

BC-SERIES

Indoor Speakers

User Manual



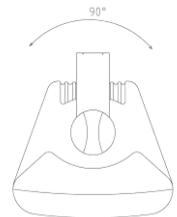
BC3	75mm (3"), 60Wmax	White - pair	100.898
		Black - pair	100.899
BC4	100mm (4"), 70Wmax	White - pair	100.901
		Black - pair	100.902
BC5	130mm (5.25"), 90Wmax	White - pair	100.904
		Black - pair	100.905
BC6	165mm (6.5"), 120Wmax	White - pair	100.907
		Black - pair	100.908
BC8	200mm (8"), 180Wmax	White - pair	100.910
		Black - pair	100.911

Introduction

Thank you for choosing the BC-series indoor speakers. These speakers have been designed to offer high quality sound for low impedance installations. Please read and follow the instructions in this manual to achieve the best results and avoid damage through misuse.

Installation

The BC-series speakers are each supplied with a wall-mounting bracket which allows 90° lateral adjustment. When fixing to a wall or ceiling, use the bracket to mark out the fixing points and use appropriate fixings for the substrate that the speaker will be attached to, ensuring that the fixing is strong enough to bear the weight.

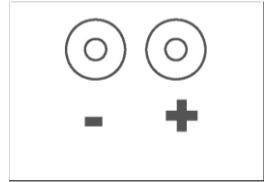


Once the bracket is fitted, support the speaker in position and attach top and bottom using the supplied screw caps and adjust to the required angle. Further mounting points are available at the rear of the speaker, should it be preferred to use different mounting methods (e.g. 129.130 – 129.124UK)

Note: Do not over-tighten the screw caps as this can cause the threaded inserts to fail.

Connection

BC-series speakers are connected via 2 spring terminals at the rear of the enclosure. With the amplifier switched off, strip the speaker wire ends and connect the "+" wire to the red terminal and connect the "-" wire to the black terminal.



When connecting to the amplifier, refer to the amplifier manufacturer's manual to ensure that total speaker impedance (Ω) on any channel is not less than that recommended for the amplifier. It is also imperative that the amplifier does not deliver more power than can be handled by the BC speaker. Refer to the amplifier manual and specifications below to calculate this. Normally, it is recommended that the amplifier is capable of the RMS power rating of the speaker but cannot ever exceed the Max power rating.

Specifications

Model	BC3	BC4	BC5	BC6	BC8
Woofers	75mm \varnothing (3")	100mm \varnothing (4")	130mm \varnothing (5.25")	165mm \varnothing (6.5")	165mm \varnothing (6.5")
Tweeter	25mm \varnothing (1")	25mm \varnothing (1")	25mm \varnothing (1")	25mm \varnothing (1")	25mm \varnothing (1")
Freq response	120Hz - 20kHz	110Hz - 20kHz	100Hz - 20kHz	80Hz - 20kHz	50Hz - 20kHz
Power max : 8 Ω	60W	70W	90W	120W	180W
Power rms: 8 Ω	30W	35W	45W	60W	90W
Dimensions: mm	106 x 153 x 106	150 x 195 x 150	180 x 240 x 180	220 x 280 x 220	280 x 375 x 260
Weight	840g	1.25kg	2.00kg	2.50kg	5.26kg
SPL @ 1W/1m	88dB	88dB	88dB	89dB	89dB

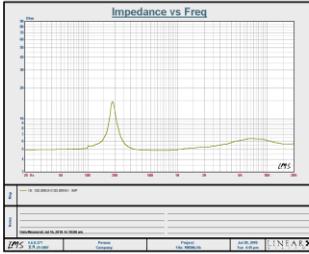
Caution

The BC-series speakers are intended for indoor use. Avoid moist or dusty environments.

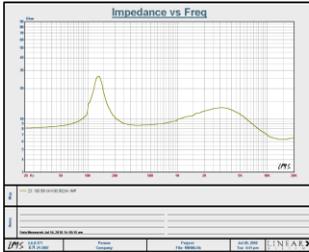
Avoid excess heat and exposure to direct sunlight.

Take care not to overload speakers. HF drivers are especially prone to damage through overload.

