



Project Independence



IN-UNF

ULTRA-NEARFIELD
Studio Monitoring System

Users' Guide

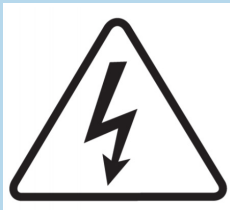
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Important Safety Information

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.

Important Safety Information



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.



DO NOT place laptops or other electronics that are magnetically sensitive directly on the bass unit.

The strong magnets of the bass unit may damage hard drives or other magnetically sensitive components. Kali Audio is not responsible for damage that occurs as a result of placing these devices on the bass unit.

About Your Speakers

Congratulations on your Kali Audio IN-UNF studio monitoring system! The IN-UNF is a unique product that creates a professional mixing environment at arm's length, allowing you to work effectively in places where space and the ability to make noise are at a premium. With the IN-UNF, if you have space to sit down, you have space for a studio.

What Does IN-UNF Mean?

The IN-UNF is part of our Project Independence series of loudspeakers, and it shares its concentric midrange and tweeter with the IN-5 and IN-8. These loudspeakers offer an upgrade from traditional 2-way loudspeakers, giving producers and music makers a world-class monitoring solution at an excellent price.

UNF stands for "Ultra-Nearfield." The IN-UNF achieves reference level of 85 dB at just .8 meters, or arm's length. So you experience the mix to the fullest possible extent from the listening position, but you don't bother others around you.

Features

Desktop Monitoring and Boundary EQs

The IN-UNF has been developed specifically as desktop monitoring system. As such, the IN-UNF's tuning takes reflections from your desk into account, providing neutral sound in what is normally a difficult acoustic environment. Combined with the boundary EQs, which can be adjusted for the system's proximity to walls, this allows for reliable monitoring in a variety of tight spaces.

A full diagram of the boundary EQs and other user-definable parameters can be found on pages 14-17 of this manual.

3-Way Coincident Architecture

The IN-UNF uses the same 4-inch mid-range driver and 1-inch soft dome tweeter as the IN-5 and IN-8. The mid-range driver and the tweeter are coincident, meaning that they share the same acoustic center and that they are phase aligned. You might have heard the terms "coaxial" or "concentric" to describe this arrangement. Those terms are technically correct, but ignore the time-aligned nature of Project Independence's midrange and tweeter.

Substantial work was done to optimize the mid-range driver not only for its own acoustic performance, but also for its role as the waveguide for the tweeter. The shape is precisely engineered to allow for controlled directivity at mid range to tweeter crossover, ensuring accurate summing both on- and off-axis. Excursion on the midrange is limited to less than 1mm peak to peak, so that the oscillation of the mid-range does not have a negative effect on the response of the tweeter.

About Your Speakers

Features

DSP

The IN-UNF is equipped with digital signal processing (DSP.) The DSP controls the loudspeaker's tuning, the limiter function, the crossover, the boundary EQs, and user-definable bandpass trims.

System Overview



1 Bass Unit

The bass unit is the heart of the IN-UNF. It houses two long-excursion, horizontally opposed 4.5-inch woofers. The fact that they are horizontally opposed means that no net vibration from the bass unit will be passed from the IN-UNF to your desk or anything that you set on top of the bass unit.

The bass unit handles all material below 280 Hz, and the two woofers are summed to mono. Harmonics above 280 Hz will allow even very low sources like bass guitar to be perceived in stereo.

The bass unit also houses the IN-UNF's amplifier and other electronics, the system inputs, the connections to the satellites, and the physical controls. A complete explanation for all of these components can be found on the next two pages.

2 Satellite Speaker

Each satellite speaker houses a coincident 4-Inch midrange driver and 1-Inch soft dome tweeter. The satellites handle all content above 280 Hz. They are identical, and it does not matter which is placed right and which is placed left.

3 Satellite Puck

Rest each satellite speaker in a satellite puck. Adjust the position of the satellite speaker within the puck so that the tweeters are pointed towards your ears. There is a printout that will help you get the pucks in their optimal position in the quickstart guide.

