DALI V-16 F Subwoofer

MANUAL

VERSION 1.0 - MARCH 2025

DALI

IN ADMIRATION OF MUSIC

Content

1.0 Introduction

Congratulations on your new DALI V-16 F subwoofer.

In order to get the most from your purchase, please read this manual carefully before you unpack and set up your V-16 F subwoofer.

You can find more information on our website: www.dali-speakers.com or by contacting your authorised DALI retailer.

IN ADMIRATION OF MUSIC

2.0 Unpacking

The V-16 F subwoofer is very heavy and should be unpacked with great care following the unpacking instructions printed on its outer carton. We recommend that unpacking and installation is carried out by two people working together. Once unpacking is complete, check all the V-16 F components illustrated are present.

We recommend that the cartons and packaging materials are retained for use should your V-16 F need to be relocated or serviced.

PACK CONTENTS
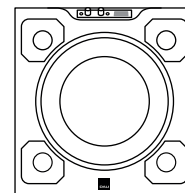
1 × DALI V-16 F subwoofer
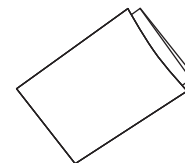
1 × Product Registration Card
1 × Quick Start Guide

1 × Mains cable

4 × Optional Port Plugs

3.0 Positioning

The quantity and quality of deep bass that any subwoofer is able to generate depends to some extent on its location within the listening space, especially with respect to the room walls. The closer to walls that the subwoofer is located, the more that bass will be emphasised, with corner locations offering the most bass. Corner locations therefore result in the least stress on t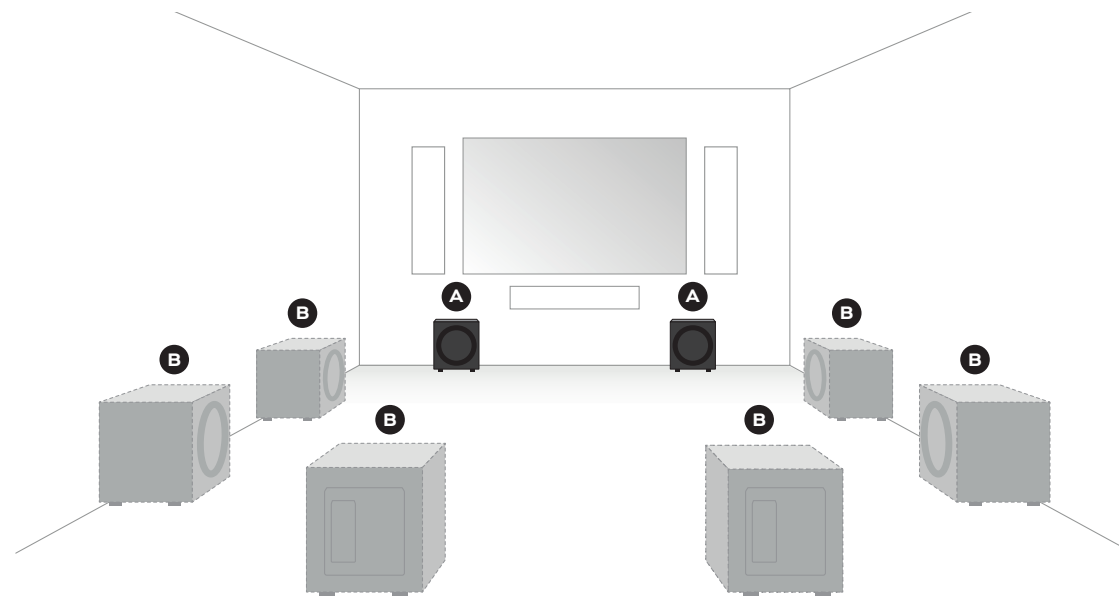he subwoofer, however such locations also potentially maximise the tendency for subwoofers to trigger low frequency room resonance modes. So while a corner position may be optimal, it may be worth experimenting to find the best subwoofer position, which may be some distance along the wall away from the corner.

In most cases however your V-16 F subwoofer should be located in front of the primary listening area either between the left and right front channel loudspeakers or, if a corner located is chosen, off to one side. A location adjacent to one of the side walls of the room is also possible. If a location along the front wall or side wall is chosen, aim for a position that is an odd number proportion of the major room dimension.

! If two subwoofers are to be installed to work in parallel, they are best located in equivalent locations on opposite sides of the listening space.

POSITIONING

A Recommended positioning options

B Alternative positioning options

3.0 Positioning

> 650 mm/25.59 inches

> 590 mm/23.23 inches

> 50 mm/1.97 inches

> 40 mm/1.57 inches

> 560 mm/22.05 inches
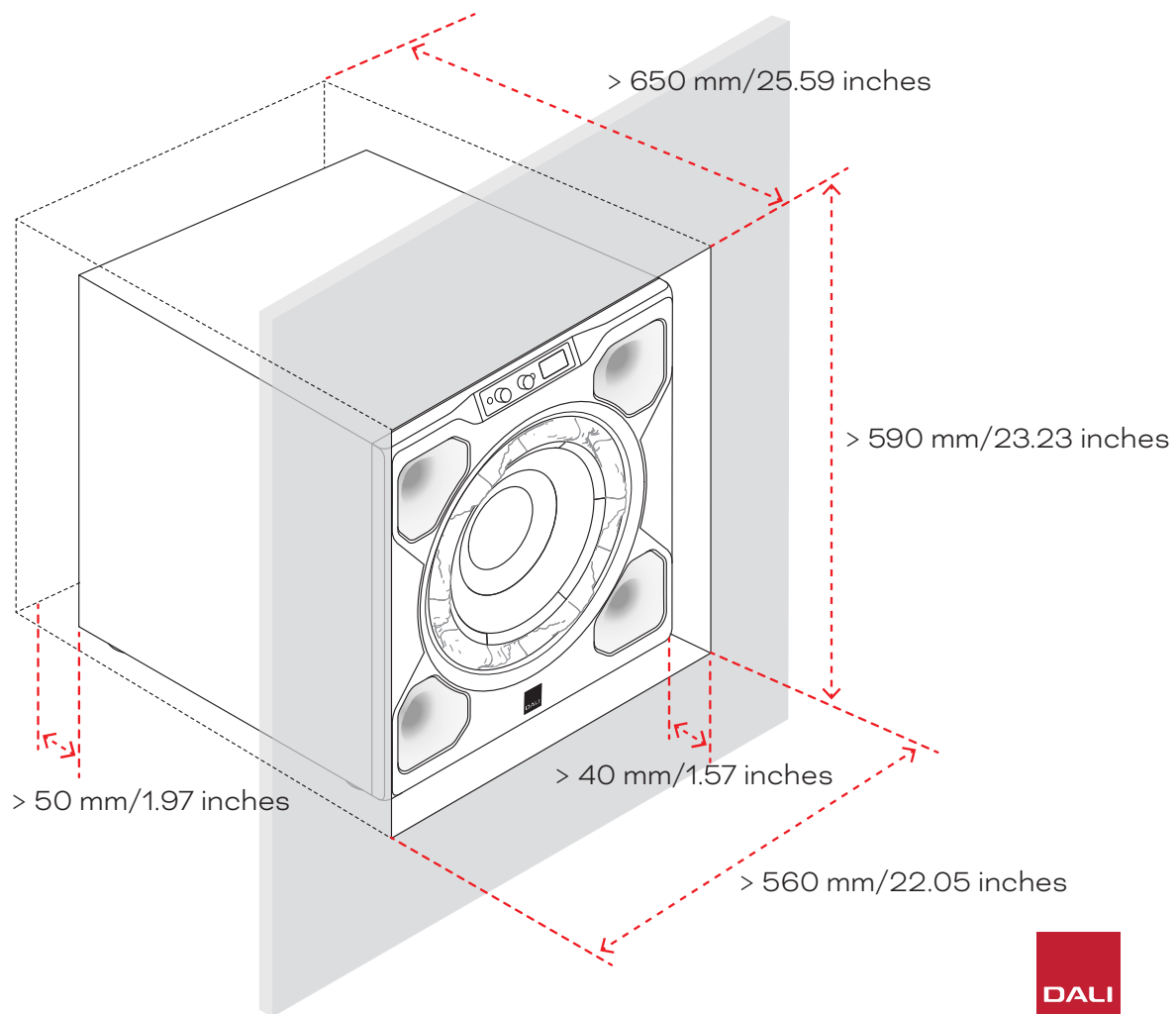
3.1   In-wall Installation

Due to of the woofer's very long potential excursion, please allow > 40 mm from the front of the baffle to any item positioned in front of the subwoofer.

