Bel BCR A4-4 OB

Audio confidence monitor

User's Guide

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Introduction

The BCR A4-4 OB is a professional audio confidence monitor housed in a reduced depth 1U rack. The unit features four amplifiers, four speakers and an analogue line output. The BCR A4-4 OB will accept four pairs of analogue and four pairs of AES3 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.

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

Four BNC connectors are provided to receive the AES3 digital audio input pairs 1 to 4. A 25 way D type connector is provided to receive the analogue audio 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.

Fig 1.1 BCR A4-4 OB Front panel

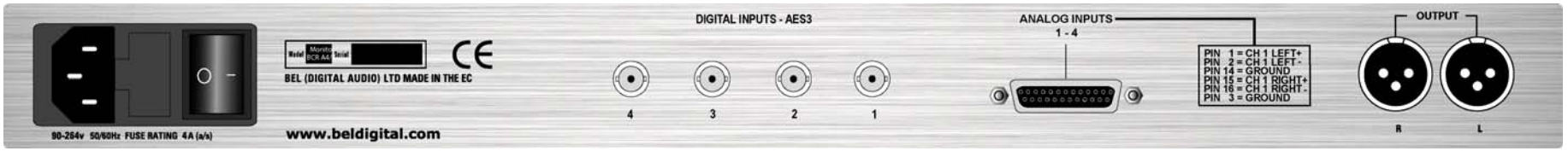

Fig 1.2 BCR A4-4 OB Rear panel

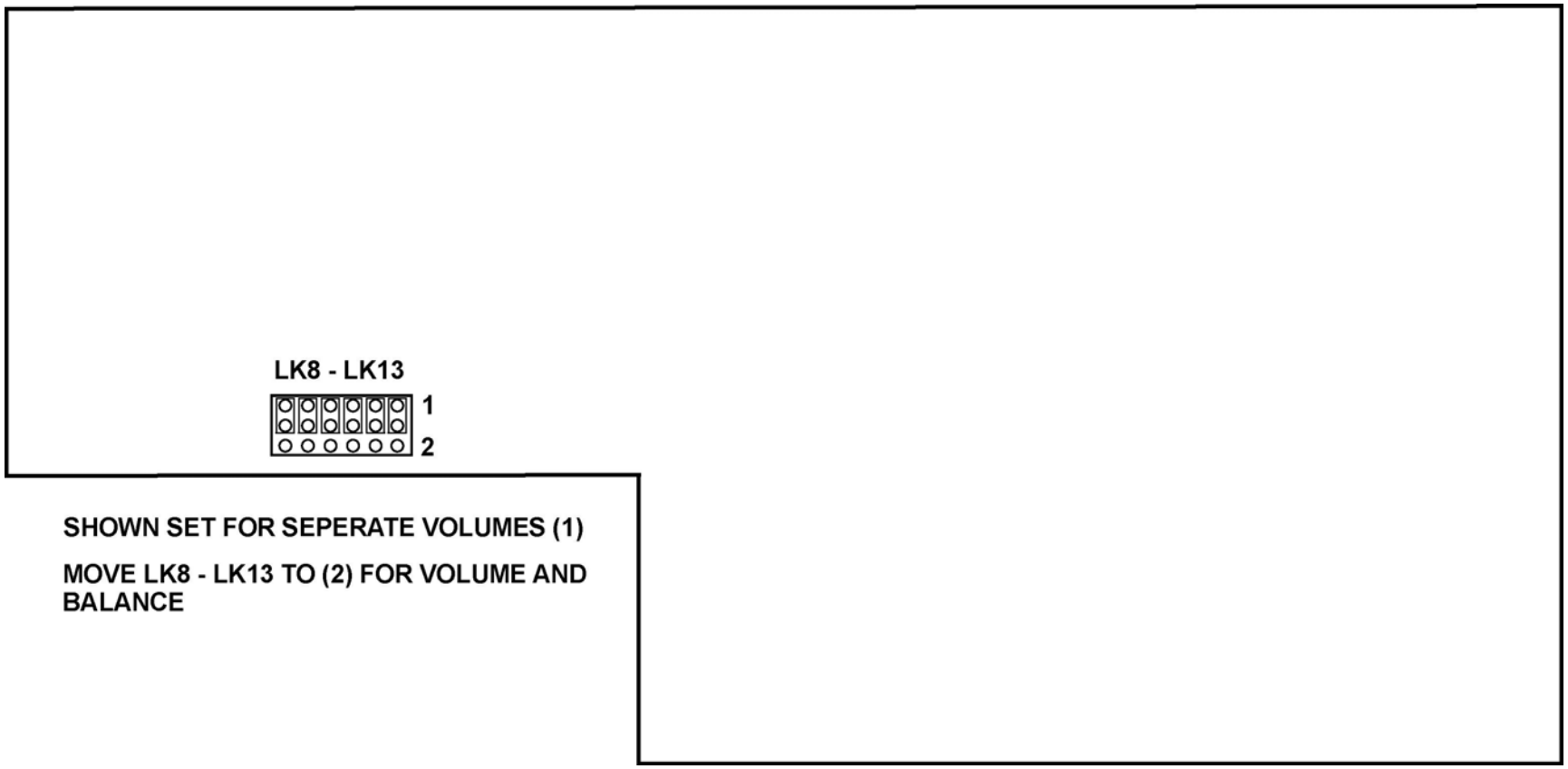

Fig 1.3 BCR A4-4 OB link settings

Audio input pin connections

Analogue audio inputs

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

BCR A4-4 OB Specification

Audio Specification

Analogue inputs	4 Pairs differential, 25kΩ impedance on 25 way female D type connector
Analogue outputs	50Ω impedance differential on XLR connector
AES digital inputs	4 independent pairs of AES3 digital audio, 75Ω on BNC connectors.
AES sample rate	32kHz to 96kHz
Hum & noise main output	more than 80dB below full output.
Hum & noise line 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 200mm x 44.3mm
Weight	4kg

EMC compliance

The BEL BCR series 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.