Project Santa Monica

SM-5 & SM-8

3-Way Studio Monitors
User's Guide

Table of Contents

Important Safety Information

1. Read these instructions.

2. Keep these instructions.

3. Heed all warnings.

4. Follow all instructions.

5. Do not use this apparatus near water.

6. Power the product down, and unplug it from power before cleaning.

7. Clean only with a dry cloth.

8. Do not block any ventilation openings.

9. Keep ventilation opening free of dust or other matter.

10. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

11. No naked flame sources (such as lighted candles,) should be placed on the product.

12. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades, with one blade wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

13. Protect the power cord from being walked on or pinched, particularly at plugs, receptacles, and at the point where they exit the apparatus.

14. Use only attachments and/or accessories specified by the manufacturer.

15. Use only with a cart, stand, tripod, plate, bracket, or table specified by the manufacturer. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

16. Unplug this apparatus during lightning storms or when unused for long periods of time.

17. Refer all servicing to qualified service personnel. Servicing is required when:
    A. The apparatus is damaged in any way
    B. The power supply cord or plug is damaged
    C. Liquid or other objects have fallen into the product
    D. The product has been exposed to rain or moisture
    E. The product does not operate normally
    F. The product has been dropped

18. This apparatus shall not be exposed to dripping or splashing.

19. No object filled with liquids, such as a vase or a glass, should be placed on the apparatus.

20. This apparatus is to be used in a moderate climate. Do not expose to extremely high or low temperatures.

21. High sound pressure in excess of 85 dB can cause hearing damage and/or loss. Do not expose yourself to high sound pressure levels.

22. The power cord must be connected to a Mains socket/outlet with earthing connection.

23. This equipment is not suitable for use in locations where children are likely to be present.

Important Safety Information

This device complies with Part 15 of the FCC Rules.   Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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.

" FCC RF Radiation Exposure Statement

Caution: To maintain compliance with the FCC's RF exposure guidelines, place the unit at least 20cm from nearby persons."

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's license-exempt RSS(s). Operation is subject to the following two conditions:

This device may not cause interference.
This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développementé conomique Canada applicables aux appareils radio exempts de licence. L'exploitatione stautorisée aux deux conditions suivantes :

L'appareil ne doit pas produire de brouillage;
L'appareildoit accepter tout brouillage radioélectriques ubi, même si le brouillage est susceptible d'encompromettre le fonctionnement.

Mains plug is used as a disconnect device and it should remain readily operable during intended use. In order to disconnect the apparatus from the mains completely, the mains plug should be disconnected from the mains socket outlet completely.

The lightning bolt with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user of the presence of important operation and maintaining (servicing) instructions in the literature accompanying the appliance.

Informations de Sécurité Importantes

1. Lisez ces instructions.
2. Conservez ces instructions.
3. Tenez compte de tous les avertissements.
4. Suivez toutes les instructions.
5. N'utilisez pas cet appareil à proximité de l'eau.
6. Mettez le produit hors tension et débranchez-le de l'alimentation avant de le nettoyer.
7. Nettoyez uniquement avec un chiffon sec.
8. Ne bloquez pas les ouvertures de ventilation.
9. Gardez l'ouverture de ventilation exempte de poussière ou d'autres matières.
10. N'installez pas à proximité de sources de chaleur telles que radiateurs, bouches de chaleur, cuisinières ou autres
appareils (y compris les amplificateurs) qui produisent de la chaleur.
11. Aucune source de flamme nue (comme des bougies allumées) ne doit être placée sur le produit.
12. Ne supprimez pas la fonction de sécurité de la fiche polarisée ou de mise à la terre. Un polarisé la fiche a deux lames, avec une lame plus large que l'autre. Une fiche de mise à la terre a
deux lames et une troisième broche de mise à la terre. La lame large ou la troisième broche sont fournies
pour votre sécurité. Si la fiche fournie ne rentre pas dans votre prise, consultez un électricien pour remplacement de la prise obsolète.
13. Protégez le cordon d'alimentation contre tout piétinement ou pincement, en particulier au niveau des fiches, des prises et à l'endroit où ils sortent de l'appareil.
14. N'utilisez que des accessoires et / ou des accessoires spécifiés par le fabricant.
15. Utilisez uniquement avec un chariot, un support, un trépied, une plaque, un support ou une table spécifiés par le fabricant. Lorsqu'un chariot est utilisé, soyez prudent lorsque vous déplacez la combinaison chariot / appareil vers éviter les blessures par renversement.
16. Débranchez cet appareil pendant les orages ou lorsqu'il n'est pas utilisé pendant de longues périodes.

Informations de Sécurité Importantes

17. Confiez toute réparation à un personnel qualifié. Un entretien est nécessaire lorsque:

A. L'appareil est endommagé de quelque manière que ce soit

B. Le cordon d'alimentation ou la prise est endommagé

C.Le liquide ou d'autres objets sont tombés dans le produit

D. Le produit a été exposé à la pluie ou à l'humidité

E. Le produit ne fonctionne pas normalement

F. Le produit est tombé

18. Cet appareil ne doit pas être exposé aux gouttes ou aux éclaboussures.

19. Aucun objet rempli de liquide, tel qu'un vase ou un verre, ne doit être placé sur l'appareil.

20. Cet appareil doit être utilisé dans un climat tempéré. Ne pas exposer à des ou basses températures.

21. Une pression acoustique élevée supérieure à 85 dB peut entraîner des dommages et / ou une perte d'audition. Faire ne vous exposez pas à des niveaux de pression acoustique élevés.

22. Le cordon d'alimentation doit être connecté à une prise secteur avec connexion de mise à la terre.

23. Cet équipement n'est pas adapté à une utilisation dans des endroits où des enfants sont susceptibles d'être présents.

L'éclair avec le symbole de la tête de flèche dans un triangle équilatéral est destiné à alerter l'utilisateur de la présence de "dangereux tension" dans le boîtier du produit qui peut être d'une amplitude suffisante pour constituer un risque de choc électrique pour les personnes.

Le point d'exclamation dans un triangle équilatéral est destiné à alerter l'utilisateur de la présence d'instructions importantes de fonctionnement et de maintenance (entretien) dans la documentation accompagnant l'appareil.

About Your Studio Monitors

Congratulations on your Kali Audio SM-Series Studio Monitors! These studio monitors are designed for the most demanding, high-precision monitoring applications. We're confident that these monitors will allow you to perceive every detail of the material that you're working on, and that the results will translate faithfully across playback platforms.

Where does "SM" come from?

The official name of this product line is "Project Santa Monica." Kali names all of our product lines after towns in California. Santa Monica and nearby neighborhoods in West Los Angeles are home to some of the world's most storied recording studios. Project Santa Monica pays tribute to those studios and the historic records that have come out of them.

Features

3-Way Coincident Architecture

The SM-Series features a powerful woofer (5-Inch on the SM-5, 8-Inch on the SM-8), 4-Inch midrange, and 1-Inch metal dome tweeter. The midrange and tweeter are coaxial, meaning that they share an acoustic center. In other words, the tweeter sits within the midrange. They are also coincident, meaning that they are physically time-aligned.

This architecture, together with the physical placement and crossover of the woofer, makes each SM-Series speaker an acoustic point source. This gives the loudspeaker an ideal directivity characteristic, resulting in a lifelike stereo image where details are placed clearly and consistently. Off-axis lobing that is unavoidable in 2-way systems is virtually eliminated in the SM-Series.

Precision Drivers

The drivers in the SM-Series are carefully engineered for high dynamic range, smooth response, and low distortion.

The woofer design emphasizes high output and very low distortion. The woofer has been refined with inductance linearization and flux stabilization features within the motor. These features reduce magnetic flux modulation, reducing distortion dramatically.

The midrange is not only optimized for its own frequency handling, but also for its role as the tweeter's waveguide. It controls the directivity of the tweeter so that off-axis reflections in all directions are congruent with the direct sound of the loudspeaker, which is part of what gives the SM-Series such excellent imaging. Peak-to-peak excursion on the midrange does not exceed 1mm, eliminating intermodulation distortion that is typical in coaxial designs.

The 1-inch metal alloy dome tweeter has been engineered to allow for high output and low distortion to the limits of human hearing. The geometry of the tweeter reduces high-Q ultrasonic resonances, resulting in smoother HF response in the audible frequency band. In other words, the harshness that is problematic in some metal domes is eliminated on the SM-Series.

About Your Speakers

Features

Low Noise Port Tube

Like all of Kali's studio monitors, the SM-Series features a front-firing port tube with a unique geometry that elminates chuffing and port compression.

