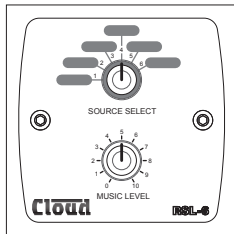
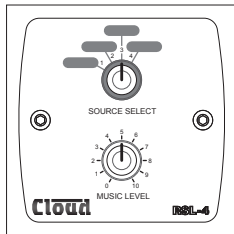
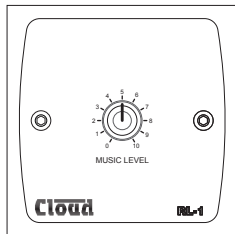


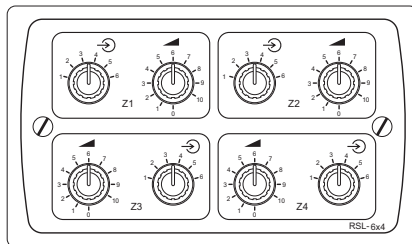
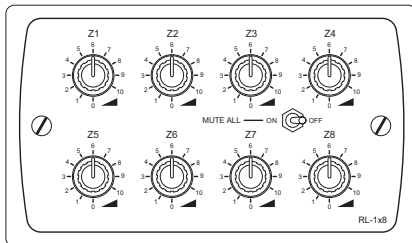


RL Series and RSL Series

Remote Control Plates



Installation Guide



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Introduction

Cloud RL Series and RSL Series remote control plates are accessories for a wide range of Cloud zoners, mixer-amplifiers and power amplifiers. They are compatible with all current (relevant) products, and also with numerous discontinued products.

RL plates adjust the signal level in one or more audio channels of a Cloud device, and thus allow audio volume in an area to be controlled locally.

RSL plates provide the same volume control function as RL plates, but additionally allow remote selection of music source, when used in conjunction with Cloud devices that have multiple line inputs.

Remote plate types

Functionally, there are three models of remote plate:

- **RL-1:** single rotary control providing remote volume control of an audio channel.
- **RSL-4:** two rotary controls, providing remote volume control of an audio channel, and also remote selection of the music source for that channel, when used with devices having up to four line inputs.
- **RSL-6:** as RSL-4, but for use with devices having up to six line inputs.

Further, each model is available in three physical sizes:

UK versions:

These are available in black or white finish; the part number is suffixed 'B' or 'W' respectively. All UK versions of the plates fit standard UK-style single-gang electrical back boxes, either surface-mounting or flush-fitting. Recommended back box depth is 25 mm. Two M3.5 x 20 fixing screws are supplied with each plate.

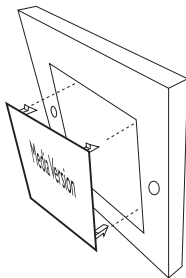
US versions:

The RL-1A, RSL-4A and RSL-6A are electrically and functionally identical to the UK versions, but the faceplates have different physical dimensions (4.51" x 2.76") which allow them to be mounted into a standard US-style back box (with vertical orientation). Both black and white finishes are available; the part numbers are suffixed 'B' and 'W' respectively.

'Media' versions:

The RL-1M, RSL-4M and RSL-6M are electrically and functionally identical to the UK versions, but are in the form of 50 mm x 50 mm Euro-modules, which can be fitted into either UK or other European back boxes with the appropriate mounting frame.

The Media module is secured in place by the four plastic clips; two at the top, two at the bottom (see diagram below). Both black and white finishes are available; the part numbers are suffixed 'B' and 'W' respectively.



NOTE: Unless stated otherwise, the information throughout this manual applies equally to all the mechanical versions listed earlier in this guide.

Multiple control plates

Further variants of the RL/RSL range are available, which provide control of multiple zones from a single plate:

- RL-1x8: eight rotary controls providing remote volume control of up to eight audio channels; a “MUTE ALL” switch is included
- RSL-6x4: four pairs of rotary controls, providing remote volume control of up to four audio channels, and also remote selection of the music source for each channel, when used with devices having up to six line inputs.

The RL-1x8 and RSL-6x4 versions are only available in white. They fit standard UK-style double-gang electrical back boxes, either surface-mounting or flush-fitting. Recommended back box depth is 25 mm. Two M3.5 x 20 fixing screws are supplied with each plate.