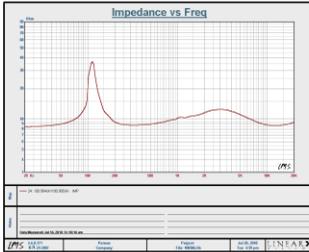
BC3



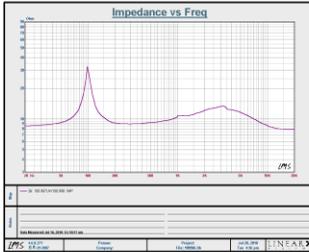
BC4



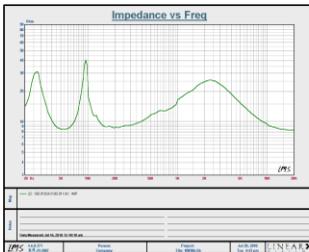
BC5

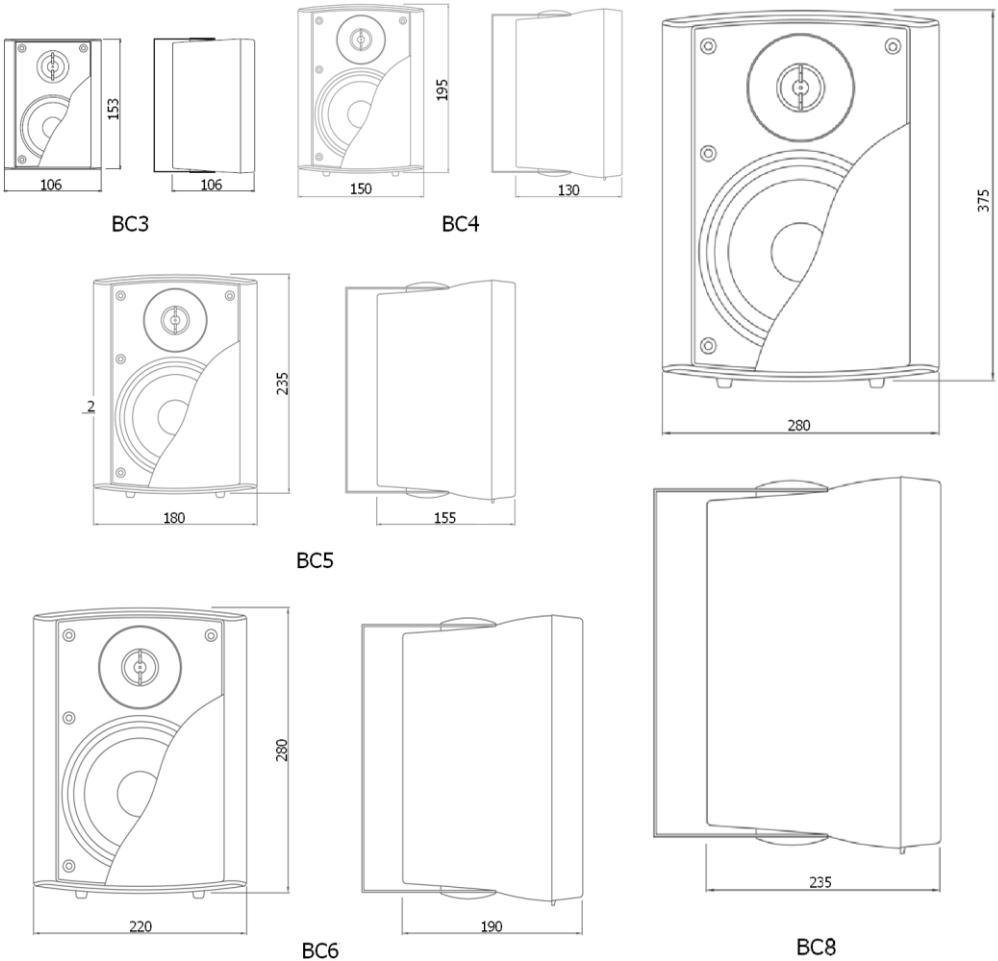


BC6



BC8



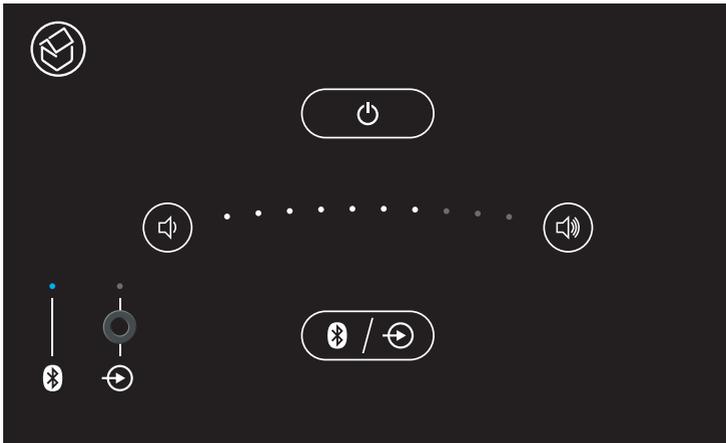


Disposal: The "Crossed Wheelie Bin" symbol on the product means that the product is classed as Electrical or Electronic equipment and should not be disposed with other household or commercial waste at the end of its useful life. The goods must be disposed of according to your local council guidelines.

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E50/E50w User Guide

*Built-in **Bluetooth**® Hi-Fi amplifier / touch panel*



Important Safety Instructions



CAUTION: To reduce the risk of electric shock, do not remove the cover. No user-serviceable parts inside. Refer to qualified personnel.

WARNING: To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture.



The lightning flash with arrowhead within an equilateral triangle is intended to alert the user to the presence of an uninsulated “dangerous voltage” within the product’s enclosure, that may be of sufficient magnitude to constitute a risk of electrical shock to persons.



The exclamation mark within an equilateral triangle is intended to alert the user to the presence of important operating maintenance (servicing) instructions in the guide accompanying this device.

Read Instructions: All the safety and operating instructions should be read before the unit is operated.

Retain Instructions: The safety and operating instructions should be retained for future reference.

Heed Warnings: All warnings on the unit and in the operating instructions should be followed.

Follow Instructions: All operating instructions should be followed.

Cleaning: Unplug the unit from the wall outlet before cleaning. The unit should be cleaned only with a lint free dry cloth.

Attachments: Only use attachments recommended by the manufacturer as non-recommended attachments may cause hazards.

Water and Moisture: Do not use the unit near water—for example, near a bath tub, wash bowl, kitchen sink, or laundry tub; in a wet basement; or near a swimming pool.