Low Diffraction Baffle

The baffle around the midrange follows the shape of that driver, blending seamlessly from the edge of the driver and into the rest of the speaker cabinet. This eliminates on-axis diffraction aftifacts in the frequency resposne, and helps reinforce the excellent imaging characteristics of the SM-Series.

Wall/Ceiling Mounting

The SM–Series features mounting holes on both the top and bottom of the loudspeaker. Kali recommends using a loudspeaker-specific U-bracket from Triad-Orbit®, but any speaker mount with a 4.25 x 2-Inch bolt pattern that is capable of holding the speaker's weight will also work.

Instructions for mounting the SM-Series with a Triad-Orbit® bracket can be found on

DSP Features

The SM–Series employs a powerful class-D amplifier. This amplifier has DSP features that control the loudspeaker's voicing, crossovers, and a limiter circuit that will protect the speaker from harmful voltage. Simple user-editable DSP features, including boundary control tunings, and LF/HF trims, are available from the DIP Switches on the back of the speaker. A full explanation of the DIP switch functions can be found on

Because the SM-Series is already engaging its DSP circuitry for everyday use, user-defined room calibration parameters add no additional latency to the system. In other words, there is no latency penalty when processing custom room calibration profiles.

Room Calibration

In addition to the simple user-editable DSP features, users can use the Kali Control Panel software to control room calibration profiles for each speaker, which include 8 parametric EQs, delays, and trims for each loudspeaker. A full explanation of how to use Kali Control Panel with the SM-Series can be found on

Full Specifications

	SM-5	SM-8
Self-Powered:	Yes	
Amplifier:	Class D	
Amplifier Power:	225 W	300 W
HF Driver:	1-Inch Metal Alloy Dome Tweeter	
Midrange Driver:	4-Inch Optimized Profile Paper Cone	
LF Driver:	5-Inch Optimized Profile Paper Woofer	8-Inch Optimized Profile Paper Woofer
LF-to-Midrange Crossover:	280 Hz	
Midrange-to-HF Crossover:	2800 Hz	
Frequency Response: (-10dB)	39 Hz- 25 kHz	37 Hz- 25 kHz
Frequency Range: (+/-3dB)	47 Hz - 21 kHz	43 Hz - 21 kHz
Recommended Listening Distance:	Up to 4 Meters	Up to 5 Meters
Max SPL with peak limiter engaged:	117 dB @ 1m	119 dB @ 1m
Loudspeaker THD: (85dB SPL at 1M)	<0.75 % from 100-450 Hz, <0.5% above 450 Hz	<0.5% above 100 Hz
Inputs:	Balanced Analog over XLR/TRS Combijack AES/EBU over BNC RJ45 for Control	
Outputs:	AES/EBU over BNC thru	
Enclosure:	Front Ported	
Mounting Holes (see page 19)	Top and bottom, spaced 4.25 x 2 Inches (108 x 50.8 mm)	
Height	15.6 Inches (39.6 cm)	19 Inches (48.3 cm)
Width:	7.9 Inches (20 cm)	10 Inches (25.4 cm)
Depth:	9.8 Inches (24.8 cm)	12 Inches (30.5 cm)
Weight:	21 lbs (9.5 kg)	32 lbs (14.5 kg)

Inputs and Controls

DIP Switch Quick Reference Guide

1

The quick reference guide on the back of the speaker can help you set the DIP switches to the appropriate positions for your application without needing to consult this manual. A full explanation of the DIP switches and what they control can be found on

Trim Control

2

The trim control wheel controls the output level of the speaker, from -12 dB to +6 dB.

Each click of the wheel adjusts the output level +/- 0.5 dB.

While turning the wheel, the LED on the front of the speaker will illuminate solid white at 0 dB. This is the recommended level for the speaker.

Turn the wheel all the way counter-clockwise, and the LED on the front of the speaker will flash white, indicating the minimum level of -12 dB

Turn the wheel all the clockwise, and the LED on the front of the speaker will-flash white, this time indicating the maximum level of +6 dB.

When the SM-5 is used with Kali Control Panel in Online Mode, the physical trim wheel on the speaker will not adjust the speaker's output level.

Inputs and Controls

3

Balanced Analog Input

The balanced analog input can accept input via either an XLR or TRS connector.

4

AES/EBU Input and Thruput.

The AES/EBU input can accept input via a BNC connector. The speaker will play the first input channel, and send the second channel out via the AES/EBU Thruput. The input is on the right; the thruput is on the left.

5

RJ45 (Ethernet) Connector

The RJ45 connector allows you to network the speakers together and control them via the Kali Control Panel app. Specific instructions for networking the speakers can be found on page 21.

6

DIP Switches

The DIP switches allow for quick configuration of the loudspeaker without needing to connect with Kali Control Panel. A full explanation of the functionality of the DIP switches can be found on page 15.

7

Power Input and Switch

Connect the provided power cable to the power input to power the speaker. The connector is an IEC, and these are easily replaced in case you need a new or longer cable, or one with a different country-specific wall connector.

Use the power switch to turn the speaker on and off. Be sure to power the speaker off when connecting or disconnecting the power cable, during lightning storms, or during extended periods of disuse. It will not harm your speakers to leave them on if you're using them regularly, nor will it harm your speakers to turn them off using an external switch that cuts power to the speaker.

8

Capacative Touch Logo

The KALI logo over the woofer on the SM-5 is a capacative touch sensor, and controls several useful features on the speaker. A full explanation of the logo's functionality can be found on page 12.

9

Multicolor LED

The LED on the front of the speaker indicates speaker power, as well as a variety of speaker statuses. A full explanation of what colors mean what can be found on page 12.

10

USB-A Input

Under the Kali logo under the woofer on the front of the speaker, there is a USB-A connector. This connector allows you to insert a USB thumb drive to program the speaker's DSP parameters via Kali Control Panel. Instructions for using Kali control panel can be found on page 20.

Inputs and Controls
LED and Capacitive Touch Logo Features

Capacative Touch Logo

The KALI logo over the woofer on the SM-5 is a capicitive touch sensor, and controls several useful features on the speaker.

Single Tap: User or Kali Tuning

Tap the Kali logo once to see if the speaker is processing a user tuning or one of Kali's default tunings.

The LED will flash light blue to indicate a user tuning, and then go back to dark blue.

The LED will remain dark blue if the speaker is using one of Kali's default tunings.

Double Tap: Standby

Tap the Kali logo twice in quick succession to activate standby mode. The LED will turn orange to indicate standby. To wake the speaker up, press and hold the Kali logo, or simply send signal to the speaker.

Press and Hold: Wake Up

While in standby mode, press and hold the logo until it flashes orange. Wait several seconds. The logo will illuminate orange again, and then switch to solid dark blue once the speaker has woken up.

Inputs and Controls
LED and Capacitive Touch Logo Features

LED Features

The LED changes colors to indicate several speaker statuses.

Dark Blue

Solid: Regular operation

The LED will be solid dark blue during normal operation. This indicates that the power is on, the speaker is not in standby mode, and it's playing or ready to play signal.

Flashing: Locate

When using the Locate function in Kali Control Panel, the LED will flash dark blue to indicate which speaker is being located.

White

Solid: Level adjustment: 0 dB

While adjusting level using the trim wheel on the back of the speaker, the LED will change to solid white when you are at 0 dB. Even if you continue to move the trim wheel, the LED will remain solid white for several seconds. This is the recommended output level for the speaker if you aren't using any trim adjustments.

Flashing: Level adjustment: Maximum or Minimum level.

While adjusting level using the trim wheel on the back of the speaker, the LED will flash white at the speaker's maximum (+6 dB) and minimum (-12 dB) output levels.

To raise the ouput level, turn the trim wheel clockwise. To lower the output level, turn the trim wheel counter-clockwise.

Each click of the trim wheel adjusts the output level up or down by 0.5 dB.

Orange

Solid: Standby mode

The LED turns orange when the speaker is in standby mode. Standby mode mutes the amp, and puts the speaker into a low power state. The speaker can be put into standby mode by double tapping the capacitive touch logo, or by programming standby mode within Kali Control Panel.

To take the speaker out of standby mode, press and hold the logo until the LED flashes orange. Wait several seconds for the LED to go back to orange, and then to blue. Playing signal through the speaker will also exit standby mode.

Flashing: Exiting standby

When exiting standby by pressing and holding the logo, the LED will flash orange before turning back to solid orange, and then solid dark blue.

Inputs and Controls
LED and Capacitive Touch Logo Features

LED Features

The LED changes colors to indicate several speaker statuses.

Light Blue

Flashing: User EQ

Single tap the logo to query whether the speaker is playing a user EQ or one of Kali's EQs. It will flash light blue to indicate that it is playing a user EQ. It will remain dark blue if it is playing a Kali EQ.

