BE-1 SERIES LINE INPUT MODULES
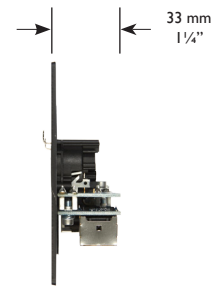
BE-1: UK Version

BE-1B
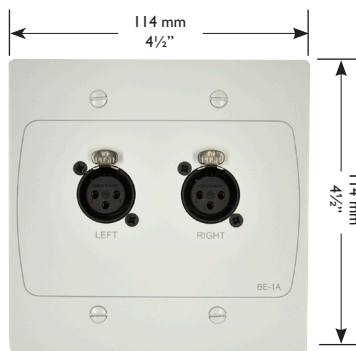
BE-1W

BE-1 side view

145 mm
5¾"

85 mm
3¾"

33 mm
1¼"

BE-1: US Version

BE-1AB

BE-1AW

BE-1A side view

114 mm
4½"

114 mm
4½"

33 mm
1¼"

BE-1: Euro-module Version

BE-1MB

BE-1MW

BE-1M side view

100mm
4"

50 mm
2"

33 mm
1¼"
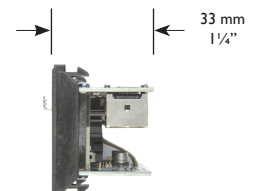
General Description

The BE-1 Series is a range of stereo, balanced line level, remote input modules for use with the Cloud DCM1 range of Digitally Controlled Zone Mixers (see separate datasheets). All references to "DCM1" in this datasheet can be taken to apply to all versions in the DCM1 range.

In most DCM1 installations, the DCM1 host unit itself will normally be located in a rack along with other audio equipment, and will not be readily accessible. Installing a BE-1 module in one of the DCM1's zones provides the user with the ability to connect professional audio equipment such as mixing consoles, hard disk recorders, radio mic receivers, etc., into the system. The DCM1 can then be configured in the usual way to route the source to loudspeakers in the same (or any other) zone.

As the DCM1 has provision for only one balanced line source (Line Input 8), a BE-1 module may also be co-located with the DCM1 host unit, and used to provide additional pairs of balanced inputs. In such an installation, the BE-1 effectively acts as a balancing option for any of Line Inputs 1 to 4.

Inputs are via two standard female XLR sockets. The input circuitry is optimised for a nominal balanced line input level of 0 dBu, and can accept the DCM1's maximum line input level of +12 dBu.

Note that the BE-1 is specifically intended for the connection of balanced line level audio sources; the Cloud LE-1 Series of remote input modules is also available for in-zone connection of lower-level unbalanced sources – such as laptops, portable MP3 players, etc. (Please see separate LE-1 datasheet.)

All Cloud products are exclusively designed in the UK.
Every Cloud product is exhaustively tested for electronic performance and sonic perfection in Sheffield, England.

Versions

Six versions of the BE-1 are available; they are electrically identical and differ only in style and appearance. Versions available are:

- BE-1W   to fit UK back boxes, white finish
- BE-1B   to fit UK back boxes, black finish
- BE-1AW to fit US back boxes, white finish
- BE-1AB   to fit US back boxes, black finish
- BE-1MW 100 x 50 mm Euro-module, white finish
- BE-1MB   100 x 50 mm Euro-module, black finish

The BE-1W and BE-1B mount into a standard dual-gang UK-style electrical back box; the BE-1AW and BE-1AB mount into a standard dual-gang US-style box. The BE-1MW and BE-1MB are "Media" versions: 100 mm x 50 mm Euro-modules, which can be fitted into either UK or other European back boxes with the appropriate mounting frame.

Connections

The BE-1 is exceptionally simple to install, as it connects to one of the DCM1's Extension Ports with a single screened Cat 5 cable using standard shielded RJ45 connectors at each end. The Cat 5 cable carries DC power as well as balanced stereo audio.

The DCM1 has four dedicated Extension Ports for connection of remote input modules. (These are alternative connections to the DCM1's Line Inputs 1 to 4; all the Line Inputs are also available on pairs of phono (RCA) sockets.) Any or all of the Extension Ports may be used for BE-1s; note that when in use, the Line Input must be dedicated to the BE-1, and the corresponding phono sockets on the DCM1 rear panel should not be used for connecting additional equipment (see fig.1).