Accessories: Do not place the unit on an unstable surface, stand, tripod, bracket, or table. The unit may fall, causing serious injury to yourself or others, and serious damage to the unit.

Ventilation: Do not place in a location or position that will interfere with the unit’s ventilation. Do not operate on a bed, sofa, rug, or other similar surface.

Power Sources: The unit should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supplied to your home, consult your local power company.

Power-Cord Protection: Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords where they enter a plug, or exit from the unit.

Lightning: For added protection for the unit during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect from other devices. This will prevent damage to the unit due to lightning and power-line surges.

Overloading: Do not overload wall outlets, extension cords, or integral convenience receptacles as this can result in a risk of fire or electric shock.

Object and Liquid Entry: Never push objects of any kind into the unit through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the unit.

Servicing: Do not attempt to service the unit yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

Damage Requiring Service: Unplug the unit from the wall outlet and refer servicing to qualified personnel under the following conditions:

- When the power-supply cord or plug is damaged,
- If liquid has been spilled, or objects have fallen into the unit,
- If the unit has been exposed to rain or water,
- If the unit does not operate normally by following the operating instructions,
- If the unit has been dropped or damaged in any way,
- When the unit exhibits a distinct change in performance— this indicates a need for service.

Replacement Parts: When replacement parts are required, be sure the service technician uses replacement parts specified by the manufacturer or which have the same characteristics as the original parts. Unauthorized substitutions may result in fire, electric shock, or other hazards.

Heat: The unit should be situated away from heat sources such as radiators, heat registers, stoves, or other units (including amplifiers) that produce heat.



This product complies with the Radio Equipment Directive (2014/53/EU) when used and installed according to the instruction manual.