3.0 Positioning
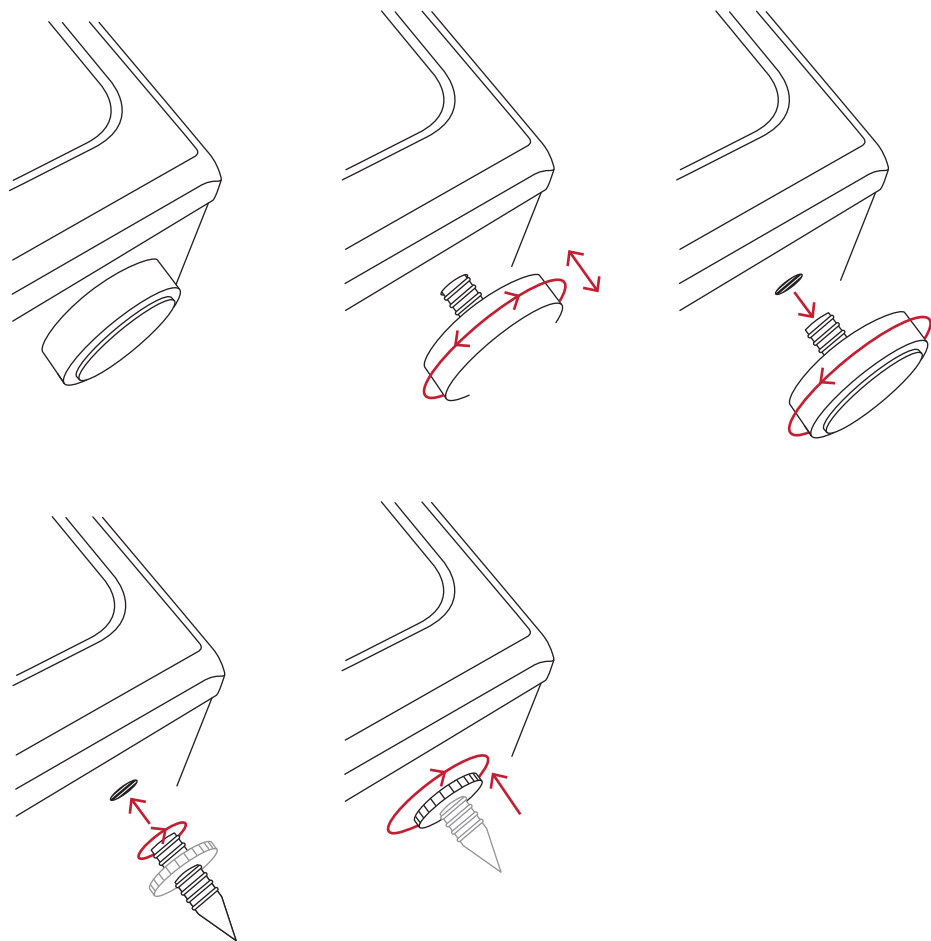
3.2   Adjustable feet

The four feet on the V-16 F can be adjusted in height to compensate for uneven floors.

The feet can also be removed and replaced by spikes or other feet types.

For example the DALI SPIKE SET.
(Spike thread size: M10)
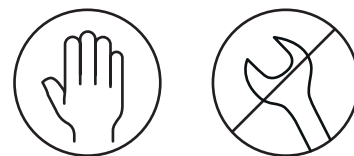
4.0 Connections

The V-16 F subwoofer connection panel is illustrated and the connection sockets provided and their use is described in the following paragraphs:

4.1   Mains Power

Connect your V-16 F to a mains power supply. Do not switch on the subwoofer until all other connections required are made.

4.2   Balanced Subwoofer
         Output (to Follower)

If a second subwoofer is to be installed, connect a balanced XLR connection cable from this socket to the Left channel balanced input of the second subwoofer.

! A second subwoofer should be designated as a "Follower" in the Link Mode settings menu. See Section 5.10 of this manual.

CONNECTION PANEL

Power/Standby LED

Sub output (to Follower)

Mains power
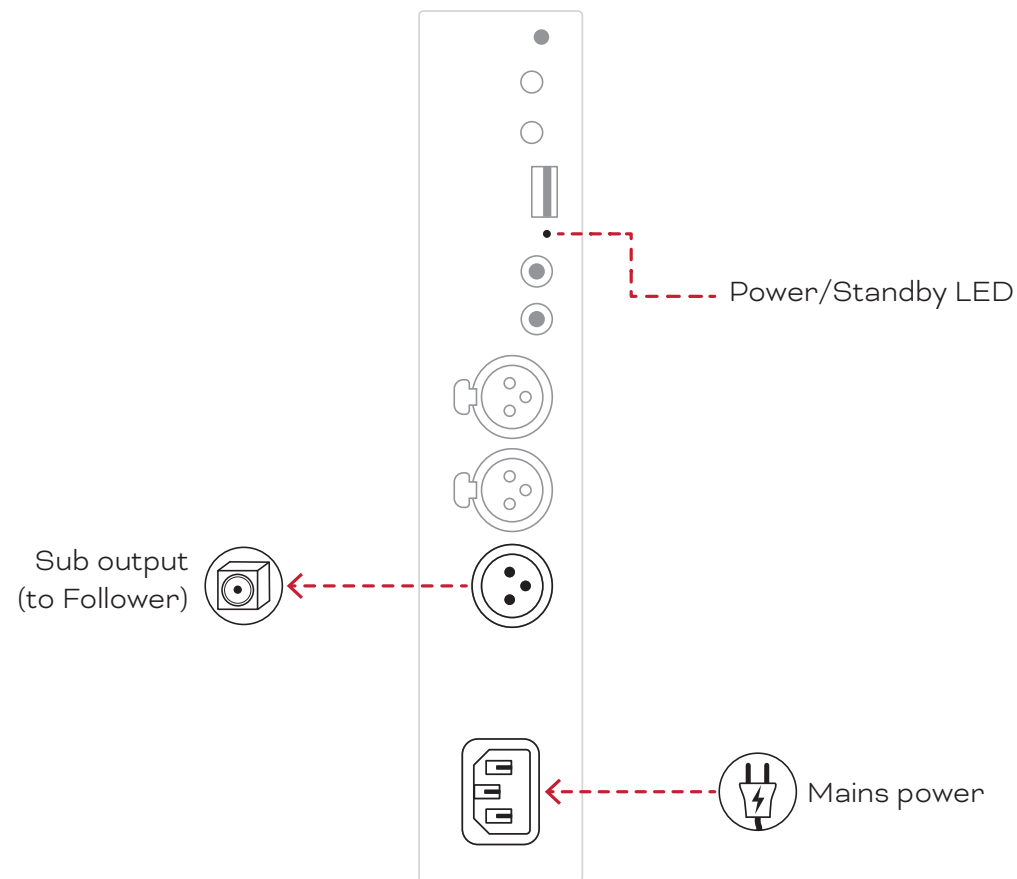
4.0 Connections

The V-16 F provides unbalanced RCA and balanced XLR inputs, configurable for stereo, mono or LFE operation. The RCA and XLR inputs can be used independently which enables a V-16 F potentially to be used with two audio systems simultaneously: For example, a home theatre system and a stereo music system. Input configuration is managed via the V-16 F Setup Menu. See Section 5.3.

4.3   Balanced Inputs

Female XLR, Left and Right

If the preamplifier or A/V processor is fitted with balanced XLR subwoofer (LFE) output(s) or balanced XLR stereo preamp outputs, use balanced XLR cables to connect the outputs to these balanced inputs.

If the preamplifier or A/V processor is fitted with only one, mono balanced XLR output, connect it to the Right input.

4.4   Unbalanced Inputs

RCA Phono, Left and Right

If the preamplifier or A/V processor is fitted with unbalanced RCA Phono subwoofer (LFE) output(s), or unbalanced stereo preamp outputs, use unbalanced RCA Phono cables to connect the outputs to these V-16 F inputs.