A second "Link" connector is provided on the BE-1 to permit multiple modules to be "daisy-chained" together, to provide input points at different locations in the same zone (see fig.2). Signals applied to modules wired in this way will be summed together to the DCM1 Line Input to which the "last" BE-1 in the chain is connected. An internal gating circuit on each module automatically disables the audio circuitry on any chained modules which are not in use, to minimise noise contribution. Chained modules will be treated as a single line input at the DCM1.

Note that BE-1 input modules (balanced sources) may be freely intermixed with LE-1 input modules (unbalanced sources) in such a chaining arrangement.

BE-1s are powered from the DCM1 to which they are connected, and each takes 24 mA at +12 V and -12 V. In the vast majority of installations, the DCM1 will have ample spare power capacity for several BE-1s. The DCM1 is capable of powering other active accessories, such as other types of remote input module, or paging microphones. If these accessories form part of the system, the "spare" current available from the DCM1's ports will be reduced. Full details are provided in the DCM1's documentation.

fig.1

fig.2
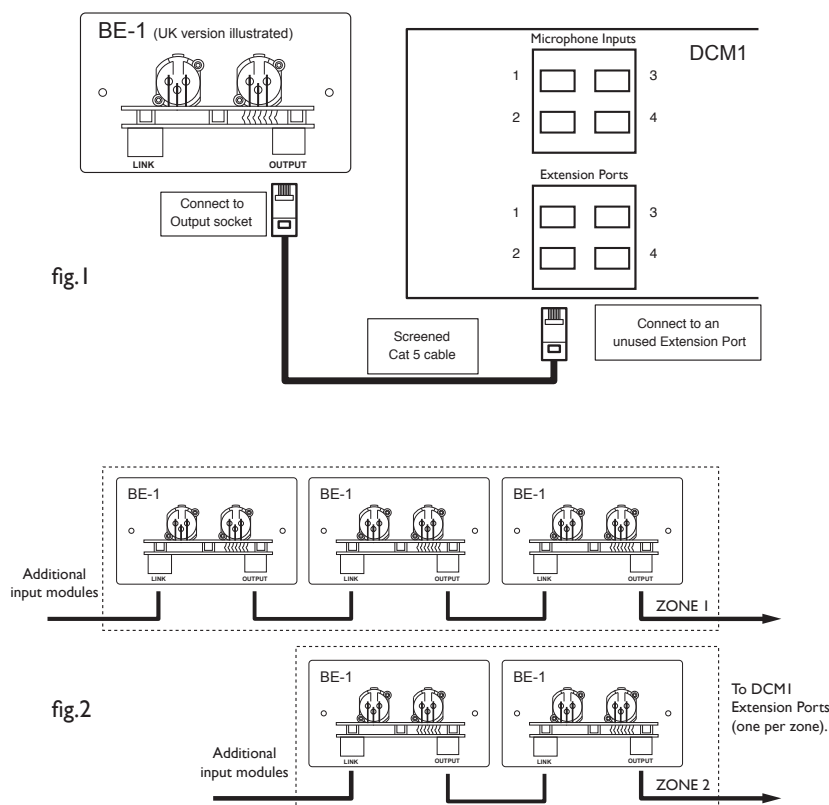
System Example
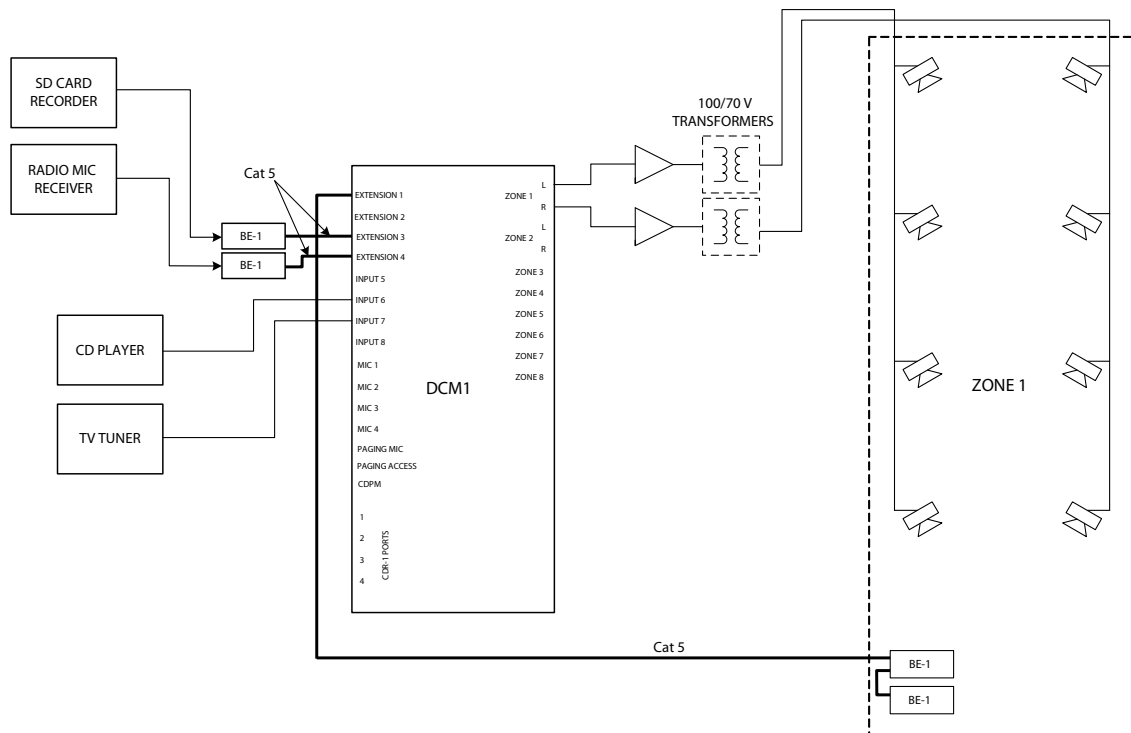
Part of an audio system is shown in the diagram, to illustrate two possible applications for BE-1 balanced line input modules. A DCM1 is set up to route a variety of audio sources into a large area, using multiple speakers in a 100/70 V configuration. Stereo audio is required in the area, so one of the DCM1's two stereo zone outputs is used.