Full Specifications

Self-Powered:	Yes
Amplifier Class:	D
Power Configuration:	2-Channel, each bi-amped (LF+MR/HF)
Midrange/HF Power Per Channel:	60W (Continuous)
LF Power Per Channel:	100W (Continuous)
HF Driver:	1-Inch Textile Dome Tweeter
Midrange Driver:	4-Inch Optimized Profile Paper
LF Driver:	4.5-Inch High-Excursion Woofer
LF to Midrange Crossover:	280 Hz
Midrange to HF Crossover:	2800 Hz
Frequency Response: (-10dB)	39 Hz- 25 kHz
Frequency Range: (+/-3dB)	47 Hz - 21 kHz
Recommended Listening Distance:	.8 meters
Max SPL: (Peak at 1M)	103 dB
System THD: (85dB SPL at .8M)	<3% from 80 Hz to 1.7 kHz <2% above 1.7 kHz
Stereo Inputs:	3.5mm (Unbalanced, -10dBV) Optical (Digital) USB-C (Digital) TRS (Balanced, +4dBu)
Conversion:	24-bit/48kHz
Trims:	LF, MR, HF +/-2dB, LF +4dB
Bass Unit Height/Depth:	11.6 Inches (29.4 cm)/5.25 Inches (13.3 cm)
Bass Unit Width:	19.4 Inches (49.4cm)
Satellite Puck Desk Area(circle):	22.2 square inches (143 square cm)
Satellite Diameter:	6.25 Inches (15.8 cm)
Weight:	25 lbs (11.2 kg)

Inputs and Controls



Inputs and Controls

3.5mm Input

1 The 3.5mm input allows convenient connection to a wide range of devices. In addition to devices with 3.5mm outputs, adapters for other output unbalanced analog connectors are easy to find.

TRS Inputs

2 The TRS inputs allow connection to professional audio devices, as well as high end receivers with balanced outputs.

Dip Switch Quick Reference Guide

3 Scan the QR code to open a reference guide that will help you set the dip switches to the appropriate positions for your application. Also see pages 14-17 of this manual.

Dip Switches

4 The dip switches control Boundary EQ, bandpass trims, and the position of the system. A full explanation of the operation of the dip switches can be found by scanning the QR code.

USB Input

5 The USB Input allows you to connect to a computer or tablet without needing a separate audio interface. Use with an Apple iPad will require a camera adapter kit, sold separately. Use with certain smartphones may be possible, but is not supported.

Optical Input

6 The optical input allows convenient connection to most televisions and other devices like Blu-Ray players and gaming consoles.

Sleep Switch

7 Use the sleep switch to put the unit into standby for low power operation when not in use. The LED will change to red. Hit the sleep switch again to bring the unit out of standby. Standby will only engage automatically if the digital inputs are not connected. You will need to use this switch if you wish to put the unit into standby while using the digital inputs.

Volume Control

8 The volume control allows users to adjust the output of the speaker from $-\infty$ (Muted) to +6 dB. There is a center detent at the +0 dB setting, and this is where Kali recommends you leave the volume setting.

Power Input - On/Off Switch

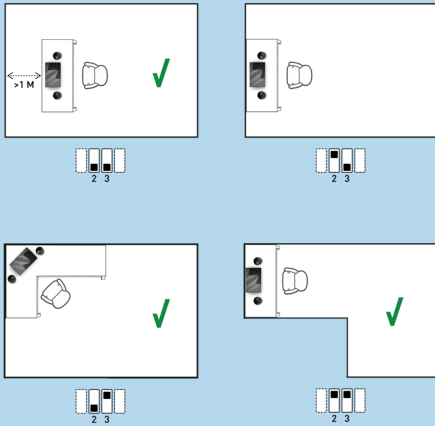
Plug the provided power cord into the power input.

9 Use the on/off switch to power 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. Turning the power on and off externally, for instance via a wifi power switch, will not harm the device.

Satellite Outputs

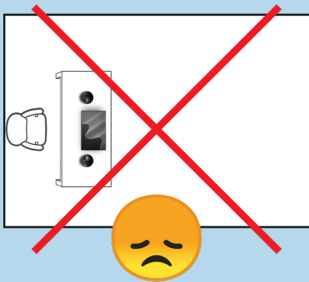
10 The satellite outputs should be connected with the provided banana plugs to the satellite speakers. They are color coded, so connect red to red and black to black. They are also labeled left and right. When connecting, "right" refers to your right when you're at the listening position, facing the system. See the bottom of page 12 for more details.

First Time Setup

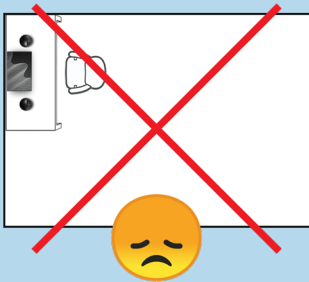


Step 1: Position your system in your room.

Place the system in the middle of the room, against a wall, or in a corner. You can even place the system in a carrel, or put your desk so that you have a wall behind you, and immediately to either side.



Avoid setting the system up so that your back is up against a wall. This will cause bass buildups between the system, the wall, and your listening position. This is not a valid position for monitoring.



When setting up in a corner, aim the system 45 degrees away from the walls. Avoid setting up so that one side is within a meter of a wall, with the other side being further from a wall.

Make sure the back of the IN-UNF is within a meter of the corner.