Flashing, USB connected: Successful EQ update

When programming an EQ using a USB stick, the LED will flash light blue to indicate that the EQ parameters have been successfully programmed. Wait until the LED turns back to solid dark blue to remove the USB stick.

Flashing with Red, USB connected: Unsuccessful EQ update

When programming an EQ using a USB stick, the LED will flash light blue and red to indicate that the EQ parameters have NOT been successfuly programmed. Check to make sure that there is only one file (a .keq file) on the USB stick. Contact customer service if the problem persists.

Green

Flashing: Firmware update

When updating firmware using a USB stick, the LED will flash green to indicate that the new firmware has been successfully programmed. Wait until the LED turns back to solid dark blue to remove the USB stick.

Flashing with Red: Unsuccessful Firmware update

When updating firmware using a USB stick, the LED will flash green and red to indicate that the firmware has NOT been successfuly updated. Check to make sure that there is only one file (a .bin file) on the USB stick. Contact customer service if the problem persists.

Note that the LED will flash blue-red very quickly at the end of the firmware update process. This is normal, and does not indicate a fault.

DO NOT UNPLUG OR POWER DOWN THE SPEAKERS DURING FIRMWARE UPDATE!

Red

Solid: Fault

The LED will illuminate red when there is an amplifier fault. This can be triggered when the limiter or thermal protection are engaged, meaning that the speaker is getting too much signal to play back safely.

If you see the LED turn red, turn down the level of the signal going into the speaker. Failing to do so may result in damage to your speaker.

# Inputs and Controls
DIP Switches

The DIP switches on the back of the SM-5 allow for control of the speaker without the direct use of Kali Control Panel.

Each set of dip switches controls one aspect of the speakers performance, independent of the other switches. Switches 1-3 control the boundary compensations EQs. Switch 4 controls whether the speaker is playing one of Kali's boundary EQs or a user EQ that you have programmed. Switches 5 and 6 control the LF Trim. Switches 7 and 8 control the HF Trim. For this reason, the explanations of the different dip switch settings will only reference the set of switches currently applicable.

Switches 1-3: Boundary Compensation EQs

The boundary compensation EQs help to mitigate the effect of various common room elements on the speaker's frequency response. The boundary compensation EQs can be helpful to increase out-of-the-box performance, but they are not a substitute for proper room calibration. While measuring your room and applying calibration, we recommend turning all boundary compensation off.

Select the boundary EQ that most closely matches your use case. If two or more boundary EQs might work, try both, and select the one that you like the best.
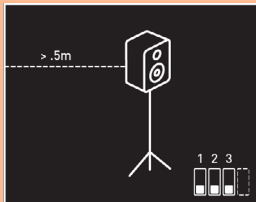
Position 1: Free Space/User Preset 1

The Speaker is on a monitor stand, at least .5 meters (about 20 inches) away from any walls. **This is the ideal position for the loudspeaker.**
        Switch 1: DOWN
        Switch 2: DOWN
        Switch 3: DOWN
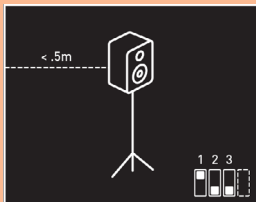
Position 2: Speaker Stand, Close to a Wall/User Preset 2

The speaker is on a monitor stand, and is less than .5 meters (20 inches) from a wall, without being right against the wall.
        Switch 1: UP
        Switch 2: DOWN
        Switch 3: DOWN
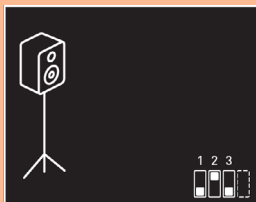
Position 3: Speaker Stand, Against a Wall/User Preset 3

The speaker is on a monitor stand, and is as close to a wall as possible without pinching any cables.
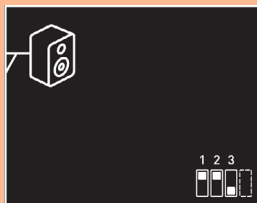   Switch 1: DOWN
        Switch 2: UP
        Switch 3: DOWN

Inputs and Controls
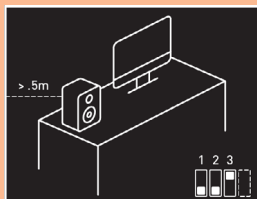## DIP Switches
Switches 1-3: Boundary Compensation EQs

Position 4: Wall-Mounted Speaker/User Preset 4

The speaker is mounted to the wall.
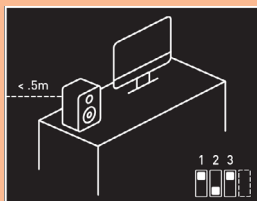>	Switch 1: UP
>	Switch 2: UP
>	Switch 3: DOWN

Position 5: On a Desk, Away From Walls/User Preset 5

The Speaker is on a desk or table, at least .5 meters (about 20 inches) away from any walls.
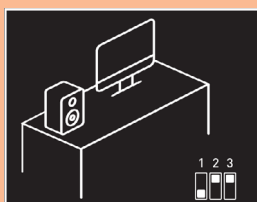>	Switch 1: DOWN
>	Switch 2: DOWN
>	Switch 3: UP

Position 6: On a Desk, Close to a Wall/User Preset 6

The speaker is on a desk or table, and is less than .5 meters (20 inches) from a wall, without being right against the wall.
>	Switch 1: UP
>	Switch 2: DOWN
>	Switch 3: UP

Position 7: On a Desk, Against a Wall/User Preset 7

The speaker is on a desk or table, and is as close to a wall as possible without pinching any cables.
>	Switch 1: DOWN
>	Switch 2: UP
>	Switch 3: UP
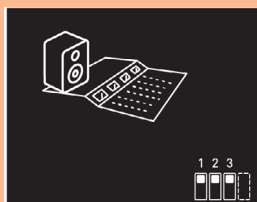
Position 4: Console Bridge/User Preset 8

The speaker is on a recording console. This position can also work well if the speakers are on gear racks on a recording desk, or on speaker stands on a desk, as long as the speakers are at least .5 meters (about 20 inches) away from any walls.
>	Switch 1: UP
>	Switch 2: UP
>	Switch 3: UP

Inputs and Controls
DIP Switches

Switch 4: Kali EQs or User EQs

Switch 4 controls whether the speaker is playing one of Kali's boundary EQs or a user EQ. While the speaker is networked and Kali Control Panel is active, the speaker will play a user EQ regardless.

To see if the speaker is playing a Kali EQ or a user EQ, tap the Kali logo on the front of the speaker, above the woofer. If the LED blinks light blue, the speaker is playing a user EQ. If the LED remains dark blue, it is playing a Kali EQ.

While programming the speaker using a USB stick, DIP switch 4 <u>must</u> be up in order for the speaker to accept the EQ.

Switches 5&6: Low Frequency Trim

The Low Frequency trim will add or subtract 2 dB from the Low Frequency response of the speaker. This can be done as a matter of personal taste, or if the room you're mixing in requires additional adjustment beyond what is offered by the boundary compensation EQs.
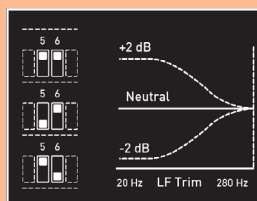
Switch 5: Engage LF Trim
DOWN: LF Trim Disengaged
UP: LF Trim Engaged

Switch 6: Adjust LF Trim
DOWN: -2dB in Low Frequencies
UP: +2 dB in Low Frequencies
Note: Switch 6 does not function independent of switch 5. If switch 5 is DOWN, the LF trim will be DISENGAGED and switch 6 will have no effect.

Switches 7&8: High Frequency Trim

The High Frequency trim will add or subtract 2 dB from the High Frequency response of the speaker. This can be done as a matter of personal taste, or if the room you're mixing in requires additional adjustment beyond what is offered by the boundary compensation EQs.
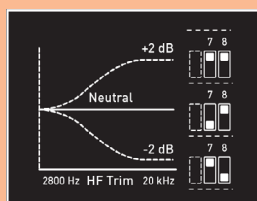
Switch 7: Engage HF Trim
DOWN: HF Trim Disengaged
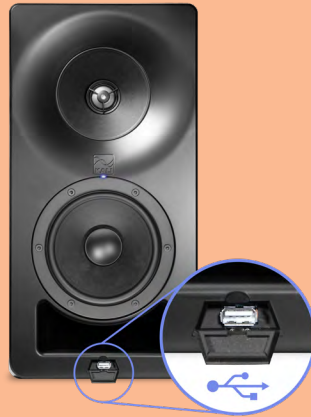UP: HF Trim Engaged

Switch 8: Adjust HF Trim
DOWN: -2dB in High Frequencies
UP: +2 dB in High Frequencies
Note: Switch 8 does not function independent of switch 7. If switch 7 is DOWN, the LF trim will be DISENGAGED and switch 8 will have no effect.