Compatible Cloud products

The table below summarises which current Cloud products are compatible with each type of plate. For older products, please consult the product's Installation Guide, www.cloud.co.uk, or contact Cloud's Technical Dept.

PRODUCT	RL-1/1A/1M/1x8	RSL-4/4A/4M	RSL-6/6A/6M/6x4
Venue Zone Mixers			
Z4II/Z4MK3/Z4MK4	✓		✓
Z8II/Z8MK3/Z8MK4	✓		✓
Zone Mixers			
CX163	✓		
CX263	✓		✓
CX261	✓		✓
CX462	✓		✓
Integrated Mixer-Amps			
MA60	✓	✓	
MA60MEDIA	✓	✓	
36-50	✓		✓

Integrated Mixer-Amps	RL-1/1A/1M/1x8	RSL-4/4A/4M	RSL-6/6A/6M/6x4
46-50	✓		✓
46-120	✓		✓
46-120MEDIA	✓		✓
Power Amps			
MPA60	✓		✓
MPA120	✓		✓
MPA240	✓		✓
CXV225*	✓		
CXV425*	✓		
CXA450*	✓		
CXA850*	✓		
CXA6*	✓		
VTX4120	✓		
VTX4240	✓		
VTX4400	✓		

* These models require VCA cards to be installed before they can be used with remote control plates. Full installation instructions are provided with the VCA card kit, and can also be found in the Installation Guide for the model.

Single and multi-channel operation

Single-zone versions of RL and RSL Series remote plates are primarily designed to provide remote control of a single audio channel; this applies equally to each individual section of a multiple zone plate (RL-1x8 and RSL-6x4).

A single audio channel will often correspond to a single zone or area of a building, and the remote plate will therefore control the audio in that zone, but see the NOTE below. Many of the products listed in “Compatible Cloud products” on page 8 and 9 have two or more audio channels; on all such Cloud devices, provision is made for connecting a separate remote control plate (or section of a multiple remote control plate) to each channel as required. (The CX163 stereo zone mixer has a slightly different arrangement; see Wiring details on “Wiring details” on page 14 and Wiring diagrams on “Wiring diagrams” on page 24 for further information.)

NOTE: It is possible to control two or more channels of a Cloud multi-channel device “in parallel” from a single remote plate (or single section of a multiple remote plate); this might be desirable where, e.g., more than one channel of a mixer-amplifier is powering speakers in the same zone, due to room size.

An RL-I Series plate may be wired in parallel to more than one channel of an amplifier or zoner, but note that the “law” of the control will differ when compared to being used with a single channel. When wired to several channels in parallel, this may produce an inconvenient “cramping” of the control’s operation at one end of the range.

RSL-4 and RSL-6 Series remote control plates require modifications for multi-channel operation. This topic is NOT covered in this manual. Installers requiring this option should download the appropriate Cloud Technical Note from www.cloud.co.uk, and carry out the modifications described before installing the plates.

Device configuration

Most RL/RSL-compatible Cloud products will require minor configuration changes when remote control plates are installed to ensure correct operation.

RL Series plates

When adding RL Series remote control plates, it will generally be necessary to disable the front panel music level control, so that volume may be adjusted only by the plate. On most units, this is done by operating a rear panel push-button switch. However, on devices with multiple music sources, doing this will also disable the front panel music source control. To maintain control of music source from the front panel, internal jumpers or DIP switches must be set to the appropriate position. The products to which this applies are those which are also compatible with RSL plates (see Compatible Cloud products table on “Compatible Cloud products” on page 8).

RSL Series plates

When adding RSL-4 Series or RSL-6 Series remote control plates, it will generally be necessary to disable both the front panel music level and source selection controls, so that full control is via the plate. On most units, this can be done by operating a rear panel push-button switch.

IMPORTANT: With both types of plate, it is essential that installers check the Installation Guide for the specific product to which they are connecting the plates. This will give full details of the configuration procedure. If necessary, Installation Guides for all products can be found at www.cloud.co.uk.

On multi-channel (or multi-zone) devices, the configuration changes necessary for remote control are always per-channel or per-zone. Channels (or zones) to which remote control plates are not fitted will operate from the unit's local controls in the normal way (provided they remain enabled).