If the preamplifier or A/V processor is fitted with only one, mono unbalanced Phono output, connect it to the Right input.

Unbalanced Inputs — Left / LFE — Right/Mono

Balanced Inputs — Left / LFE — Right/Mono

IN ADMIRATION OF MUSIC
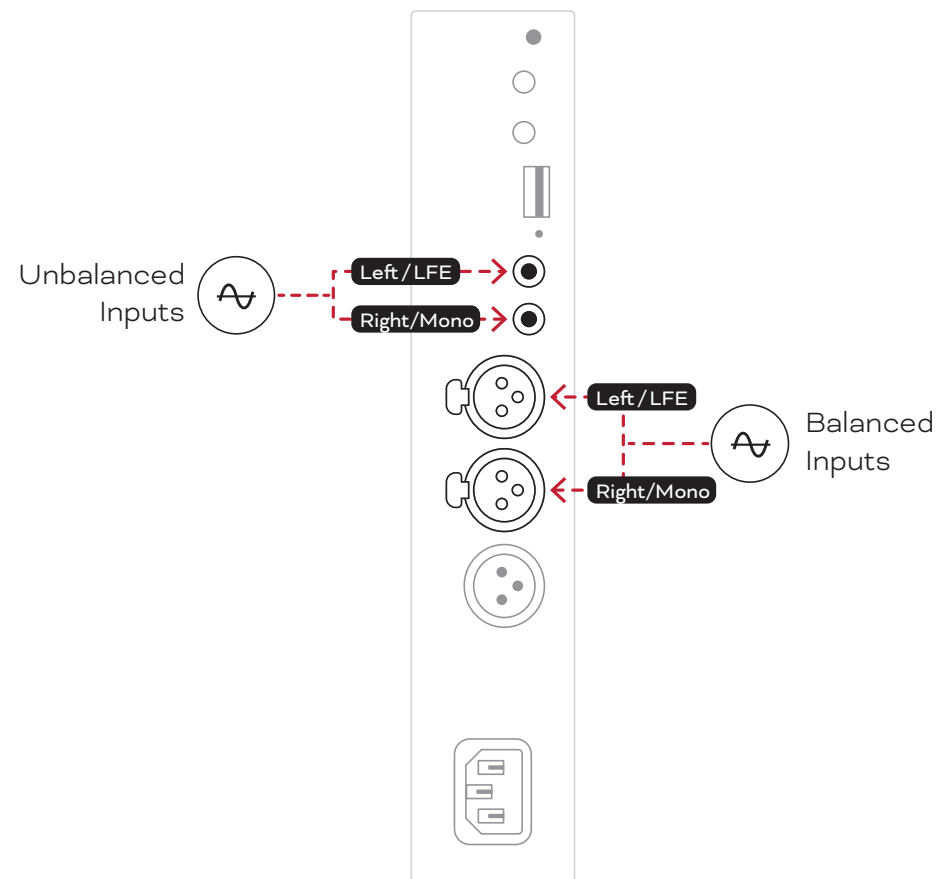
4.0 Connections

4.5 USB-A Socket

5V out / Service

The V-16 F USB socket is intended primarily for service and firmware update procedures, however it also carries a 5V power supply that can be used to power a DALI WSR Wireless Subwoofer Receiver.

4.6 Trigger In and Out

3.5 mm mini-jack

The Trigger In and Trigger Out sockets allow the V-16 F subwoofer to be integrated with home automation systems that can provide the appropriate 12V trigger signal. V-16 F subwoofers can be remotely switched in and out of Standby mode using trigger signals. Contact your DALI retailer or installer for more information on home automation systems.

CONNECTION PANEL

12V Trigger In/Out

USB Power out / Service
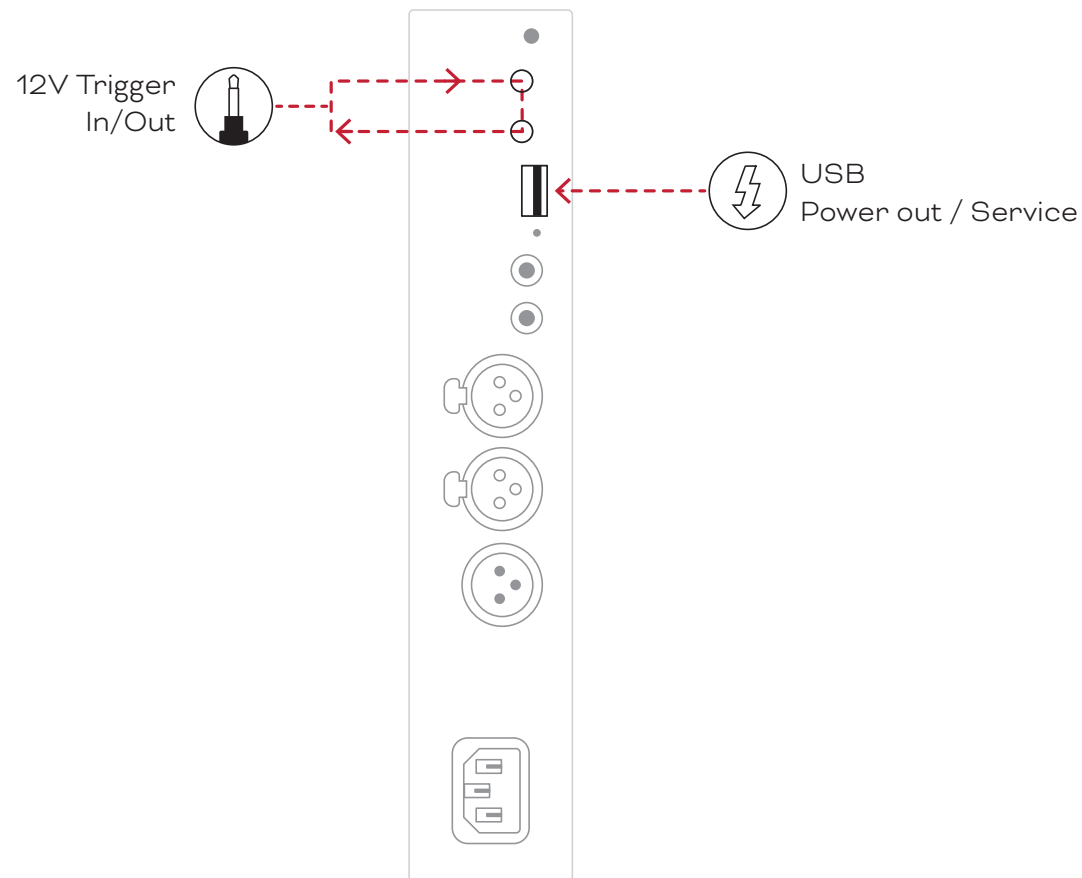
5.0 Configuring

Once your V-16 F subwoofer is positioned at the desired location and connected to mains power and a signal source it can be switched on and configured.

V-16 F configuration is managed through multiple setup menus that can be accessed via its front panel controls and display.

