



Bel BCR-A4-4

Audio confidence monitor



User's Guide

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Contents

CONTENTSINTRODUCTION	3
INTRODUCTION	4
Front panel controls	4
Balance/ Left level	4
Input selector	4
Input level indicators	4
AES lock indicators	4
Anti-phase indicator	4
Right level	4
Headphone jack	4
Power on indicator	4
Rear panel	5
Mains input	5
Audio inputs	5
Line outputs	5
FIG 1.1 BCR-A4-4 FRONT PANEL	6
FIG 1.3 BCR-A4-4 LINK SETTINGS	7
Audio input pin connections	8
BCR-A4-4 SPECIFICATION	9
Audio Specification	9
General	9
EMC compliance	10

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

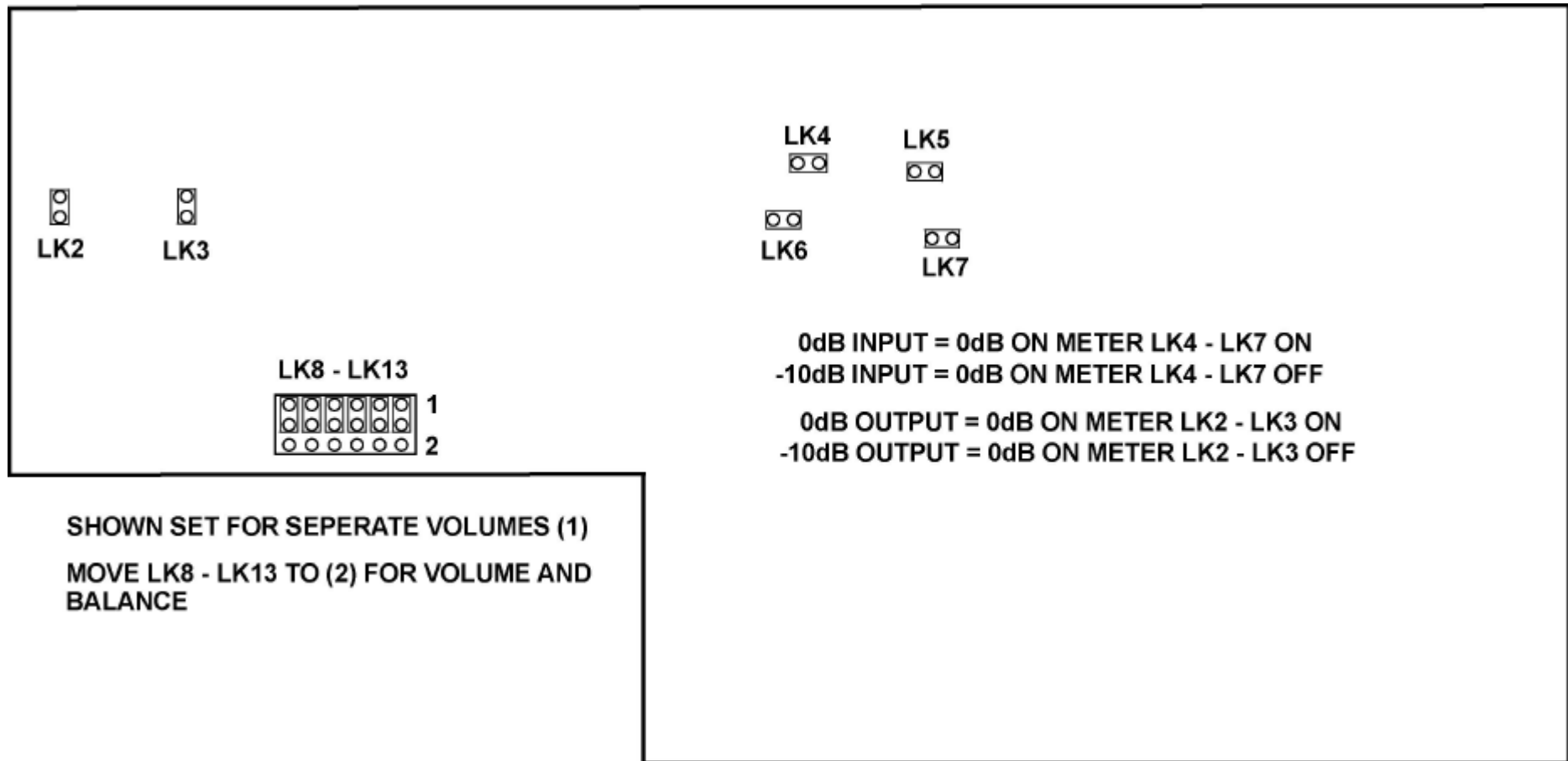


Fig 1.3 BCR-A4-4 link settings

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.