Wiring details

In most cases, remote control plates connect to their host devices via per-channel, 3-pin 5 mm-pitch screw terminal connectors on the device's rear panel. The only exception is the CX163, which has a 4-pin connector.

The connector will be labelled **REMOTE LEVEL**, **REMOTE LEVEL/SOURCE**, **REMOTE MUSIC CONTROL**, or something similar (please consult the appropriate installation guide for further details).

On all single-zone versions of remote control plate, connection at the plate is via a rear 3-pin screw-terminal connector. On multiple-zone versions, connection at the plate is via a rear 3-pin screw-terminal connector *per section*.

RL Series plates

Connection may be conveniently made using standard single- or twin-core screened audio cable. RL Series plates can generally be connected to devices that support remote music source selection with single-core cable, but two-core screened cable is required when connecting to devices that do not support this. The wiring scheme to be adopted varies between devices. See the table below to check which of the wiring diagrams at “Wiring diagrams” on page 24 should be followed to connect an RL-I Series plate to a specific device.

The use of crimp ferrule-type terminals is recommended for the cable terminations as they will provide a much more reliable long-term connection.

Model RL-1x8 only

For wiring purposes, this version may be considered as eight independent RL-1 sections. As many of the eight sections may be utilised as needed. Not all sections need to be wired to the same host unit; for example, one RL-1x8 plate may provide remote volume control for two separate four-channel or four-zone units such as the 46-120.

We recommend that separate runs of single- or twin-core screened cable are used for each section, using the wiring method described for single-zone plates appropriate for the host unit in use. If screened audio cable is not available, one or more runs of multicore cable such as Cat 5 can be used, provided that the runs are not longer than 100 m. However, installers should note that as Cat 5 cores are solid wires, the use of crimp ferrule terminals is recommended to ensure a mechanically reliable connection.

Connecting the MUTE ALL switch

The **MUTE ALL** switch is included on the RL-1x8 plate to provide a simple manual method of muting multiple zones (usually all zones) in an audio system simultaneously. Its implementation is optional.

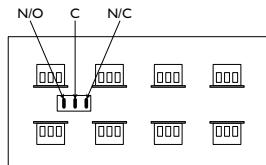
NOTE: The **MUTE ALL** switch terminals are solder tags: to connect the switch, soldering is necessary. This part of the wiring procedure should not be attempted if you are not competent in soldering electrical connections. There are two methods of connecting the switch.

Using the MUSIC MUTE facility

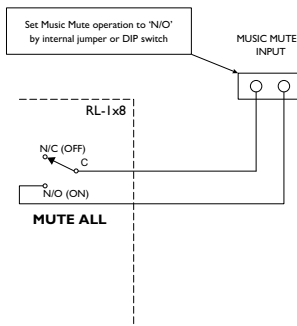
The majority of Cloud products which support RL Series remote control plates include a Music Mute facility. This is in the form of a two-pin rear panel connector, which, when activated, mutes all music sources in all* zones. Activation is by either shorting the two pins together (N/O) or removing a permanent short-circuit placed across them (N/C). The selection of N/O or N/C operation is made by internal jumpers or a DIP switch.

The primary use of Music Mute is to connect the host unit to an emergency system (typically the fire alarm), so that in the event of an emergency, all music is immediately muted, leaving any microphone channels active for evacuation instructions, etc.

If the host unit's Music Mute facility is not being used for this purpose, the N/O contacts of the **MUTE ALL** switch on the RL-1x8 can be wired to the **MUSIC MUTE** input of the host. Providing that Music Mute operation is set to N/O (the factory default setting), moving the **MUTE ALL** switch to ON will then mute the music in all zones by activating the host's Music Mute function.



Rear view of RL-1x8,
showing switch terminal
orientation



Please consult the host unit's User Guide for instructions on how to select Music Mute operation to N/O or N/C.

* NOTE: some Cloud units include a facility for one line input to remain active when Music Mute is enabled; this is to allow the connection of an emergency sound store, or similar.