FRONT PANEL CONTROLS

Setup menu

Sound modes

Menu scroll

Gain

Back

Menu/Select

Power/Standby

Gain
30
Cinema   XLR

Cinema
Preset

Music
Preset

Boost
Preset

Sound mode selection
(Press and turn to select)
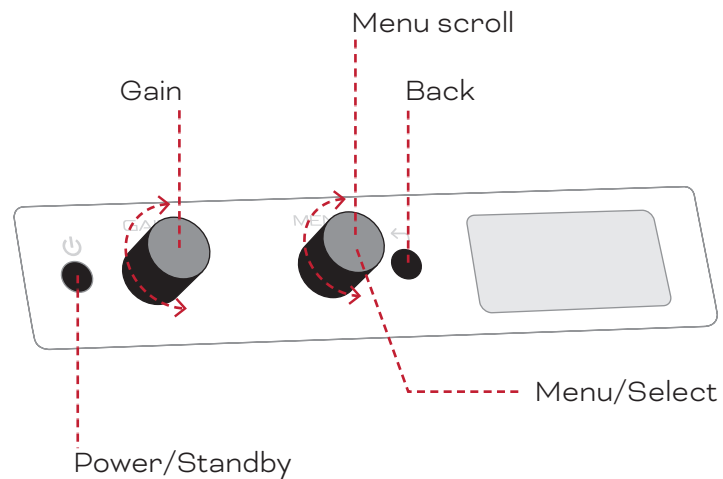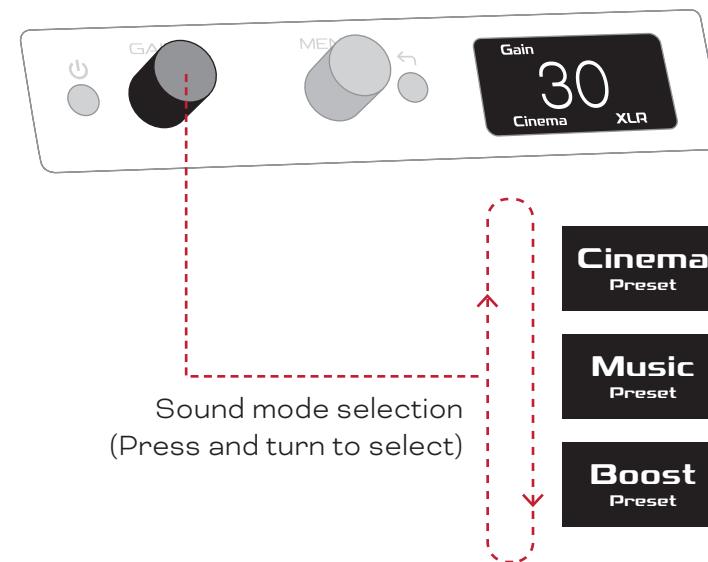
5.0 Configuring

5.1 Menu structure

Input setup Cut-off LP Phase	→	XLR RCA	→	Stereo LFE Mono

Input setup
Cut-off LP
Phase
→ XLR
RCA
→ Stereo
LFE
Mono

Cut-off LP
Phase
Room mode
→ Cut-off LP
120Hz
Cinema

Phase
Room mode
attenuation
→ Phase
180°
Music

Room mode
attenuation
Bass ports
→ Room mode
Frequency 120Hz
Attenuation -8dB

Room mode
Frequency 120Hz
Attenuation -8dB

Bass ports
Cst grp delay
Time delay
→ Open
Closed

Cst grp delay
Time delay
Link mode
→ On
Off

Time delay
Link mode
Input sense
→ Time delay
10ms

Link mode
Input sense
Display
  brightness
→ Leader
Follower

Input sense
Display
  brightness
Version info
→ On
Off

Display
  brightness
Version info
Reset
→ Display brightnes
100%

Version info
Reset
→ Version info
1.2
Software

Reset
→ Reset Cinema
Reset Music
Reset Boost
Reset all settings
→ Resetting
Cinema
Preset

Reset Cinema
Reset Music
Reset Boost
Reset all settings
→ Resetting
Music
Preset

Reset Cinema
Reset Music
Reset Boost
Reset all settings
→ Resetting
Boost
Preset

Reset Cinema
Reset Music
Reset Boost
Reset all settings
→ Confirm reset
Cancel reset

5.0 Configuring

5.2   V-16 F Front Panel Configuration

To configure the setup menus using the V-16 F front panel controls, first switch on the subwoofer by pressing the Power/Standby button ❶.

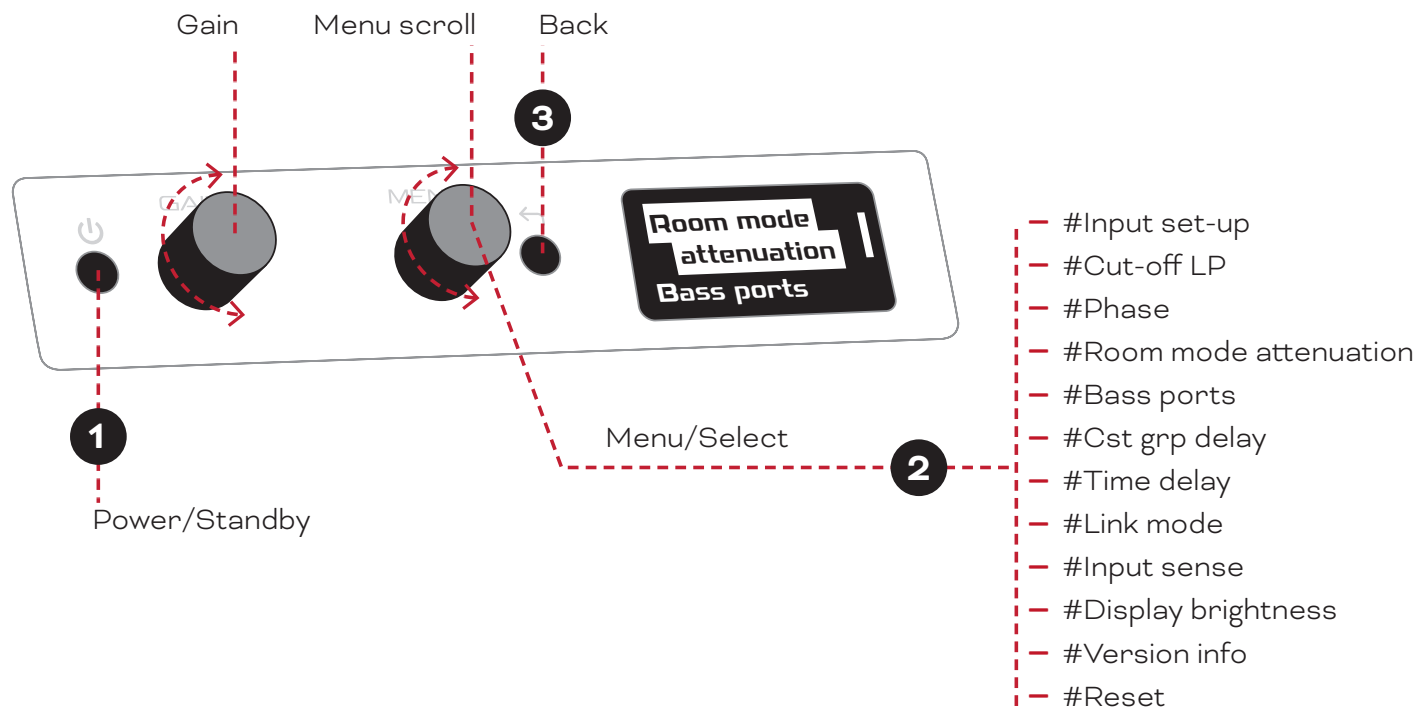To access the setup menus, turn the Menu knob ❷ to select the desired function then press the Menu knob to access that function's menu items. Pressing the Menu knob again selects and saves the option.

To return to a previous menu, press the Back button ❸.

SETUP MENU STRUCTURE AND OPTIONS

Gain   Menu scroll   Back

3

Room mode
attenuation
Bass ports

1

Menu/Select

2

Power/Standby

#Input set-up
#Cut-off LP
#Phase
#Room mode attenuation
#Bass ports
#Cst grp delay
#Time delay
#Link mode
#Input sense
#Display brightness
#Version info
#Reset

5.0 Configuring

5.3   Input setup menu

The V-16 F **Input setup** options reflect the signal connections described in Section 4 of this manual. If your V-16 F is connected via its XLR sockets (or socket) select the **XLR** menu option. If your V-16 F is connected via its RCA Phono sockets (or socket) select the **RCA** menu option.

Selecting and confirming an input socket option will open a secondary menu offering **Stereo**, **Mono** and **LFE** options.

If your V-16 F is connected using both left and right input sockets (XLR or RCA), select **Stereo**.

If it is connected using just one socket, select **Mono**.

If your V-16 F is connected to the dedicated LFE (Low Frequency Effects) output of an AV decoder, with either stereo or mono connections, select the **LFE** option.

| Input setup |
| Cut-off LP |
| Phase |

→

| XLR |
| RCA |

→

| Stereo |
| LFE |
| Mono |

Select the input mode.