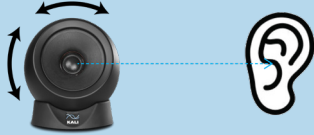


DO NOT place the bass unit on the floor. The bass unit is made to be used on your desk. Using it on the floor will result in poor sound quality. This is not a valid position for monitoring, and it will likely not even be fun to listen to.

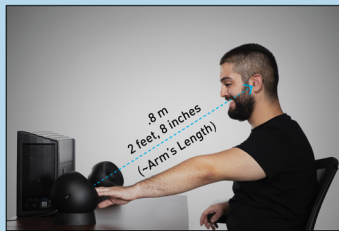
First Time Setup

Step 1: Position your system in your room.

Aim the tweeters of the satellites so that they're aimed directly at your ears. Experiment with moving them slightly in and out to get the best possible stereo picture.



Do not use speaker stands or any other apparatus to raise the height of the satellites to ear level. They should sit in their pucks on your desk in the same plane as the bass unit. Rotating the pucks to aim the tweeters at your ear will yield the best results.



Position yourself about arm's length from the system.



Step 2: Decide on vertical or horizontal placement for the bass unit.

There is not necessarily an acoustic advantage to either position, so choose the one that works best with the space on your desk.



First Time Setup



Step 3: Use the printouts from the quickstart guide to position your system on your desk.

Place the printouts under the front corners of the bass unit, and then place the satellites in the marked position on the printout. Carefully slide the printouts out when done, and place them aside.



If you've lost your printouts, you can download new ones from the Kali Audio website.

Step 4: Plug in the IN-UNF.

The banana plugs from each satellite connect to the left side of the IN-UNF bass unit.



If the bass unit is horizontal, the right satellite goes on top, and the negative (red) cable goes towards the back.

If the bass unit is vertical, the right satellite goes towards the back, and the negative (red) cable goes on bottom.



Plug in whichever input you're using, then plug in power and turn the unit on. If you're connecting multiple inputs, note that all active inputs will play at the same time. Make sure to turn off any sources for inputs that are not actively in use.

First Time Setup



Step 5: Place the rest of your deskscape around and on the IN-UNF

Without disturbing the arrangement of the satellites in relation to the woofer, place your computer, monitor screen, laptop, keyboard and/or mouse on your desk.



DO NOT place laptops or other electronics that are magnetically sensitive directly on the bass unit.

The strong magnets of the bass unit may damage hard drives or other magnetically sensitive components. Kali Audio is not responsible for damage that occurs as a result of placing these devices on the bass unit.

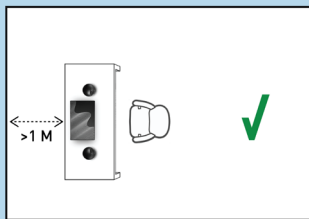
DIP Switches

Switch 1: Bass Unit Position



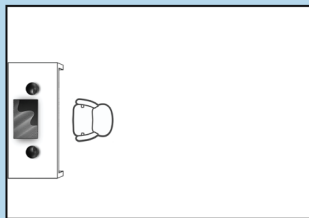
Switch 1 DOWN: Bass Unit Horizontal
Switch 1 UP: Bass Unit Vertical

Switches 2 & 3: Room Position



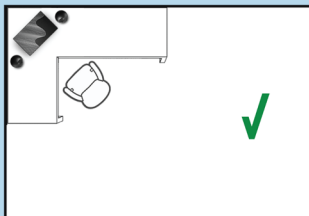
Position 1: Desk in the center of the room (More than a meter away from any walls.)

Switch 2: DOWN
Switch 3: DOWN



Position 2: Desk against a wall

Switch 2: UP
Switch 3: DOWN



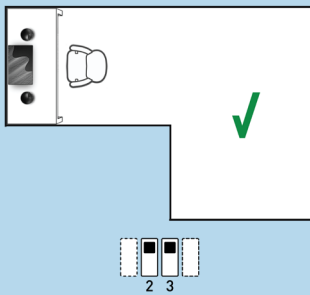
Position 3: Desk in a corner (back of the IN-UNF is within 1 meter of the corner.)

Switch 2: DOWN
Switch 3: UP



DIP Switches

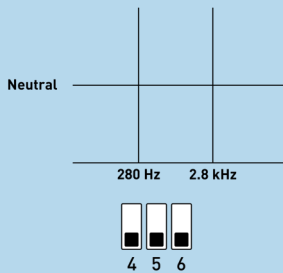
Switches 2 & 3: Room Position



Position 4: Desk in a carrel (wall against the back of the speaker, walls or other boundaries immediately to both sides of the desk.)