Inputs and Controls
USB Functions

The front of the SM-Series features a USB-A port below the woofer. Flip the cover down to expose the USB port.

Using the USB port, you may update firmware or program room calibration parameters to the SM-5. The USB port will not function while units are in standby (indicated by an orange LED.)

Updating Firmware

From time to time, Kali will publish new firmware to increase the functionality of your SM-Series Speaker. Be sure to register your SM-Series Speaker at kaliaudio.com/register and you will get an email whenever new firmware becomes available.

The latest firmware will always be available for download at kaliaudio.com/santa-monica-how-to, and you can also use Kali Control Panel to update your speaker's firmware, either in online or offline mode.

To update your speaker's firmware, save the firmware file, which is a .bin file to a USB thumb drive with FAT32 formatting. Make sure that this .bin file is the ONLY file on the thumb drive. Insert the thumb drive into your SM-5. The LED on the front of the speaker should flash green to indicate that the firmware was successfully loaded. Once it is done loading, the LED will return to solid dark blue.

DO NOT UNPLUG OR POWER DOWN THE SPEAKERS DURING FIRMWARE UPDATE!

If the LED flashes green and red, there is an issue with either the firmware file or your USB thumb drive. If nothing happens, there is not an appropriate file on your thumb drive.

Loading Room Calibration Parameters

Room calibration parameters may be uploaded to the speaker using a USB thumb drive. You can save .keq files from Kali Control Panel, or from REW. It is recommended to use Kali Control Panel, as this will ensure that the correct calibration files are loaded to the correct speakers.

Mounting

Kali Audio recommends using Triad-Orbit®'s SM-KB1 to mount the SM-5. This mount is sold most places where SM-5s are available. The SM-5 includes 8 x M6 25mm panhead hex screws and 8 x rubber washers to be used with the SM-KB1. To install the SM-KB1:

1. Remove the 4 screws that come installed in the top and the bottom of the SM-5. Discard these or save them in case you want to take the SM-KB1 off at some other time.
2. Slide the SM-KB1 over the speaker. On the top and bottom, you should be able to see through the holes on the SM-KB1 to the holes on the SM-5.
3. Install the rubber washers on the M6 x 25mm screws. Put the washer as close to the screw head as possible.
4. Use the screws to secure the SM-KB1 to the SM-5. Hand tighten them so that the rubber washer is fully engaged.

If you'd like to use a different mount, you will need a mount with a 4.25-inch (108mm) x 2-inch (50.8mm) hole pattern. The mount must also be able to hold the SM-5's 21-lb weight.

Whichever mount you choose, follow the instructions provided by the mount's manufacturer. Kali Audio is not responsible for damage or injury resulting from failing to follow the instructions included with the speaker mount.

Fig. 1: Top of the SM-5 showing mounting hole position and spacing.

Fig. 2: Bottom of the SM-5 showing mounting hole position and spacing.

Fig. 3: SM-5 with KP-1 mount and SW-1 swivel accessory mounted.

Kali Control Panel

Kali Control Panel is a Windows and MacOS application that allows users to control calibration and workflow parameters for our Santa Monica line of speakers. The newest version of the application can be found at kaliaudio.com/santa-moni-ca-how-to

Kali Control Panel is currently in beta, and not all features are available. See the chart below for which features are live and which are still in development.
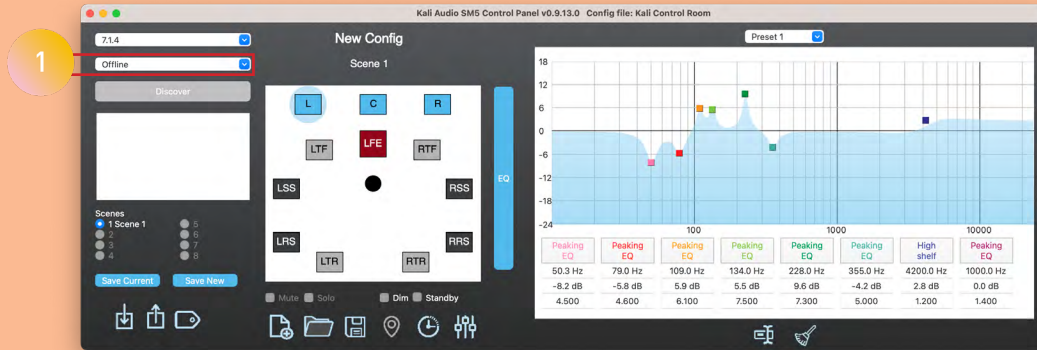
1 Online Mode vs. Offline Mode

To get started in Kali Control Panel, you'll first need to decide whether you're going to use the application in **online mode,** meaning that you're running a network cable to each speaker in your system, or **offline mode**, meaning that you'll program the speakers one at a time using a USB thumb drive.

Online mode is a great choice for large setups, especially immersive setups with overhead speakers, as some speakers might be out of reach for programming. Online mode also allows you to program "scenes," which are full-configuration parameters that you can change at the press of a button. This can be useful if you'd like to switch the tuning profile of your system; for example you could save one scene as "Flat" and another scene as "Dolby Curve." The tuning switch will happen for all speakers, and takes about 5 seconds to load.

Other features, like mute, solo, and locate, are only available in online mode.

Offline mode is a good choice for simpler setups where you don't need to change tunings, especially stereo speakers. Offline mode will allow you to load multiple tunings that are recallable using the DIP switches on the back of the speaker, so if you've got speakers that might be used in multiple rooms in a facility, you can load a preset for each of those locations.

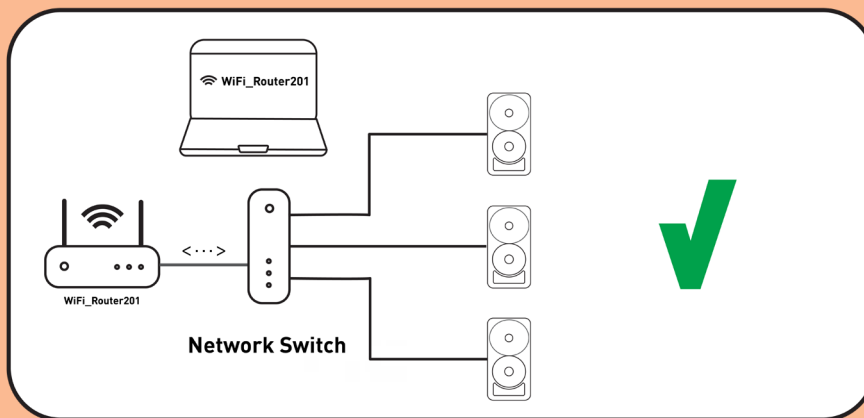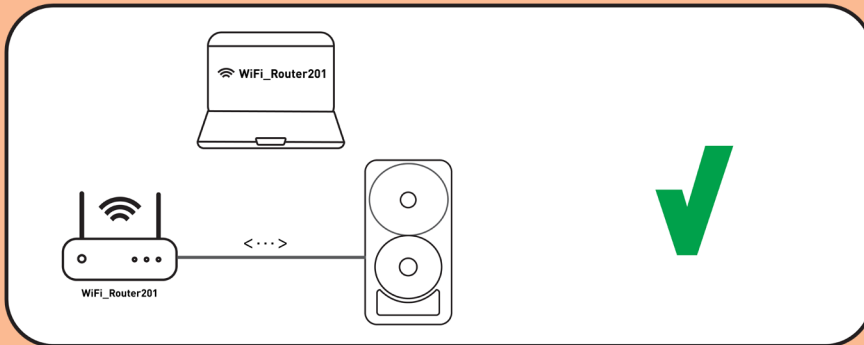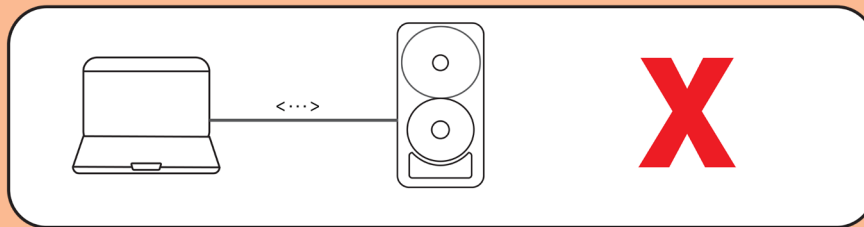|	Online Mode	Offline Mode
8 Parametric EQs	Yes	Yes
Delay	Yes	Coming Soon
Trim	Yes	Coming Soon
Save Presets	Coming Soon	Coming Soon
Dim	Yes	No
Mute	Yes	No
Solo	Coming Soon	No
Locate	Yes	No
Scenes	Coming Soon	No
Name Speakers	Yes	No
Connection	RJ45 (Ethernet)	USB Thumb Drive

Kali Control Panel
Online vs. Offline Mode

Configuring Online Mode

For online mode, you will need to connect each speaker in your system to your network via an ethernet cable. Your computer running Kali Control Panel must be connected to that same network.