The rear of the area has both a BE-1 and an LE-1 remote input module installed. Such an arrangement would readily allow any type of portable audio equipment to be connected into the system; professional, balanced sources to the BE-1 and unbalanced sources (laptops, MP3 players, etc.) to the LE-1. The two modules are connected together with screened Cat 5 cable and to the Extension 1 port of the DCM1 host unit in the same way.

Any portable audio source connected to either the LE-1 or BE-1 will now be available to any zone in the system as Line Input 1; though in all likelihood it would normally be routed only to Zone 1, where the modules are fitted. The routing is made in the normal way using the DCM1's front panel display and controls, or may be selected from any CDR-1 remote control plates in the system, if they have been enabled to do so.

The example also shows various "fixed" music sources connected to other DCM1 Line Inputs. Two of these – the CD player and the audio output of the TV receiver – are unbalanced sources, and are connected to the phono (RCA) sockets for Line Inputs 6 and 7 respectively. The SD Card recorder and the radio mic receiver are likely to have balanced outputs, so additional BE-1 modules could be fitted, to permit a fully balanced interface. All these sources would also be available to any or all of the zones (unless barred from selection in particular zone(s) by the DCM1's Input Enable function): the SD Card recorder as Line Input 3, the Radio Mic as Line Input 4, the CD player as Line Input 6 and the TV Tuner as Line Input 7.

The DCM1 permits Line Inputs to be renamed, so any of the sources could appear in the displays as e.g., "SPARE INPUT".

Architect's and Engineer's Specification

An optional remote input module shall be available for the Cloud DCM1 range of Digitally Controlled Zone Mixers, and the module shall be compatible with all versions in the range. The module shall be provided with LINK and OUTPUT RJ45 connectors to permit connection to the DCM1 host unit and other similar input modules via screened Category 5 data cable.

The remote input module shall allow the connection of a stereo balanced audio source; two female 3-pin XLR connectors marked 'LEFT' and 'RIGHT' shall be accessible from the front of the module. The inputs shall be capable of accepting signals with a nominal level of 0 dBu and a maximum input level of +12 dBu.

The remote input module shall be available in versions suitable for fitment in standard UK or US dual-gang back boxes. There shall also be a version with a front panel measuring 100 mm x 50 mm suitable for mounting in standard Euro-style modular mounting frames. The modules shall be available in a choice of finishes.

The remote input modules shall be the Cloud BE-1W (UK version, white finish), the Cloud BE-1B (UK version, black finish), the Cloud BE-1AW (US version, white finish), the Cloud BE-1AB (US version, black finish), the Cloud BE-1MW (Euro-module, white finish) and the Cloud BE-1MB (Euro-module, black finish).