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5.0 Configuring

5.4   Cut-off LP menu

The **Cut-off LP** menu enables the V-16 F low pass filter frequency to be set. This filter frequency is important when the V-16 F is used in Stereo or Mono input mode in a conventional audio system with satellite main loudspeakers. The low pass filter frequency should be set to the satellite speaker's -3dB low frequency cut-off. Confirm the selection by choosing the frequency and exit the menu by pressing the **Back** button.

If the **LFE** option is selected in the **Input Setup** menu, the low pass filter frequency is fixed at 500 Hz and cannot be adjusted. The **Cut-off LP** menu will be disabled if the V-16 F is a second subwoofer that is set up as a **Follower**. In this case it will inherit the settings of the subwoofer set up as the **Leader**.

See the Link mode menu in Section 5.10 for Leader and Follower configuration.
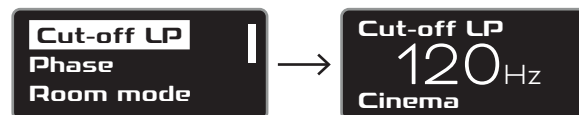
Choose cut-off low pass filter crossover frequency, from 40 Hz to 200 Hz (10 Hz per step).

! Cut-off LP can be set separately for each sound mode. To toggle between sound modes in the **Cut-off LP** menu, press and turn the front panel **Gain** knob.

5.0 Configuring

5.5   Phase menu

The **Phase** menu enables the V-16 F acoustic phase to be set at 0°, 90°, 180° or 270°. Adjusting the phase can help optimise the acoustic integration of the subwoofer and satellite loudspeakers. Once the **Cut-off LP** frequency has been set, adjust the phase while listening to some familiar music programme with significant deep bass content. Select the **Phase** setting that offers the most consistent and best integrated bass. The **Phase** menu will be disabled if the V-16 F is a second subwoofer that is set up as a **Follower**.

! Phase can be set separately for each sound mode. To toggle between sound modes in the **Phase** menu, press and turn the front panel **Gain** knob.

Selectable options:
0°, 90°, 180°, 270°.

IN ADMIRATION OF MUSIC

5.0 Configuring

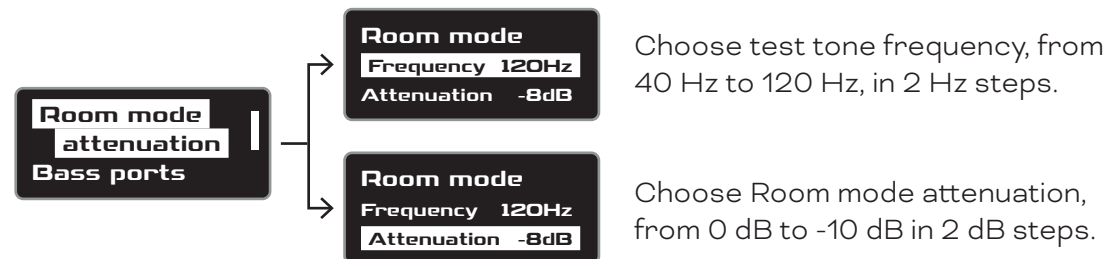## 5.6   Room mode attenuation menu

The **Room mode attenuation** menu enables configuration of the V-16 F Room mode attenuation feature. Room mode attenuation optionally introduces localised attenuation at the primary room resonance mode frequency.

To read more about the room mode attenuation feature, please see the V-16 F Whitepaper - downloadable from the DALI website.

To configure Room mode attenuation, select the **Frequency** option and turn the **Menu** knob to vary the frequency of the tone generated by the V-16 F, from 40 Hz to 120 Hz, in 2 Hz steps. Listen as you adjust the frequency for a noticeable increase in volume that indicates a room resonance mode and select that frequency by pressing the **Menu** knob.

Pressing the **Menu** knob confirms the choice of frequency and jumps to the Attenuation selection.
Now, use the **Menu** knob to reduce the volume of the tone to an appropriate level. Up to -10 dB room mode attenuation is available.

Room mode
attenuation
Bass ports

Room mode
Frequency 120Hz
Attenuation   -8dB

Choose test tone frequency, from 40 Hz to 120 Hz, in 2 Hz steps.

Room mode
Frequency 120Hz
Attenuation   -8dB

Choose Room mode attenuation, from 0 dB to -10 dB in 2 dB steps.

! The volume of the Room mode test tone can be adjusted using the V-16 F **Gain** knob.

5.0 Configuring

5.6 Room mode attenuation menu (continued)

! Only one Room Mode Attenuation frequency can be applied at a time - activated by applying attenuation at the selected frequency. If another frequency is selected and attenuated this will reset the first frequency attenuation to 0 dB.

Gain

Legend:
- 0dB
- -2dB 56Hz 2
- -4dB 56Hz 3
- -6dB 56Hz 4
- -8dB 56Hz 5
- -10dB 56Hz 6
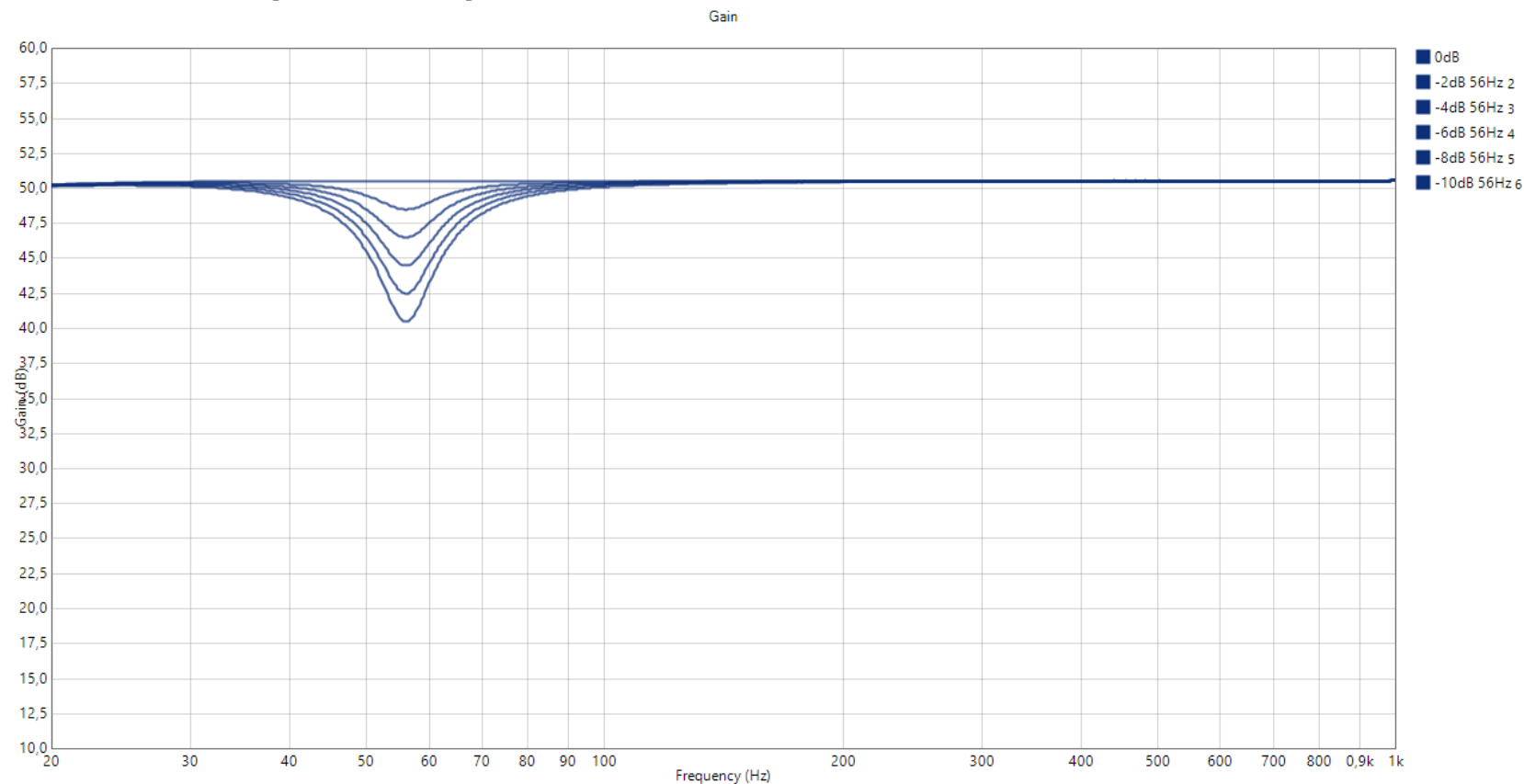
5.0 Configuring

5.7   Bass ports menu

In some cases, a subwoofer with a closed enclosure may be a better choice for the acoustic characteristics of a specific listening room or personal preferences than the ported (reflex) design of the V-16 F. If this appears to be the case, you can use a closed-box sound profile and the port plugs supplied with the V-16 F to create a closed-box system optimised for your application.