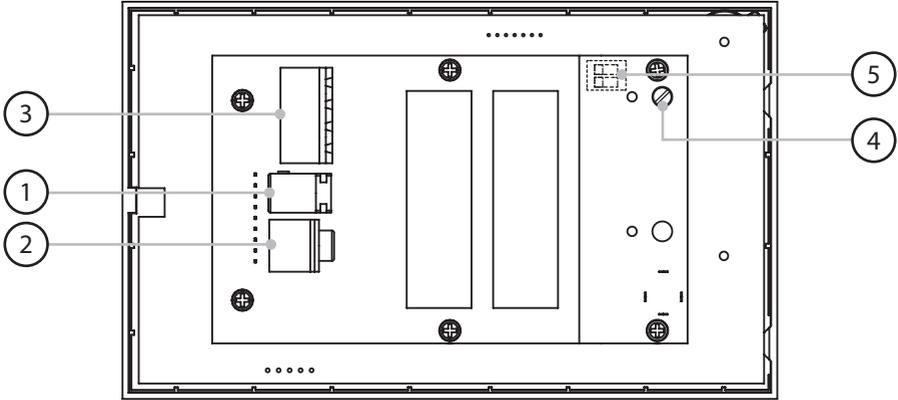
NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

The user is cautioned that changes or modifications not expressly approved by Armour Home Electronics could void the user's authority to operate the equipment.

Contains FCC ID: OC3BM1856

Connections and Controls



E50 Rear View

Rear panel connections

1. Power input



Use ONLY the power supply provided. Failure to do so may cause irreparable damage to the unit.

DO NOT alter the length of the supplied DC extension cable

2. Analogue audio – line in

Connect an analogue audio input here using a stereo 3.5mm jack cable such as QED Performance J2J. A green LED means this input is active.

3. Speaker outputs

Use the green terminal blocks provided to attach left and right stereo speakers.

Rear panel installer controls

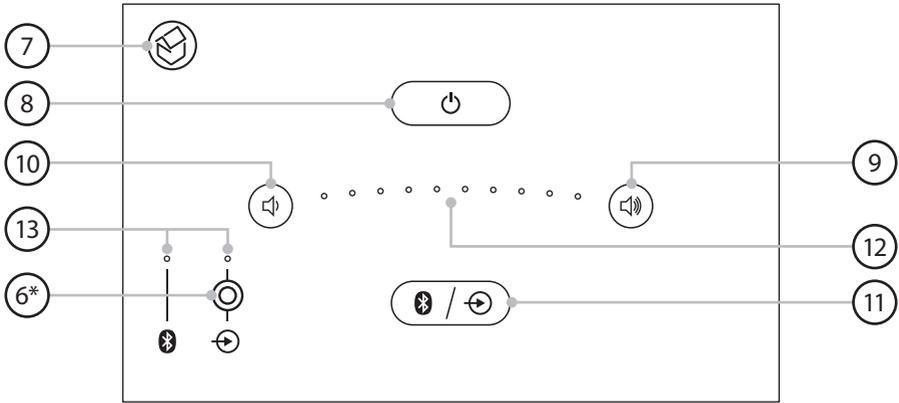
4. Max volume adjustment

See installer adjustments for details (page 11).

5. Stereo/Mono & EQ DIP switches

See installer adjustments for details (page 11).

* Not present on E50w. Both models include line in socket on rear.



E50 Front View

Front panel connections

6. Analogue audio - line in

Connect an analogue audio input here using a stereo 3.5mm jack cable such as QED Performance J2J. A green LED means this input is active.

Front panel controls

7. Standby indicator

Illuminates red to indicate the unit has entered standby.

8. Standby/on key

Touch here to toggle the unit on or off.

9. Volume up key

Touch here to increase the volume.

10. Volume down key

Touch here to decrease the volume.

11. Source key

Touch here to toggle between *Bluetooth* and line-in sources.

12. Volume position array

Provides a visual indication of current volume setting. A single pulsing LED means mute. Auto dims after 10s. Touch here to toggle play/pause when in *Bluetooth* mode.