Connecting one end of an ethernet cable to your computer, and the other end to a Santa Monica speaker, will not work.

The recommended configuration is to connect each of your speakers to a network switch, and then connect that switch to your modem or wireless router. You may also connect one or more speakers directly to your modem or wireless router.

Configuring Offline Mode

For offline mode, you will need a high-quality USB thumb drive that is formatted for FAT32. The speaker uses .keq files for programming, and .bin files for firmware update. Whenever you're saving a file to the USB drive to load into the speaker, you'll need to confirm that there is ONLY one .keq file or one .bin file on the USB drive. Having more than one file on the drive will result in an unsuccessful load.

Kali Control Panel
Configurations
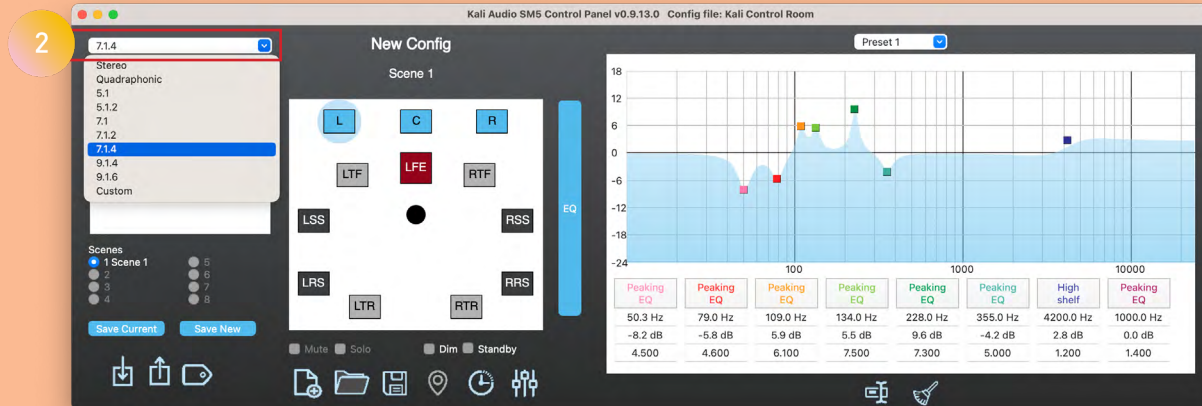
Configurations

Once you've decided whether to use online or offline mode, it's time to define your system's configuration. Use the drop-down menu to find whichever system best matches yours.

Two important things to note:

1: As of now, there are not Kali subwoofers that can communicate with Kali Control Panel, so you can ignore the LFE channel.

2: The number of speakers in your system must match the number of speakers in the configuration, minus the LFE channel. So if you choose "Stereo," you must have 2 speakers in your system. If you choose 5.1, you must have 5 speakers in your system, etc.

If your configuration doesn't match one of the configurations in the drop-down menu, use the "custom" configuration.
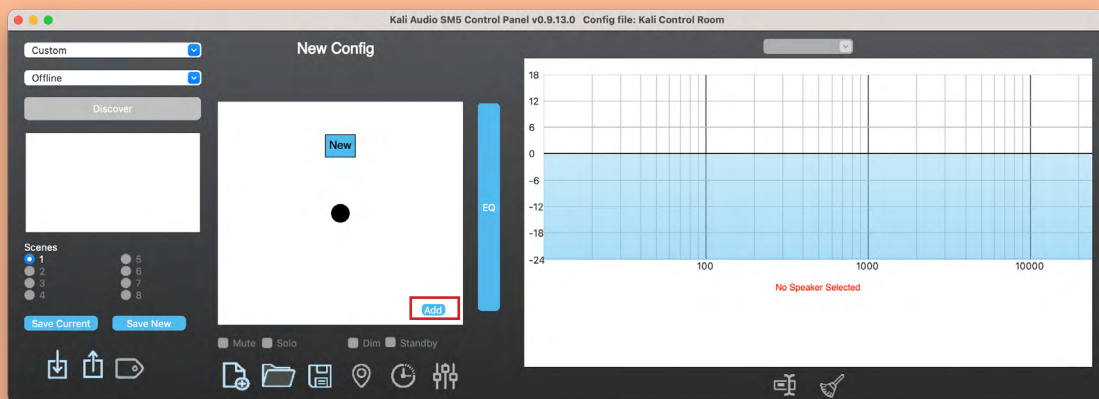
Custom Configuration

In a custom configuration, you may add as many speakers to the configuration as you like, using the Add button in the lower right corner. Once a new speaker is created, double click it to rename it for it's position in your configuration ("Left", "Right", "Center", etc.)

If you have more speakers in your configuration than you would like, simply right click a speaker and select "Delete Custom Speaker"

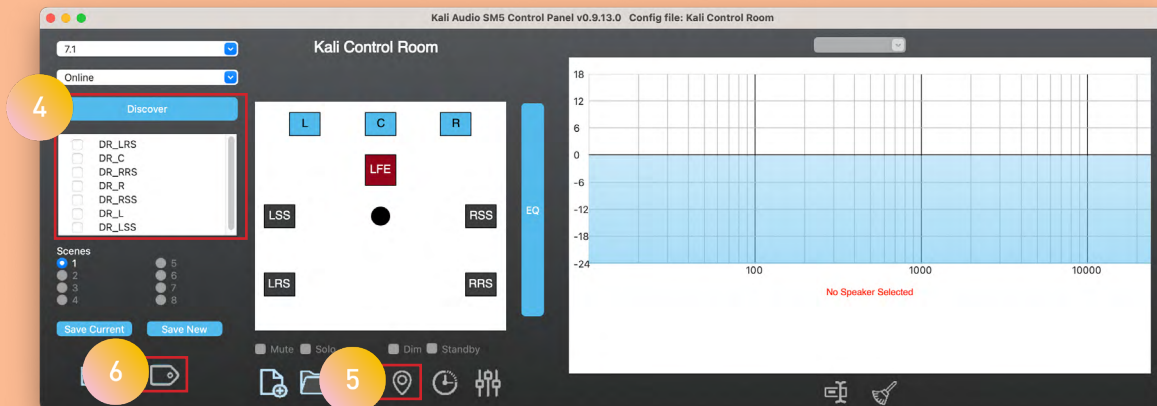Once it's named, drag it to the appropriate position in the configuration.

Kali Control Panel
Configurations & Online Functions
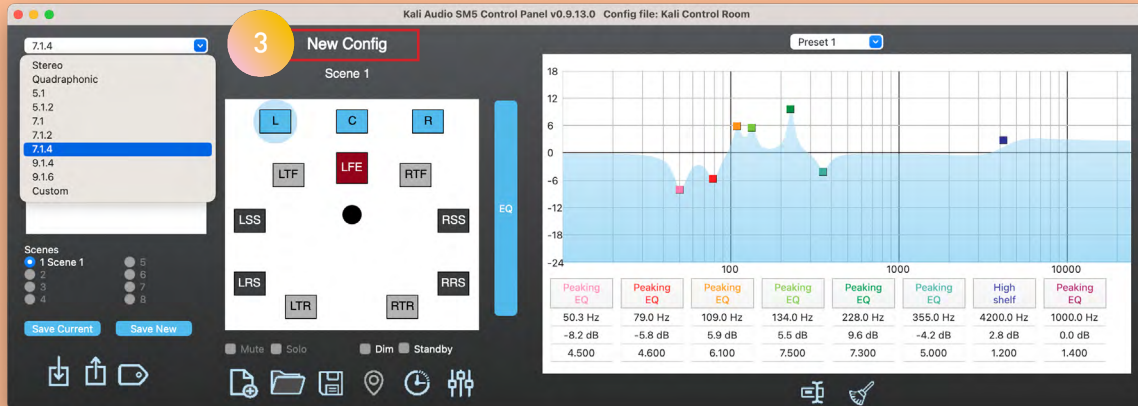
3 Naming Configurations

Once you've gotten your configuration together, double click the name of the configuration ("New Config" by default) to name it. You can name it whatever you like.

4 Speaker Discovery

In online mode, click "**Discover**" to search for speakers on the network. You may have to click more than once for every speaker to show up, or if a speaker drops off the network.

