GM-7420

Remote control for ARIA modules
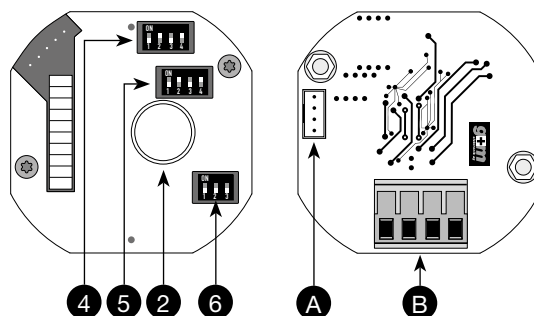
GM-7420-ED-xx   GM-7420-EXT   GM-7420-ARC
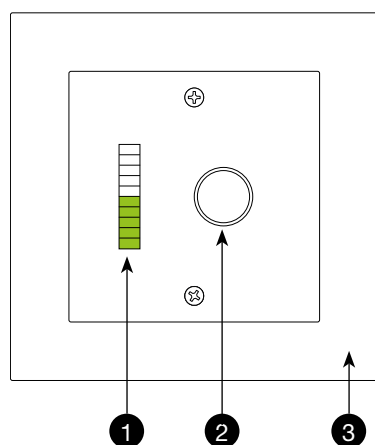
Front view (FRS)

1 Volume indicator
2 Volume control
3 Mounting frame (EDIZIO)
4 Mini-switch for unique unit address
5 Mini-switch for audio channel / group selection
6 Mini-switch Terminating resistor, lighting, volume (steps)

Rear view (RWS)

A Pin strip for digital inputs UP / DOWN
B Terminal strip RC16 Bus
C Mini-switch for unique unit address
D Mini-switch for audio channel / group selection
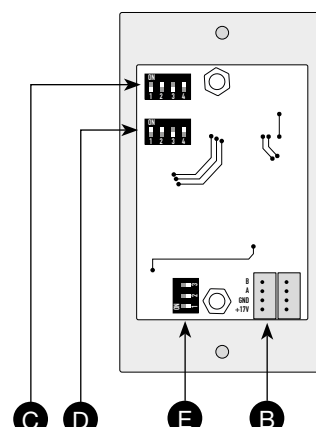E Mini-switch Terminating resistor, lighting, volume (steps)
D Terminal strip RC16 Bus

Basic functions

With the GM-7420 remote control, a volume of modules from the ARIA family can be set via the RC16 bus. Depending on the configuration, individual buses or groups can be controlled. By default, the set volume is displayed for a certain time after a change. By setting the corresponding switch, a permanent display of the volume can be activated (from firmware V1.03.01).

Installation procedure

General
The remote-controlled ARIA module must support the RC16 bus (min. v1.0). The loudspeaker system must be disconnected from the mains and emergency power supply when changes are made to the installation.

Installation

For proper function, the following installation points must be observed:
• Cable type (see data sheet)
• Cable length
• Bus structure: The RC16 bus must be wired as a line (for tree or star wiring, a GM-7428-HUB must also be used).
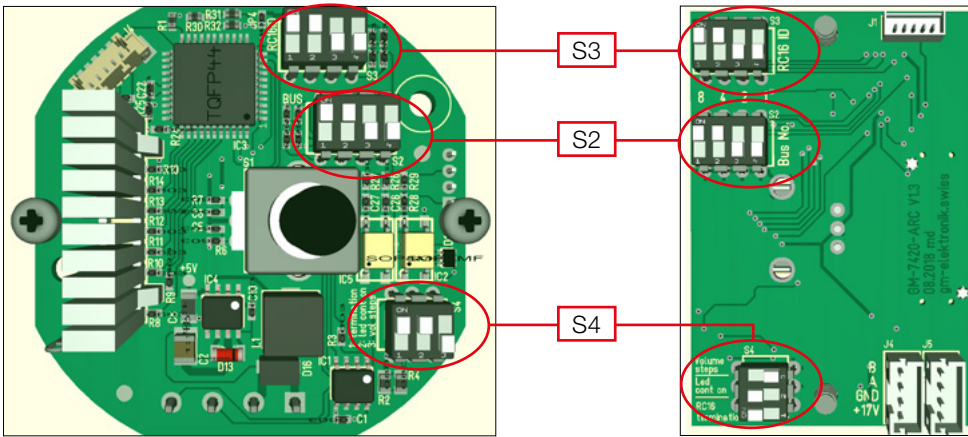
The terminating resistor must be active on **the first and last** RC16 participant (switch or via software).