13. Indicator LEDs

Blue = *Bluetooth*, Green = Analogue In

Operating Instructions

Pairing/connecting a *Bluetooth* music source

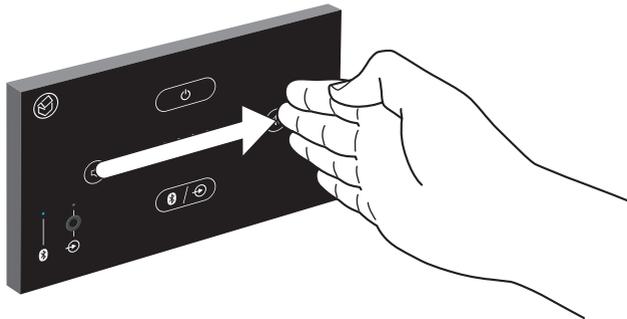
1. The E50 is always in pairing mode. Navigate to the *Bluetooth* devices list on your phone or other *Bluetooth* transmitter device. Select *Systemline E50(_n)* from the device list. If the phone has not previously been paired a *Bluetooth pairing request* will be displayed on the phone. On the E50 the blue LED will flash.
2. Press and hold the *source* key on the E50 until the blue LED stops flashing.
3. Press *pair* on the phone. The unit will now pair and connect. The E50 will wake up, the blue LED will be illuminated and the default volume level will be displayed.
4. If the phone has previously been paired it will connect straight away, without the need for steps 2 and 3.

Listening to a *Bluetooth* music source

1. If not already done, pair or connect with the *Bluetooth* device (see above).
2. Navigate to the media player on your phone or other *Bluetooth* transmitter device and press *play*. The *Bluetooth* source will be selected and music will play through the E50.
3. Check that the blue source LED is illuminated, if not press the *source* key on the E50. The LED will turn from green to blue and the default volume level will be displayed.

To skip track forwards in *Bluetooth* mode

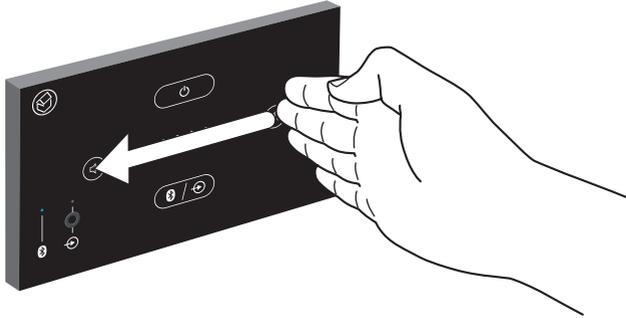
1. Use your four outstretched finger tips to flick from left of the *volume down* key to right of the *volume up* key in a single consistent sweeping motion from left to right at a distance of up to 70mm from the front panel. Do not actually touch the front panel. The track will skip forward.



Skip track forwards using hand gesture

To skip track back in *Bluetooth* mode

1. Use your four outstretched finger tips to flick from right of the *volume up* key to left of the *volume down* key in a single consistent sweeping motion from right to left at a distance of up to 70mm from the front panel. Do not actually touch the front panel. The track will skip back.



Skip track back using hand gesture

To pause/play in *Bluetooth* mode

1. Touch the centre of the touch panel where the volume LEDs are positioned to pause playback while in *Bluetooth* mode.
2. Touch the centre of the touch panel again to resume playback.

Listening to an analogue music source

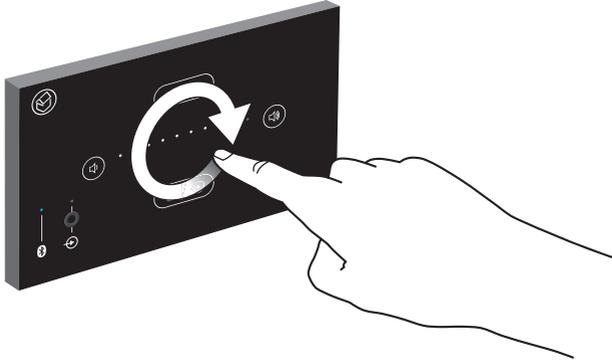
1. Make sure that a compatible analogue music source is connected to either the front or rear input jack (not both) using a 3.5mm stereo audio jack cable.

Do not connect audio sources to the front and rear line inputs at the same time.

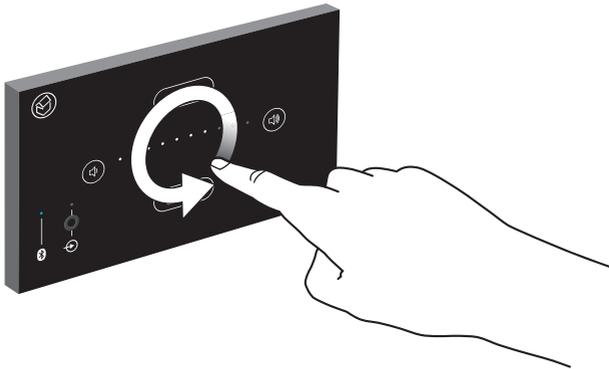
2. Check that the green *source* LED is illuminated. If not, press the *source* key. The green LED will be illuminated and the default turn on volume level will be indicated.