If the bass port plugs are used, the V-16 F internal equalisation parameters must be adjusted and the **Bass ports** menu enables this.

Select **Open** for reflex mode and **Closed** for closed mode. Confirm by highlighting the selection, and exit the menu by pressing the **Back** button.
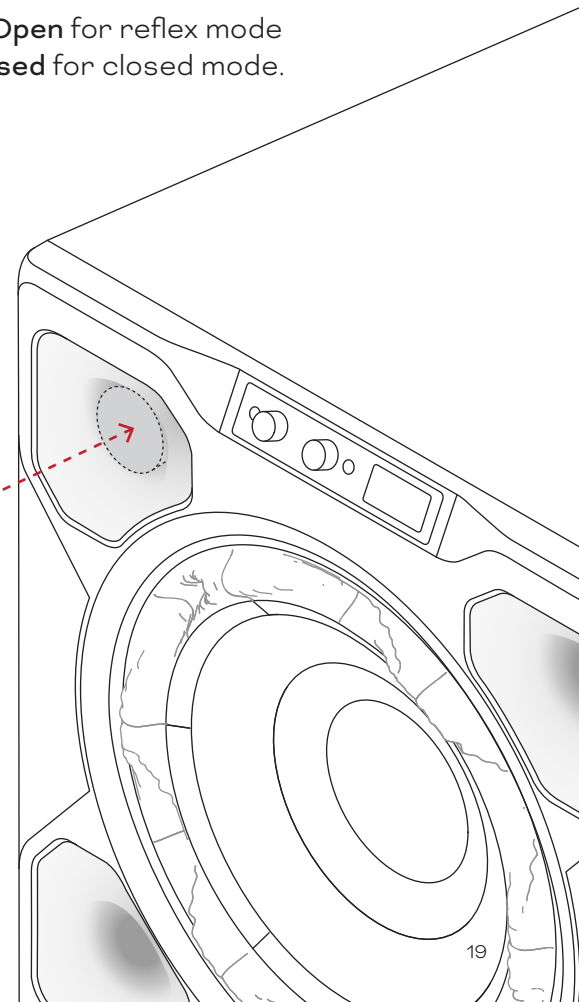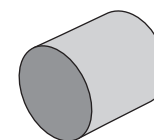
! The V-16 F should only be used with its bass ports *all closed* or *all open*.

! Insert the port plugs so that they are flush with the bottom of the entrance of the port tube.

| Bass ports |
| Cst grp delay |
| Time delay |

→
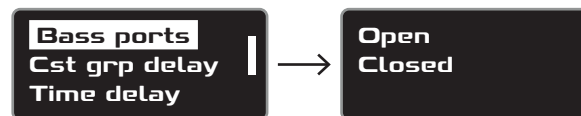
| Open |
| Closed |

Select **Open** for reflex mode and **Closed** for closed mode.

Optional Port Plugs × 4

IN ADMIRATION OF MUSIC

5.0 Configuring
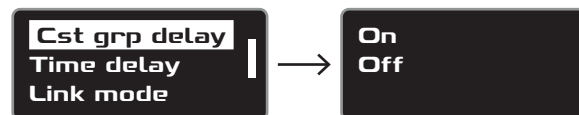
5.8 Cst grp delay menu

Constant Group Delay

The **Constant Group Delay** menu enables optional group delay compensation to be applied. Group delay is an artefact of all electro-acoustic systems that display finite bandwidth and it results in latency (time delay) that increases with reducing frequency.

Group delay can be compensated within the V-16 F digital signal processing and for some listeners this can result in better subjective bass impact and timing.

Select compensation **On** or **Off** and confirm by highlighting the selection, and exit the menu by pressing the **Back** button.

```
┌──────────────────┐        ┌──────────────────┐
│ Cst grp delay    │        │ On               │
│ Time delay       │  ──→   │ Off              │
│ Link mode        │        │                  │
└──────────────────┘        └──────────────────┘
```

Activate or de-activate Constant Group Delay.

! Activation of Constant Group Delay is only possible when the V-16 F is working in LFE Input Setup mode and with Cinema sound mode activated.

A small "CGD" logo will be shown on the main display when Constant Group Delay is active.

! When Constant Group Delay is selected the overall in/out latency of the V-16 F subwoofer will increase 40 ms and this may mean that V-16 F Phase will benefit from re-adjustment.

See Section 5.5.

! Constant Group Delay will add 40 ms of delay to the overall in/out latency of the V-16 F.

Without Constant Group Delay activated, the V-16 F has under 2 ms of in/out delay.
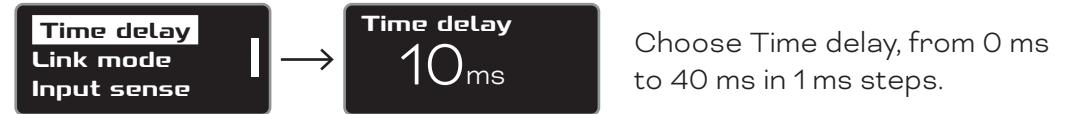
5.0 Configuring

5.9   Time delay menu

The **Time delay** menu enables a signal delay between 0 ms and 40 ms using the V-16 F digital signal processing that can provide sync adjustment with video. Select the required delay and confirm by highlighting the selection, and exit the menu by pressing the **Back** button.

! If Constant Group Delay is selected (see Section 5.8) the time delay specified may need to be reduced for optimal video sync.

Time delay
Link mode
Input sense

→

Time delay
10ms

Choose Time delay, from 0 ms to 40 ms in 1 ms steps.

IN ADMIRATION OF MUSIC

5.0 Configuring

5.10 Link mode menu

If two V-16 F subwoofers are installed in one system, the **Link mode** menu enables one to be defined as the Leader and one to be defined as the Follower. The Follower will inherit all the menu settings of the Leader. Select the required option and confirm by highlighting the selection, and exit the menu by pressing the **Back** button.