5 Location

Once a speaker is selected in the discovery area, use the locate (⊙) button to determine which speaker it is in your configuration. The locate button will cause the blue LED on the front of the speaker to flash for 10 seconds.

6 Speaker Naming

Once a speaker is selected in the discovery area, use the name tag (⊡) button to rename it. In order to tell which speaker is which, you can use the location feature.

Kali Control Panel
Online Functions
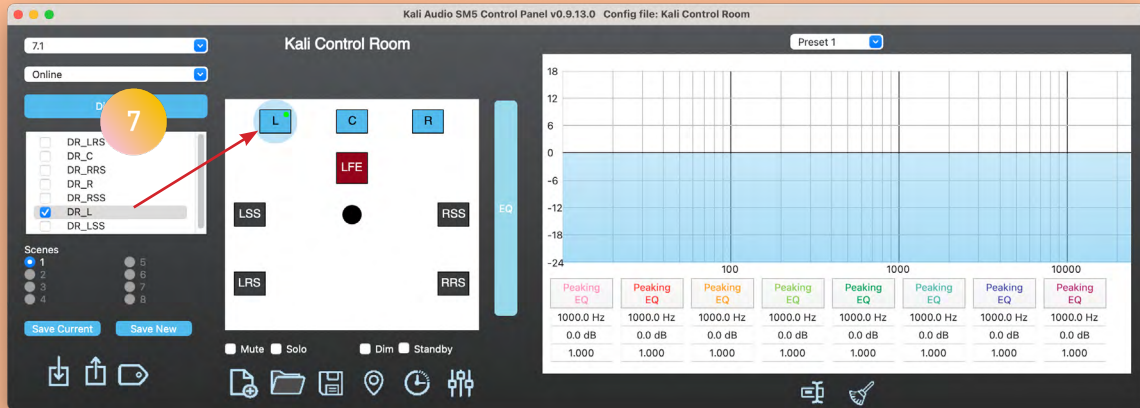
7 Assigning Speakers to Positions

With a speaker named, click it and drag it into a position in the configuration. In the configuration, the upper right corner of an assigned speaker will show a green dot. At the same time, a checkmark will appear to the left the speaker's name in the discovery area.

Repeat this process for every speaker in your configuration.
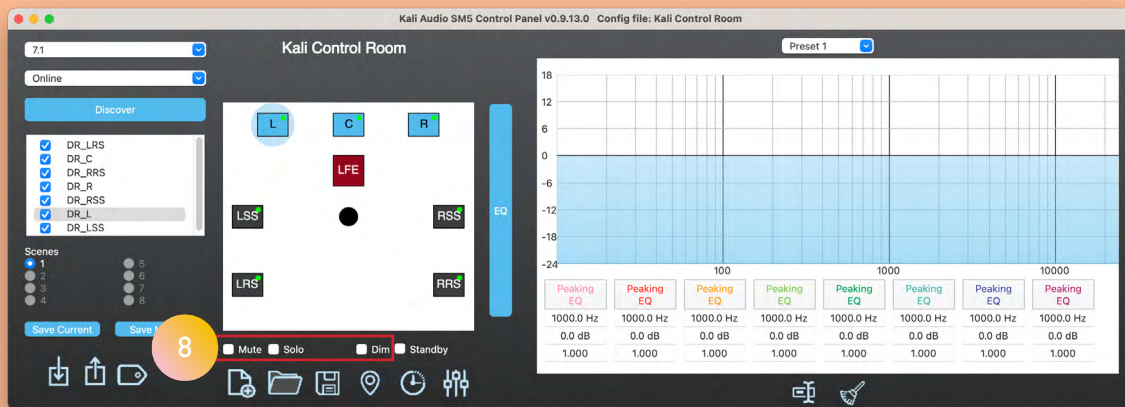

8 Mute/Solo/Dim Functions

Mute will mute the selected speaker(s). A muted speaker will have a red outline. To mute more than one speaker at once, select each and check the box next to "Mute" in turn.

Solo will mute every speaker except for the selected speaker. A solo'd speaker will have a yellow outline. To solo more than one speaker at once, select each and check the box next to "Solo" in turn.

Dim will reduce the output level of all speakers in the system by 20 dB. Blue outlines will appear around all speakers when dim is applied.

# Kali Control Panel
Standby & EQ Panel
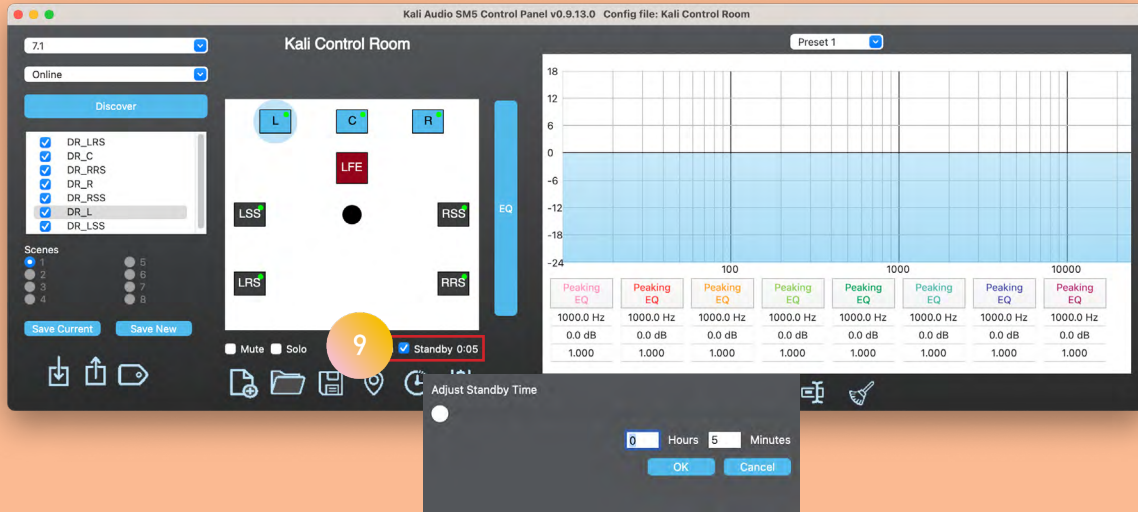
9 Standby Mode

Check the box next to "**Standby**" to enable standby mode. A timer will appear to tell you how many hours and minutes the speaker needs to be idle in order to go into standby. If you wish to change this amount of time, you can click the timer, and a window will appear that allows you to adjust the time before standby.

You can also manually put the speaker into standby mode by double-tapping the Kali logo above the woofer. To take it out of standby, either play signal, or press and hold the Kali logo until the LED turns blue.

The LED will be orange while the speaker is in standby mode.
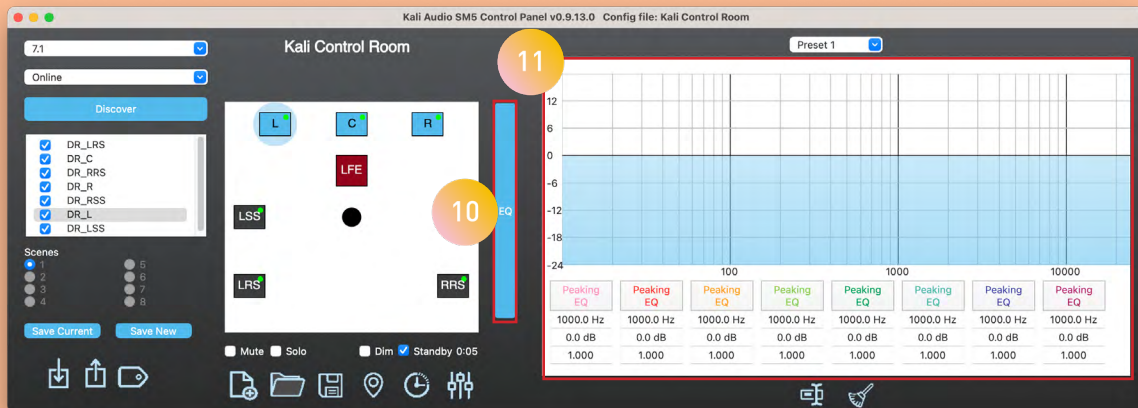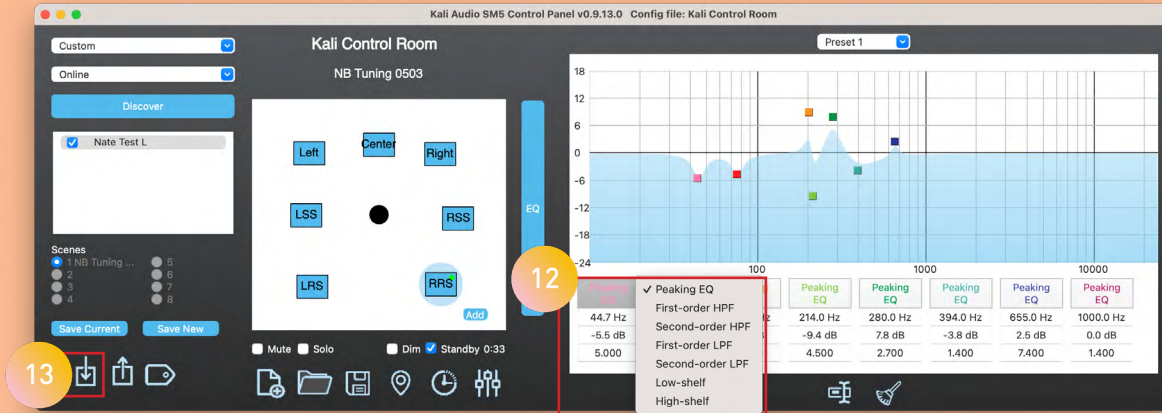

10 EQ Panel Button

Press the "EQ" button to minimize and maximize the EQ panel.