To adjust the volume

1. Touch the *volume up* key to increase the level of the music, and touch the *volume down* key to reduce it.
2. The same functionality can be achieved using a convenient gesture control.
3. Use your index finger to describe a circular pattern within the confines of the four touch key symbols at a distance of up to 70mm from the front panel. Do not actually touch the front panel. A clockwise rotation will increase the volume level and an anti-clockwise rotation will decrease the volume level.



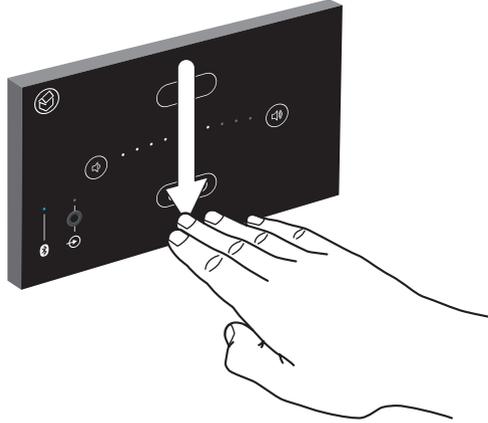
Increase volume using hand gesture



Decrease volume using hand gesture

To mute the volume

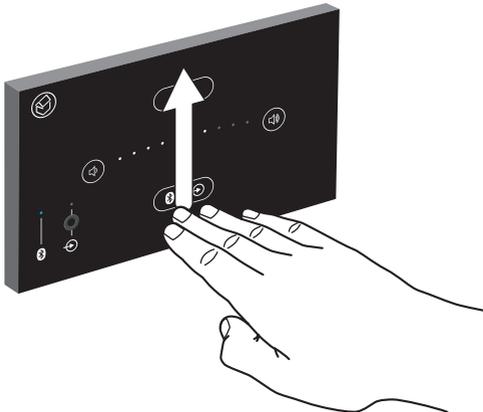
1. Use your four outstretched finger tips to flick from above the *standby* key to below the *source* key in a single consistent sweeping motion from top to bottom at a distance of up to 70mm from the front panel. Do not actually touch the front panel.
2. The music will mute and the white volume LED will gently pulse. In *Bluetooth* mode the music will also be paused.



Mute using hand gesture

To unmute the volume

1. Use your four outstretched finger tips to flick from below the *source* key to above the *standby* key in a single consistent sweeping motion from bottom to top at a distance of up to 70mm from the front panel. Do not actually touch the front panel.
2. The music will unmute and the volume display will return to the previous setting. In *Bluetooth* mode the music will also be unpaused.



Unmute using hand gesture

To put the E50 into standby

1. Press the *standby* key. The E50 will turn off and the red LED will illuminate. In this mode the amplifier is turned off and the *Bluetooth* connection is dropped. The E50 is still in *Bluetooth pairing mode* and will wake instantly when the *standby* key is pressed or when paired.

To put the E50 into deep standby

1. Press and hold the *standby* key until the red LED is extinguished. In this mode the amplifier and the *Bluetooth* pairing are turned off and the unit will consume only 0.5W of power.
2. When the *standby* key is pressed the unit will reboot to standby mode as above.