Power supply

The ARIA main module supplies the remote controls with voltage (max. 120 mA). The current consumption of a remote control is max. 12 mA.

Setting the participant ID, as well as the bus or group number

Situation of the switches and settings

GM-7420-EXT   GM-7420-ARC

Setting ID and volume

The participant ID can be selected between 1 and 15. It may only occur once on an RC16 bus, whereby ARIA modules also count. Settings of the DIP switches are adopted after a restart.

DIP switch S3 (ID), unique participant ID (recommendation: start at 15, counting down):

	Mark 1 Value: 8	Mark 2 Value: 4	Mark 3 Value: 2	Mark 4 Value: 1
ID 1	0	0	0	1
ID 2	0	0	1	0
ID 3	0	0	1	1
…				
ID 15	1	1	1	1

DIP switch S2 (BUS), digital volume:

	Mark 1 Value: 8	Mark 2 Value: 4	Mark 3 Value: 2	Mark 4 Value: 1
Bus 1	0	0	0	1
Bus 2	0	0	1	0
Bus 3	0	0	1	1
Bus 4	0	1	0	0
Bus 5	0	1	0	1
Bus 6	0	1	1	0
Bus 7	0	1	1	1
Group 1	1	0	0	1
Group 2	1	0	1	0
Group 3	1	0	1	1
Group 4	1	1	0	0
Group 5	1	1	0	1
Group 6	1	1	1	0
Group 7	1	1	1	1

Setting Target ID

The target ID sets the module on which the GM-7420 controls the volume.

The target ID can be selected between 0 and 15.

Follow the procedure below to set the destination ID:
- Switch off / disconnect the power supply of the remote control GM-7420.
- Set all switches of the DIP switch S3 (ID) to 0 (remember the current subscriber ID for later use)
- Switch on the supply voltage of the GM-7420 remote control.
- Set target ID with rotary encoder according to table LED display (see below)
- Set subscriber ID on DIP switch S3 again (10 seconds time for setting subscriber ID)
- Target ID flashes on LED display
- Remote control ready for operation

By default, the destination ID is set to 0. The target ID cannot be changed with GM-7420-EXT.

LED indicator, target ID:

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
LED 10 (red)											●	●	●	●	●	●
LED 9 (yellow)										●	●					
LED 8 (green)									●	●	●					
LED 7 (green)								●	●	●	●					
LED 6 (green)							●	●	●	●	●					
LED 5 (green)						●	●	●	●	●	●					●
LED 4 (green)					●	●	●	●	●	●	●				●	●
LED 3 (green)				●	●	●	●	●	●	●	●			●	●	●
LED 2 (green)			●	●	●	●	●	●	●	●	●		●	●	●	●
LED 1 (green)		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

Permanent light function

If switch 2 is set on the S4, the volume indicator always remains on. Otherwise, the light switches off after approx. 5 seconds.

Function Volume 10 levels

If switch 3 is set on the S4, the remote control switches the volume up or down one level with each movement. There are 10 fixed volume values stored. The standard volume should be 0 dB, the steps are optimised for this.

The function is available as of Firmware V1.04.01 and can be changed during operation.

Switching on the system

Check the pin assignment on the bus connector. Incorrect polarity can damage the unit. As soon as the GM-7420 remote control switches on, the level indicator lights up and shows the current volume value.

If the yellow LED flashes, the GM-7420 remote control is not receiving any data. The electrical connection to the ARIA module (RC16 bus) should be checked in this case.

If the red LED flashes, the GM-7420 remote control is not receiving any initialisation data. In this case, the configuration of the participant ID and target ID should be checked (from firmware V1.03.01).

Programming the groups

Seven groups can be defined per APS centre. The group definition is configured in the ARIA module according to the desired audio function.

The GM-7420 remote control must be assigned to the desired function (bus or group).

Additional options for changing the volume

The GM-7420-EXT version can also be operated via +/- digital signals. In order for the +/- digital signals to be recognised, a voltage between 5–24 V must be applied (pay attention to polarity). The inputs are galvanically isolated from the supply voltage.

Behaviour during operation

The volume of an ARIA module can be changed by the remote controls during operation of the system and thus deviate from the stored setpoint. When the system is switched off, however, the current volume is not saved. When loading a preset, the volume levels from the ARIA module are sent to the remote controls and taken over by them.

Parallel operation

Several GM-7420s can set the same volume. To do this, the same setting must be made on DIP switch S2 (BUS).

Behaviour during Live Mode

While the ARIA master module is in Live Mode, the volume cannot be changed via the remote control. This is indicated by the flashing of the yellow LED on the remote control.