 | Ground |
| 21 | Right 3 + | 21 | Ground |
| 22 | Right 3 - | 22 | Ground |
| 23 | Ground | 23 | Ground |
| 24 | Right 4 + | 24 | Ground |
| 25 | Right 4 - | 25 | Ground |

BCR-A4-4 Specification

Audio Specification

| | |
|--|---|
| Analogue inputs | 4 Pairs differential, 25k Ω impedance on 25 way D type connector |
| Analogue outputs | 50 Ω impedance differential on XLR connector |
| AES digital inputs | 4 independent pairs of AES/UBU digital audio, 110 Ω on 25 way D type connector |
| AES sample rate | 32kHz to 96kHz |
| Hum & noise main output Hum & noise line output | more than 80dB below full output. 100dB below full output |
| Peak acoustic output | 100dB SPL (@ 2ft) |
| Level meters | 2x10 element LED PPI bar graphs |
| Speakers | 2 mid/treble and 2 bass |

General

| | |
|--------------------|------------------------|
| Power requirements | 90-260 VAC 40/60Hz |
| Power consumption | 30W Max |
| Dimensions | 483mm x 256mm x 44.3mm |
| Weight | 4kg |

EMC compliance

The BEL 2120 was designed and tested to comply with the EMC directive numbers EN55103, EN55022 and EN55082-1 when used as directed.



It is recommended that, where possible, all cables be good quality screened twisted pairs with the screening braid connected to pin 1 on the XLR connector. Optimum performance is obtained using double-screened cable with separate ground returns.