11 EQ Panel

The EQ panel displays the EQ for the selected speaker. To edit EQs, you can click anywhere on the Frequency/Amplitude chart to create a new EQ. Once an EQ is created, you can drag it to adjust the parameters.

# Kali Control Panel
EQ Panel

12 Individual EQs

Individual EQs are displayed with their parameters below the frequency/amplitude chart. For each EQ, you can change the type of EQ that the speaker will process. By default, they are each peaking EQs.

To fine tune EQ parameters, edit the values in the fields for each EQ. From top to bottom, those values are the frequency of the EQ, the amplitude, and the Q.

13 Download EQs

EQs can also be created using Room EQ Wizard (REW,) a freeware room-tuning program. To load .keq files created in REW, or in another instance of Kali Control Panel, click the download ([⤓])button. This will open a finder window, where you can locate a .keq file to load.

Instructions for building .keq files in REW can be found at <u>kaliaudio.com/santa-monica-how-to</u>
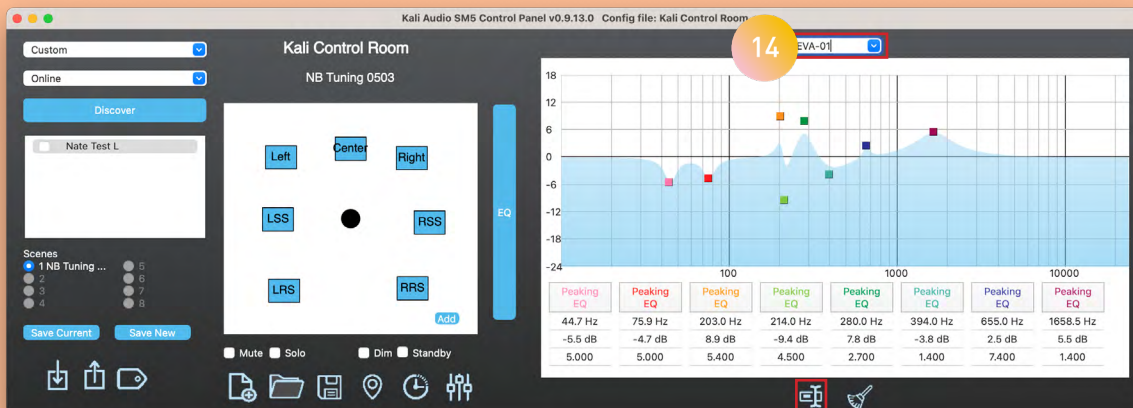

14 EQ Preset

Each speaker can save up to 8 presets. These presets correspond to the boundary EQs that come loaded onto the speaker by default. Presets are saved in the speaker, and do not require KCP to access. Turning DIP Switch 4 up on the back of the speaker will switch from Kali's boundary EQs to your user-defined presets. See <u>page 15</u> of the user's manual for a full explanation of which DIP switch positions correspond to which preset numbers.

To rename these presets, you can click the name of the preset in the dropdown menu, or use the rename ([⧉]) button.

Kali Control Panel
EQ Panel & Delays and Trims
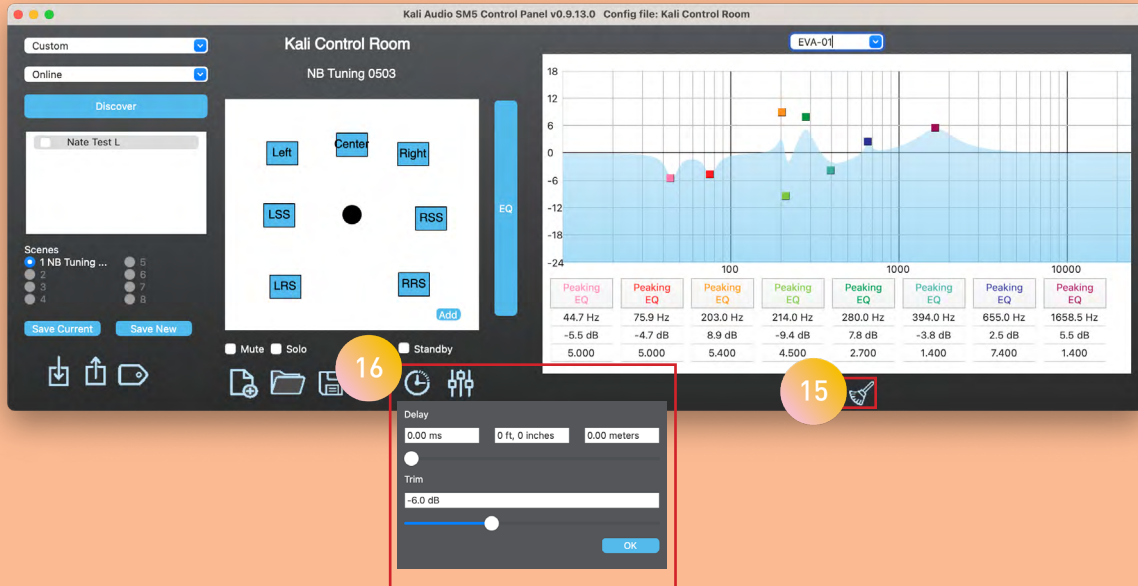
15 Clear EQs

Use the broom (🧹) button to clear the EQs in the current preset. There is no way to undo this action, so it may be a good idea to save the file before clearing EQs.

13 Delays and Trims

Click the clock (🕐) or faders (🎚) icon to open the delays and trims panel. You may enter a value up to 12ms for delay, or use the slider to adjust this value. You'll see that the corresponding distance, in both imperial and metric units, changes in the fields to the right.

You may enter a value between -12 dB and +6 dB for trim. Note that the trim has a resolution of 0.5 dB, so smaller increments will be rounded. You may also use the slider to adjust the trim value. By default, when the speakers are connected via online mode, Kali Control Panel will override the trim setting on the speaker, and the control wheel will not be functional.

Kali Control Panel
## Scenes and File Management
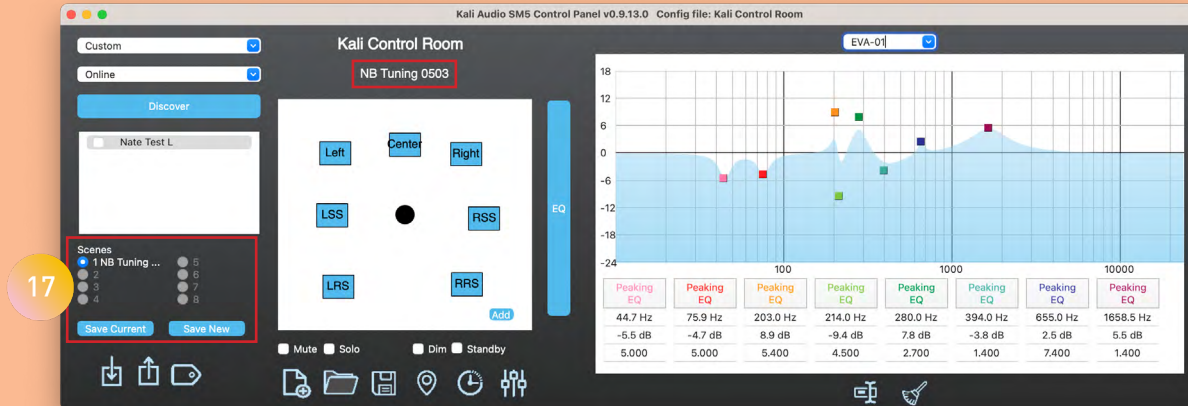
17 Scenes

Scenes allow you to adjust all parameters in a configuration at the press of a button. This can be useful if you want to A/B between two different tuning standards, or adjust the calibration for a different listening position/application, like a client who may be seated outside the mix position. Unlike presets, scenes are saved to the KCP Configuration file, so you'll need to be networked in order to recall them.