! Bass ports configuration must be set manually on both Leader and Follower(s).
Configuring Bass ports is described in Section 5.7
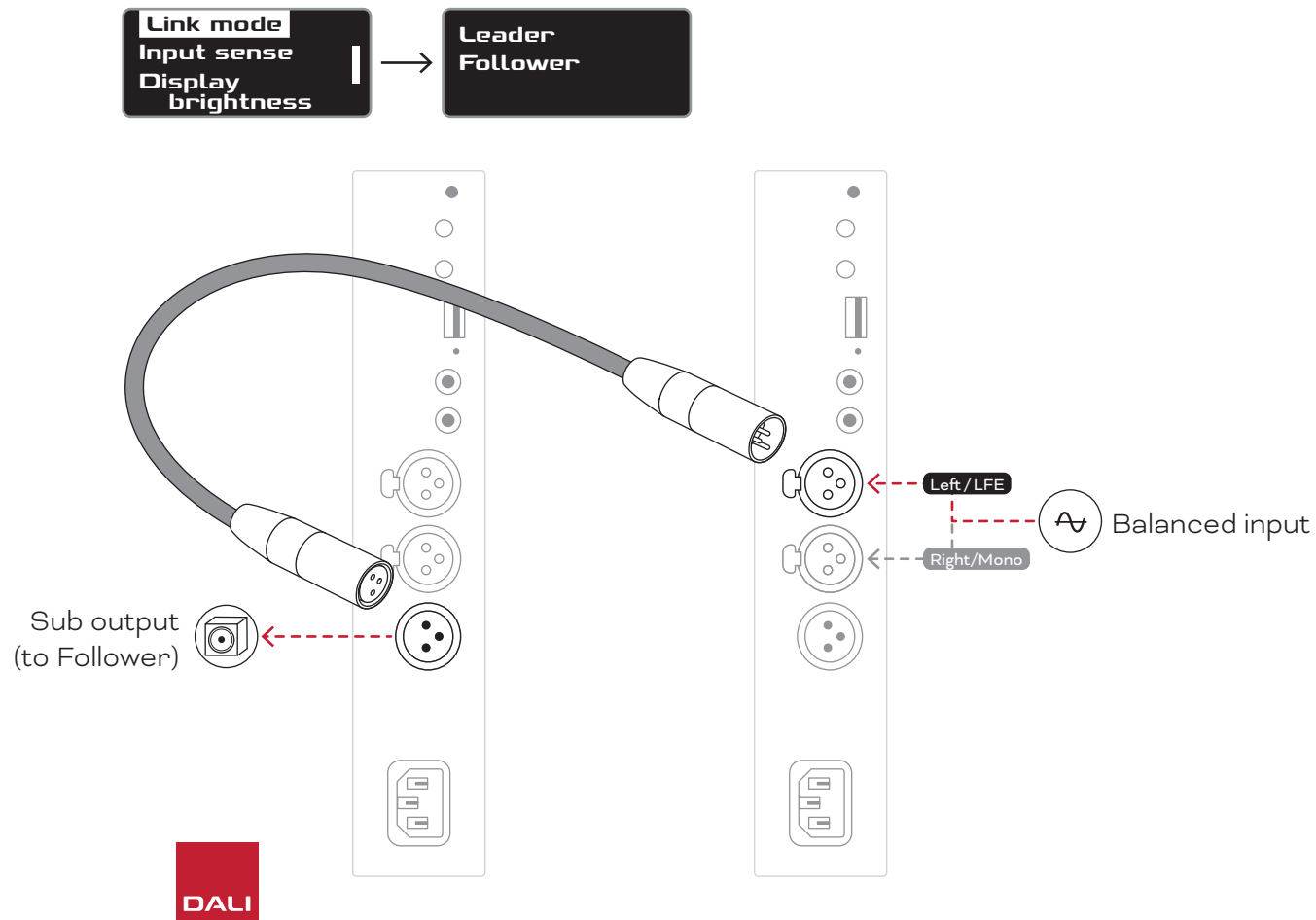
5.0 Configuring

5.11   Input sense menu

The **Input sense** menu enables the V-16 F to be configured so that it will switch on automatically when an input signal is present and switch off after 20 minutes with no input. Select the required option and confirm by highlighting the selection, and exit the menu by pressing the **Back** button.

! Activating or deactivating the **Input sense** function will not affect the Trigger functions as described in Section 4.6.

! **Input sense** reacts to an active signal on the input(s), but movies can have extended periods of silence.

To make sure the V-16 F always powers on and off with the rest of your system, we recommend to use the Trigger In/Out function, when possible. See Section 4.6.

Activate or de-activate input sensing for all inputs.

IN ADMIRATION OF MUSIC

5.0 Configuring

5.12 Display brightness menu

The **Display brightness** menu enables the brightness of the V-16 F front panel display to be adjusted. Select the required brightness and exit the menu by pressing the **Back** button.

! If on the home screen, the display will automatically switch off after 10 seconds of inactivity. If within a menu, the display will not switch off, but automatically return to the home screen after 3 minutes of inactivity, and from there switch off following 10 seconds of inactivity.

Display
brightness
Version info
Reset

→

Display brightnes
100%
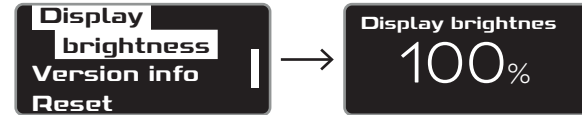
You can adjust the display brightness from 10% to 100% in 10% steps.

IN ADMIRATION OF MUSIC

5.0 Configuring

5.13 Version info menu

The **Version info** menu displays the installed firmware version. See Section 7.1 for more information on firmware update.
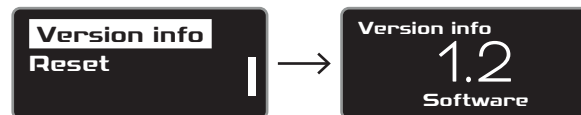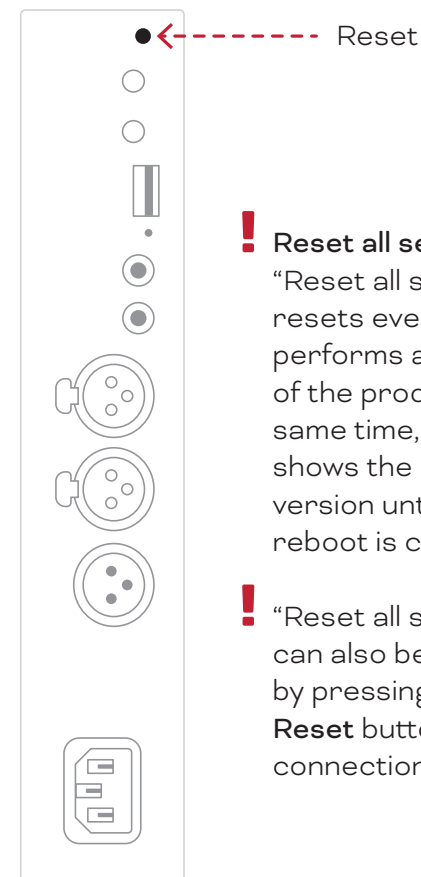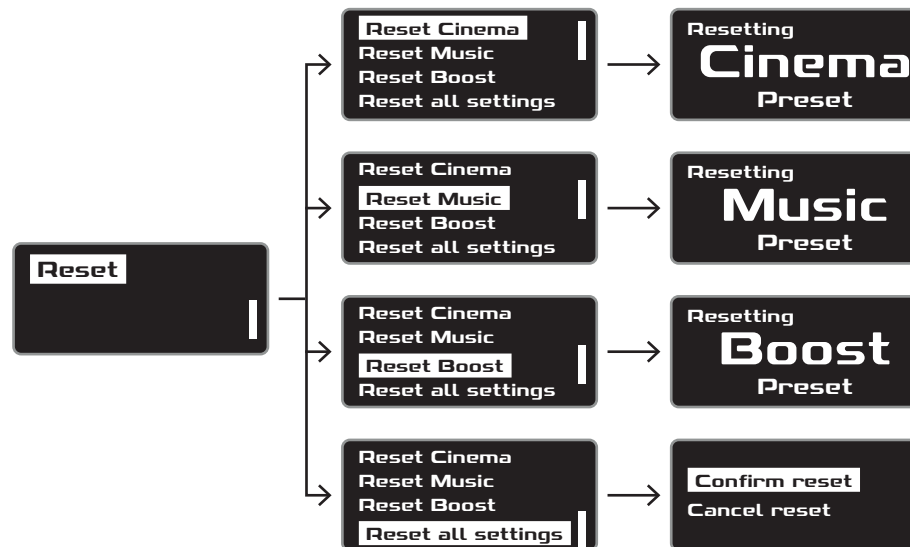
5.0 Configuring

5.14 Reset menu

The **Reset** menu enables V-16 F settings to be returned to their defaults either globally or separately within the three V-16 F preset Sound Modes. Select the required option and confirm the selection by pressing the **Menu** knob.

! The use of Sound Mode presets is described in Section 6 of this Manual.

! Resetting sound modes, also resets the Phase and Cut-off settings associated with the chosen sound mode.

! Confirmation of a reset results in the sound mode name flashing 3 times, and then the display returns to the Main Menu.

Reset

Reset Cinema
Reset Music
Reset Boost
Reset all settings

Resetting
Cinema
Preset

Reset Cinema
Reset Music
Reset Boost
Reset all settings

Resetting
Music
Preset

Reset Cinema
Reset Music
Reset Boost
Reset all settings

Resetting
Boost
Preset

Reset Cinema
Reset Music
Reset Boost
Reset all settings

Confirm reset
Cancel reset

Reset

! Reset all settings
"Reset all settings" resets everything and performs a restart of the product. At the same time, the screen shows the software version until the reboot is completed.