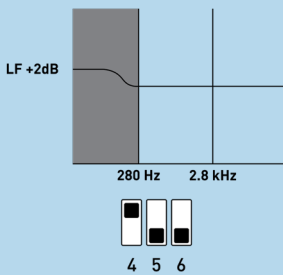
Switch 2: UP
Switch 3: UP

Switches 4, 5 & 6: EQs



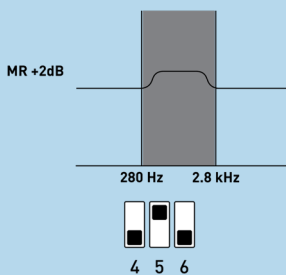
Neutral

Switch 4: DOWN
Switch 5: DOWN
Switch 6: DOWN



2 dB Low Frequency Boost

Switch 4: UP
Switch 5: DOWN
Switch 6: DOWN

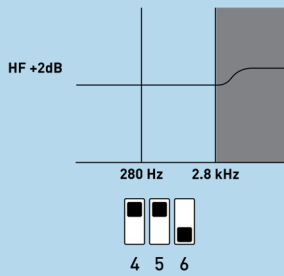


2 dB Midrange Boost (HF and LF Cut)

Switch 4: DOWN
Switch 5: UP
Switch 6: DOWN

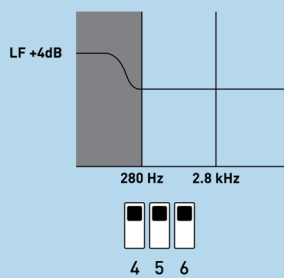
DIP Switches

Switches 4, 5 & 6: EQs



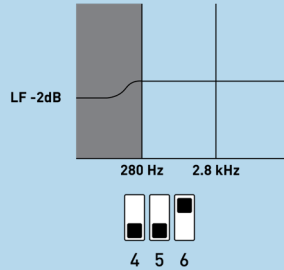
2 dB High Frequency Boost

Switch 4: UP
Switch 5: UP
Switch 6: DOWN



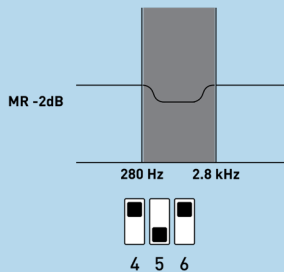
4 dB Low Frequency Boost

Switch 4: UP
Switch 5: UP
Switch 6: UP



2 dB Low Frequency Cut

Switch 4: DOWN
Switch 5: DOWN
Switch 6: UP

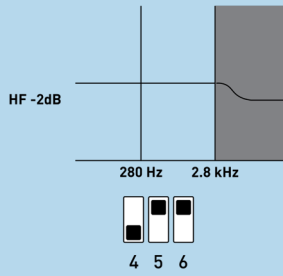


2 dB Midrange Cut (HF and LF Boost)

Switch 4: UP
Switch 5: DOWN
Switch 6: UP

DIP Switches

Switches 4, 5 & 6: EQs



2 dB HF Cut

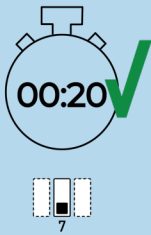
Switch 4: DOWN

Switch 5: UP

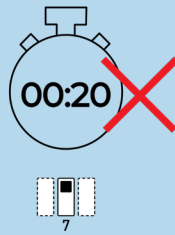
Switch 6: UP

Switch 7: Standby

Standby On



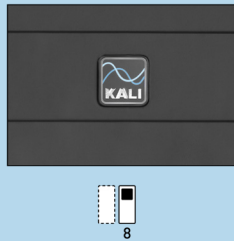
Standby Off



Switch 7 DOWN: Standby On

Switch 7 UP: Standby Off

Switch 8: Kali Logo LED



Switch 8 DOWN: LED On

Switch 8 UP: LED Off

Troubleshooting

1. I opened the speaker, 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 bass unit if it's on. If this light is off, the speaker may be turned off or the LED might be disengaged with the DIP switches.
- 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? 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 and turn your source down.

4. I hear cracks, hums, or buzzing.

- Are you using RCA?
 - a. If "yes," be advised that RCA is an unbalanced connection, and is prone to picking up noise as signal travels through the cable. This is especially true if you are using very long RCA cables.
- Is the speaker close to electronics like a television, wireless router, phone, motor, or radio? If so, these can interact with the speaker's magnet 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 hardware are secure.
- Do you hear the offending sound with nothing plugged into the inputs? If no, there is an issue elsewhere in your signal chain that you'll need to troubleshoot.

5. I cannot adjust the volume via my computer.

- If you're using a Windows computer, restart the computer. Make sure that you have the newest audio drivers installed.

If you're still having trouble, contact Kali's customer service for help!