Installer Adjustments

Maximum volume setting

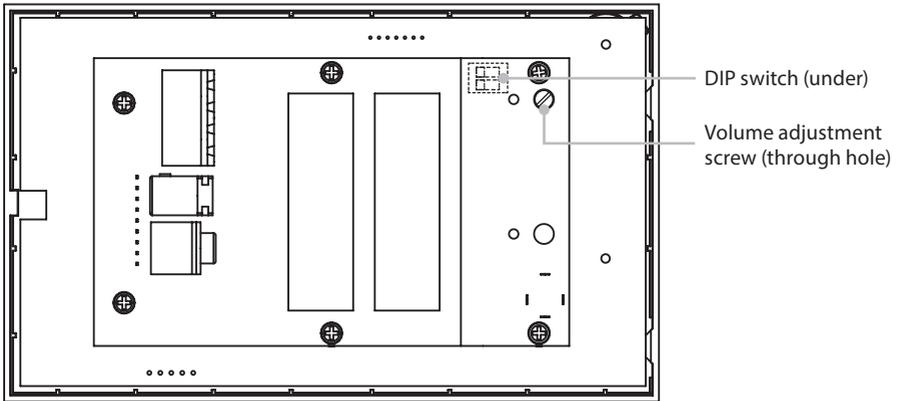
To restrict the maximum volume level of the E50, adjust the preset screw (labelled below) with a small flat blade screw driver. Turning anti-clockwise will reduce the maximum volume level and turning clockwise will increase it. The maximum output level of the speakers will be altered accordingly but the range of volume indication on the front of the unit will not be affected.

Mono/Stereo setting

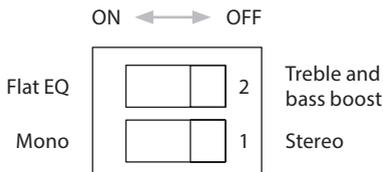
To set the amplifier output to *mono*, use a ball point pen or small screw driver to move the DIP switch #1 (labelled below) to the *ON* position. The default position for this switch is *OFF* (*stereo*).

EQ adjustment

To adjust the EQ to a flat response, use a ball point pen or small screw driver to move the DIP switch #2 to the *ON* position. The default position for this switch is *OFF* (*treble and bass boost for Qi 65CB speakers*).



Rear panel controls for installer adjustments



DIP switch detailed view

Changing the *Bluetooth* name

The E50 is shipped with the default *Bluetooth* name “*Systemline E50*”. For installations where multiple E50s are within range of the same *Bluetooth* source, each E50 can be renamed in order to distinguish one from another.

1. Make sure that the E50 is in standby mode. Press and hold the *standby* and *source* keys at the same time until the white volume LEDs are illuminated and the green source LED is flashing.

DO NOT PRESS ANY BUTTONS. WAIT 2 SECONDS.

2. Press the *source* key once. The blue source LED will flash.
3. Using the *volume up* and *down* keys on the E50 and the chart below, illuminate the corresponding number of white volume LEDs to select a new *Bluetooth* name.
4. Press the *standby* key once to set the new *Bluetooth* name.

The E50 will reboot with the new *Bluetooth* name.

Status of LEDs:

Number of white LEDs illuminated	<i>Bluetooth</i> Name
1	E50
2	Kitchen
3	Dining
4	Living
5	Master Bed
6	Ensuite
7	Bathroom
8	Conservatory
9	Garden
10	Systemline E50_2

To disable gesture control

The E50 is shipped with gesture control enabled. In some installations gesture control may not be required. In order to enable/disable gesture control:

1. Make sure that the E50 is in standby mode. Press and hold the *standby* and *source* keys at the same time until the white and green LEDs are illuminated.

DO NOT PRESS ANY BUTTONS. WAIT 2 SECONDS.

2. To disable gestures press the *volume down* key to extinguish all the white LEDs.
3. To enable gestures press the *volume up* key to light all the white LEDs.
4. Press the *standby* key to save the current setting.

Troubleshooting

There is no sound

Check that the correct input is selected using the *source* key.

There is no sound when using the Bluetooth input

Check that the Bluetooth device is correctly paired (blue LED).

Make sure the Bluetooth source is playing.

There is no sound when using the analogue input

Check that the analogue source device is correctly connected (front or rear jack).

Check that the analogue source is playing and that any volume on the device is set to maximum.

Check that the Bluetooth device is not connected (green LED).

Technical Specification

Power Supply	18-19V , 2.5-3.5A DC
Frequency Response	10Hz – 20kHz \pm 1dB
Signal to Noise Ratio	> 80dB
Cross-talk @ 1kHz	better than 60 dB
Total Harmonic Distortion	
@1kHz Bluetooth input	0.1%
@1kHz Line input	0.2%
Maximum output level	
Speakers	18W/ch continuous
Minimum speaker impedance	4 Ω
Sensitivity	
Analogue	550mV rms Line in
Digital	0dBFS
Dimensions (W x H x D)	150 x 90 x 47mm
Weight	830g

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