RSL Series plates

All three pins of the terminal block must be connected, so the use of twin-core screened cable is recommended. The wiring scheme to be adopted varies between devices. See the following table to check which of the wiring diagrams at “Wiring diagrams” on page 24 should be followed to connect a particular type of plate to a specific device.

The use of crimp ferrule-type terminals is recommended for the cable terminations as they will provide a much more reliable long-term connection.

Model RSL-6x4 only

For wiring purposes, this version may be considered as four independent RSL-6 sections. As many of the four sections may be utilised as needed.

We recommend that separate runs of single- or twin-core screened cable are used for each section, using the wiring method described for single-zone plates appropriate for the host unit in use. If screened audio cable is not available, one or more runs of multicore cable such as Cat 5 can be used, provided that the runs are not longer than 100 m. However, installers should note that as Cat 5 cores are solid wires, the use of crimp ferrule terminals is essential to ensure a mechanically reliable connection.

PRODUCT	RL-1/1A/1M/1x8 SEE NOTE 1	RSL-4/4A/4M	RSL-6/6A/6M/6x4 SEE NOTE 2
Venue Zone Mixers			
Z4II/Z4MK3/ Z4MK4	A		E
Z8II/Z8MK3/ Z8MK4	A		E
Zone Mixers			
CX163 SEE NOTE 3	C or D		
CX263	A		E
CX261	A		E
CX462	A		E
Integrated Mixer-Amps			
MA60	A	E	
MA60MEDIA	A	E	
36-50	A		E
46-50	A		E
46-120	A		E
46-120MEDIA	A		E

PRODUCT	RL-1/1A/1M/1x8 SEE NOTE 1	RSL-4/4A/4M	RSL-6/6A/6M/6x4 SEE NOTE 2
Power Amps			
MPA60	A		E
MPA120	A		E
MPA240	A		E
CXV225	B		
CXV425	B		
CXA450	B		
CXA850	B		
CXA6	B		
VTX4120	B		
VTX4240	B		
VTX4400	B		

NOTES:

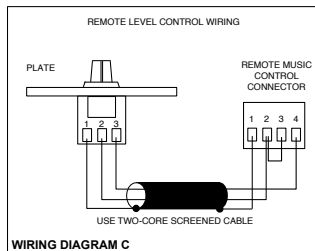
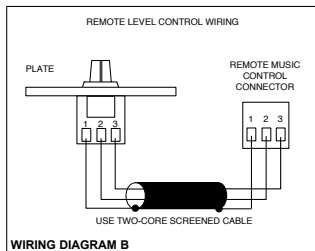
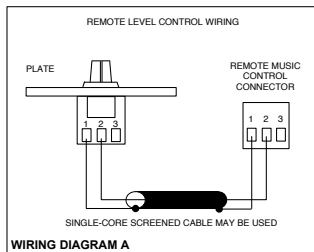
1. Wire each section of an RL-1x8 according to the relevant diagram
2. Wire each section of an RSL-6x4 according to the relevant diagram
3. See "CX163 stereo control options" below

CX163 stereo control options

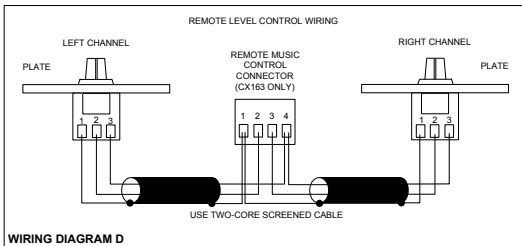
The CX163 is a two-zone stereo mixer and has a different remote control connector to other Cloud units. When using RL Series remote level control plates with a CX163, the installer has the option of using a single RL Series plate to control both left and right channels together (i.e., stereo operation), or of using two separate RL Series plates to control the left and right channels independently. For stereo operation, use wiring diagram C. For separate L/R control, use wiring diagram D.

Wiring diagrams

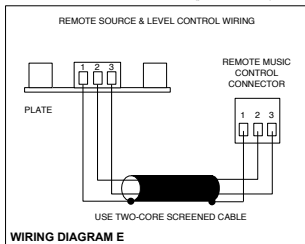
RL-1/1A/1M/1x8 (per section)



RL-1/1A/1M/1x8 (per section)



RSL-4/4A/4M or RSL-6/6A/6M/6x4 (per section)



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