By default, when you start a configuration, you will be in Scene 1. You can change this scene's name by clicking it's name under the name of the configuration.

To start a new scene, hit "Save New." This will automatically populate the next available scene. After making your desired changes, rename the scene. Now you can switch between the two scenes using the radio buttons in the scenes area.
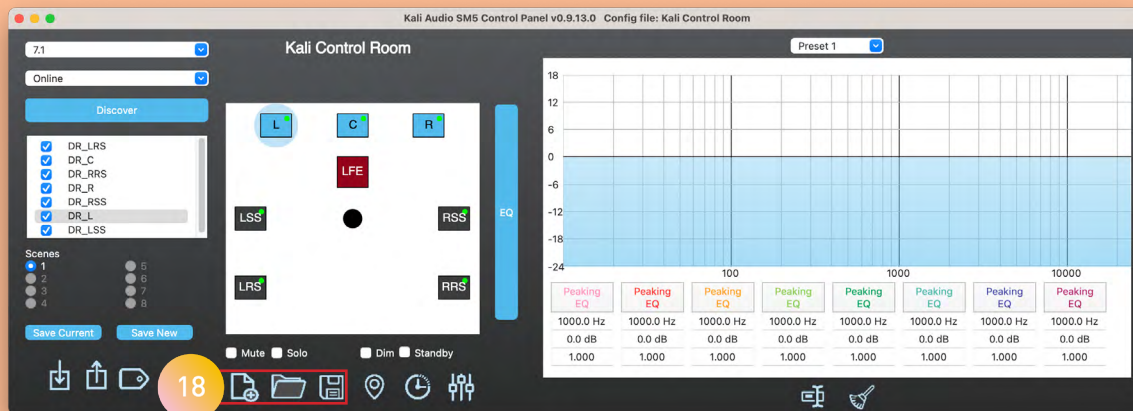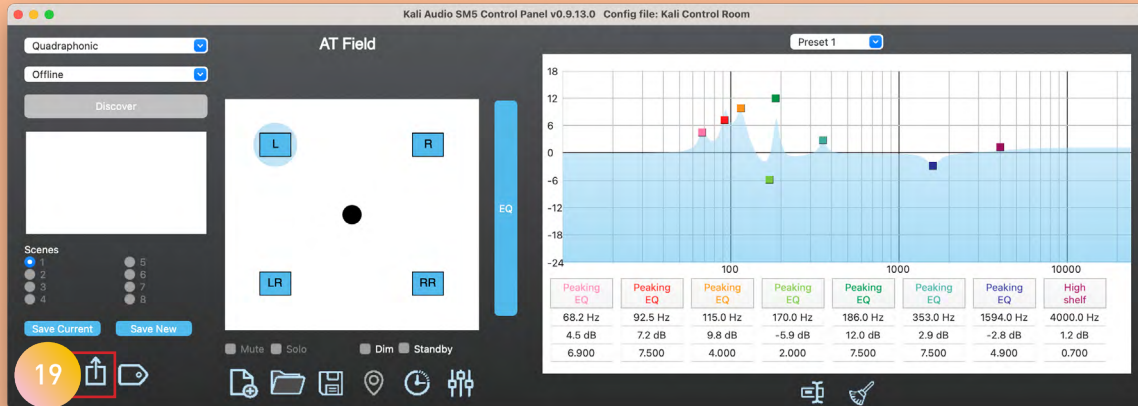

18 New, Load, and Save

Use the **new document** (🗋) button to start a new configuration. Use the **open file** (📂) button to load a previously saved configuration file. Use the **disk** (💾) button to save the current configuration. A configuration will save all the associated scenes you've made.

Kali Control Panel
Offline Mode: Upload Tunings to Speakers

19 **Upload Tunings**

In online mode, tunings are automatically sent to the speakers as soon as you make them. There is no need to upload tunings. As long as you have DIP switch 4 up on the back of the speaker, the speaker will continue to process whatever tunings you build.

In offline mode, you need to upload the tunings into the speakers. As in online mode, DIP Switch 4 needs to be up in order for the speakers to accept and process your tuning files.

Once you've built your configration, use the **upload** ( ) button to start this process.

The first step will be to insert a blank USB thumb drive that is formatted for FAT32. Your SM-5 shipped with a thumb drive, and Kali recommends using that one. If you don't have that one available, use a high-quality USB-A thumb drive. It is important that nothing at all is on this thumb drive.

KCP will walk you through the steps of saving one of the EQs to the thumb drive, then inserting that thumb drive into your speaker to load the tuning(s). When the speaker has successfully taken the tuning, the LED will flash cyan (light blue) and then return to its normal solid dark blue color.

KCP will direct you to insert the thumb drive back into your computer. It will overwrite the previous file with the file for the next speaker.
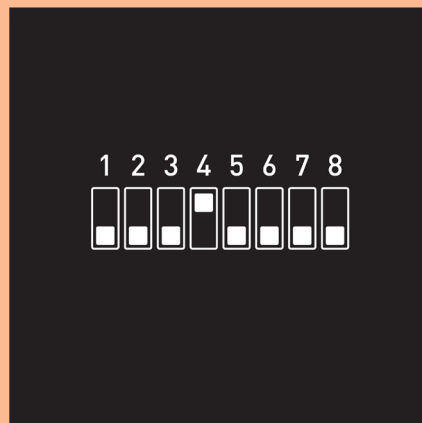
Troubleshooting

1. I took the speaker out of its box, and it is damaged.
If you received a speaker that is obviously damaged, please contact your dealer immediately.

2. The speaker is making no sound.
• Is the speaker plugged in?
• Is the speaker turned on? There should be a blue LED on the front of the speaker if it's on. If this light is off, the speaker is turned off.
• Is the volume turned up?
• Are all cables plugged in to both your playback device and the speaker?
• Are you passing audio via your playback device?

3. The speaker sounds distorted.
• Is the speaker playing too loud? If the LED turns red, your are passing signal that is too hot for the speaker to safely reproduce. Turn down the volume on the back of the speaker. If the distortion goes away, you may be playing the speaker too loud. Besides the problem of distortion, this can be damaging to your hearing if you are close to the speaker.
• Is your source too loud? Turn the volume down at your source device. If the distortion goes away, you may be overdriving the input. If this is the case, turn the volume of the speaker up with the volume control on the back.

4. I hear crackling, hums, or buzzing.
• Is the speaker close to electronics like a television, wireless router, phone, motor, or radio? If so, these can interact with the speaker's electronics in ways that cause unwanted noise. Try moving the speaker at least .5 Meters (20 inches) from any such devices.
• Are there loose objects in the room that may be buzzing with the bass? Low frequencies can cause objects in a room to vibrate loudly. Make sure that small, hard objects like screws and other hard-ware are secure.

5. The speaker stops playing.
• If the speaker stops playing but the blue light stays on, you may be engaging it's thermal protect mode, which will shut the speaker down so that it does not damage itself. Power the speaker down, wait 2-3 minutes, and power it back on.
• If the speaker plays after being turned off and on again, reduce the output level of the speaker, and make sure it is in a cool, well-ventilated area so that it does not overheat.

If none of the above solves your problem, contact Kali's customer service by clicking the "?" or "Help" button in the bottom right hand corner of every page on our website.

Warranty

What does this warranty cover?
This warranty covers defects in materials or workmanship for a period of one year (365 days) after the purchase date of the product. <u>If you have just received your speaker, and it is obviously damaged, contact your dealer IMMEDIATELY to initiate a warranty claim</u>.

What will Kali do?
If your product is defective (materials or workmanship,) Kali will replace or repair the product at our discretion - free of charge.

How do you initiate a warranty claim?
Contact the retailer from whom you bought the product to initiate a warranty process. You will need the original receipt showing the date of purchase. The retailer may ask you to provide specific details about the nature of the defect.

What is not covered?
The following cases are NOT covered by this warranty:
- <u>Damage from failing to reduce output level after the LED illuminates red.</u>
- Damage from shipping
- Damage from dropping or otherwise mishandling the speakers
- Damage resulting from failure to heed any of the warnings outlined on pages 3 and 4 of the user's manual, including:
    1. Water damage.
    2. Damage from foreign substances/objects or substances entering the port tube.
    3. Damage resulting from an unauthorized person servicing the product.
    4. Damage resulting from the product being left plugged in during an elecrical storm.

The warranty applies only in the United States. International Customers should contact their dealer about their warranty policy.