! "Reset all settings" can also be activated by pressing the small **Reset** button on the connection panel.
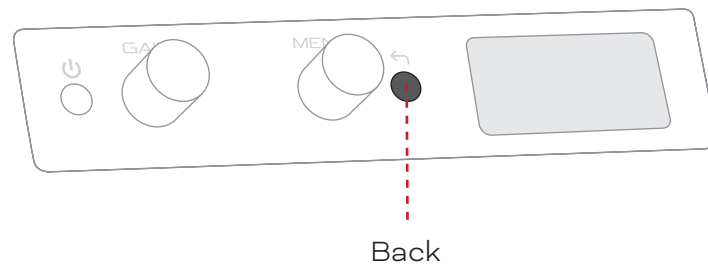
5.0 Configuring

5.15 Setup Menu Exit

With all menus configured, exit the setup menus by pressing the **Back** button.

Back

! Pressing the **Back** button will preserve and save all settings.

6.0 Your V-16 F Subwoofer In Use

With V-16 F configuration complete you can begin to enjoy its performance with your favourite movies and music. The V-16 F front panel controls and display provide the following in-use functions:

6.1   Gain Control

Turn the V-16 F front panel **Gain** knob to adjust V-16 F gain level. V-16 F gain control adjusts only the relative volume between itself and the satellite or multi-channel speakers, not the overall system volume. You should only expect to adjust V-16 F gain occasionally.

Gain

Sound mode select
(Press and turn to select)
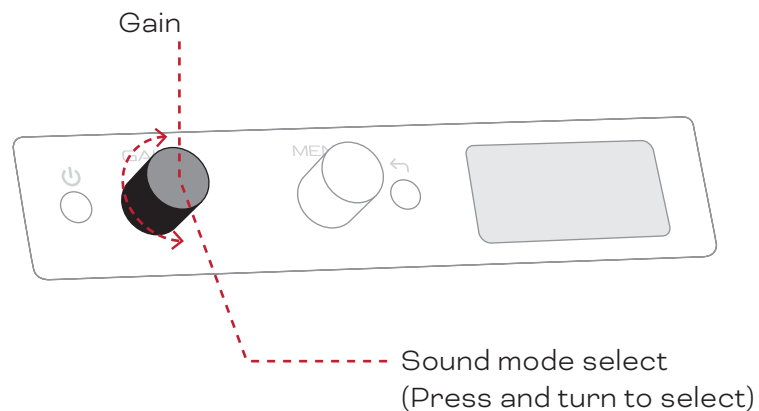
6.2   Sound Modes

The V-16 F provides three preset sound modes that can be accessed by pressing and turning the front panel **Gain** knob. Pressing the front panel **Gain** knob activates the **Sound Mode** menu, and turning the Gain knob toggles through the three Sound Modes. V-16 F sound modes comprise EQ presets designed to offer optimal subwoofer performance for particular types of media content or personal preference in low frequency reproduction:

- The **Cinema** sound mode is designed for LFE content in audio-visual and movie content. It emphasises low frequency bandwidth and impact.

- The **Music** sound mode is designed for optimal low bass in music. It focusses on bass dynamics and timing and has the most neutral frequency response of the three sound modes.

- The **Boost** sound mode is designed for those occasions on music or movie content when a little extra bass is desired. It emphasises impact and explosive depth.

! The V-16 F is capable of extremely high volume levels of very low bass. Please always consider those who share your home, and your neighbours, when using your V-16 F.

IN ADMIRATION OF MUSIC

6.0 Your V-16 F Subwoofer In Use

6.3   Child Lock Mode

Child Lock Mode prevents changes to the V-16 F settings and configuration during operation.

To **activate** Child Lock Mode, hold down the Back button **1** and press the Power/Standby button **2**.

"LOCKED" will appear on the display to indicate that Child Lock Mode has been activated.

All functions except Power/Standby are now disabled until you deactivate Child Lock Mode, even after power cycling the V-16 F.

To **deactivate** Child Lock Mode, hold down the Back button **1** once again and press the Power/Standby button **2**.

You can also deactivate Child Lock Mode by using the Reset button on the back to reset the V-16 F to factory settings.

Press the Power/
Standby button

Hold down the
Back button

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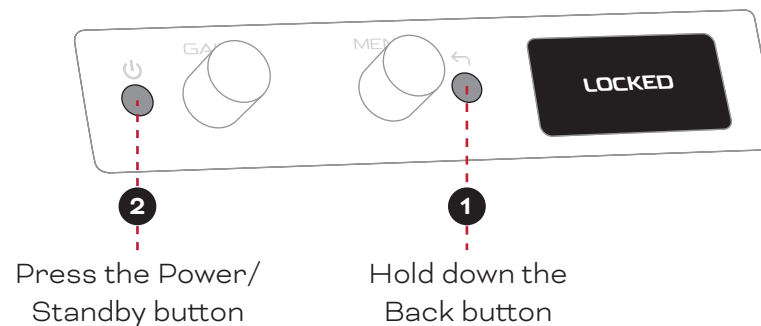
7.0 Care and Maintenance

7.1   Firmware Update

DALI will occasionally release updated firmware for the V-16 F and we recommend that you check occasionally to see if new firmware is available for your subwoofer. Compare the firmware version displayed in your V-16 F configuration menu (see Section 5.13) with the firmware version available on the DALI website.

If updated firmware is available, follow the download instructions to copy the firmware to a USB drive then insert the USB drive in the V-16 F connection panel USB socket. When the V-16 F is switched on it will automatically access and install the updated firmware. The USB drive can be removed when the update procedure is complete.

7.2   Cleaning

Your V-16 F needs no special maintenance or care and should be treated as any other valuable item of furniture in your home. Remove dust from the cabinet with a soft, dry cloth, and clean it using a soft damp cloth with a mild all-purpose, non-abrasive household cleaning agent. Use caution when dusting the bass driver cone as it is fragile.

Finally, if your subwoofer becomes marked or damaged, your DALI retailer can arrange to have it serviced or replaced.

7.0 Care and Maintenance

7.3   Disposal

If you want to dispose of your DALI subwoofer, don't mix it with your general household waste. In accordance with EU legislation, a separate collection system for used electronic products enables private households in EU member states, Switzerland, Liechtenstein and Norway to return their used electronic products free of charge to designated collection facilities or to a retailer (if you purchase a similar replacement product).

If you reside in a country not mentioned above, please contact your local authorities to determine the correct method of disposal and prevent any potential negative effects on the environment and human health.

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8.0 DALI V-16 F Subwoofer Technical Specifications

V-16 F	
Frequency range (in-room)	19 - 200 Hz ±3 dB (Line input) 19 - 500 Hz ±3 dB (LFE input)
Input impedance	9 kOhm
Maximum SPL	122 dB @ 1m
Crossover LP frequencies	40 - 200 Hz
Low frequency driver	1 × 16-inch long-throw
Low frequency diaphragm	Anodised aluminium with CSS technology
Enclosure type	Bass reflex
Bass Tuning Frequency	18 Hz
Connection Input(s)	2 × RCA unbalanced (Stereo, mono or LFE) 2 × XLR balanced (Stereo, mono or LFE)
Connection output(s)	1 × XLR balanced (Follower out)
Recommended placement	Floor / Flush-mount
Continuous amplifier output power	1500 W RMS
Maximum amplifier output power	2500 W Peak
Mains power rating	550 W
Standby consumption	≤ 0.5 W
Other features	Flush mount option Constant Group Delay mode Room Mode Attenuation mode Cinema/Music/Boost sound modes Closed box mode

V-16 F	
Dimensions (H × W × D)	570.5 × 520 × 560 mm 22.46 × 20.47 × 22.04 inches
Shipping dimensions (H × W × D)	730 x 660 × 710 mm 28.74 × 25.98 × 27.95 inches
Minimum flush-mount installation dimensions (H × W × D)	> 590 × 560 × 650 mm > 23.23 × 22.05 × 25.59 inches
Weight [kg/lb]	55 kg 121.25 lb
Shipping weight [kg/lb]	65 kg 143.30 lb
Finish	Black Ash
Accessories included	4 × Optional port plugs 1 × Mains power cable
Optional accessories	DALI Spike Set
Spike thread size	M10

All technical specifications are subject to change without notice.

DALI SUB V-16 F

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