

MICROMAIN45

Owner's Manual





PRODUCT REGISTRATION

Please complete the product registration form for your Barefoot Sound studio monitors to be registered for warranty and product updates.

[CLICK HERE TO REGISTER NOW](#)



PROTECT YOUR BAREFOOT MONITORS

We will keep the model number and date of purchase of your new Barefoot Sound product on file to help you refer to this information in the event of an insurance claim such as loss or theft.

MICROMAIN45

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MicroMain45 Description

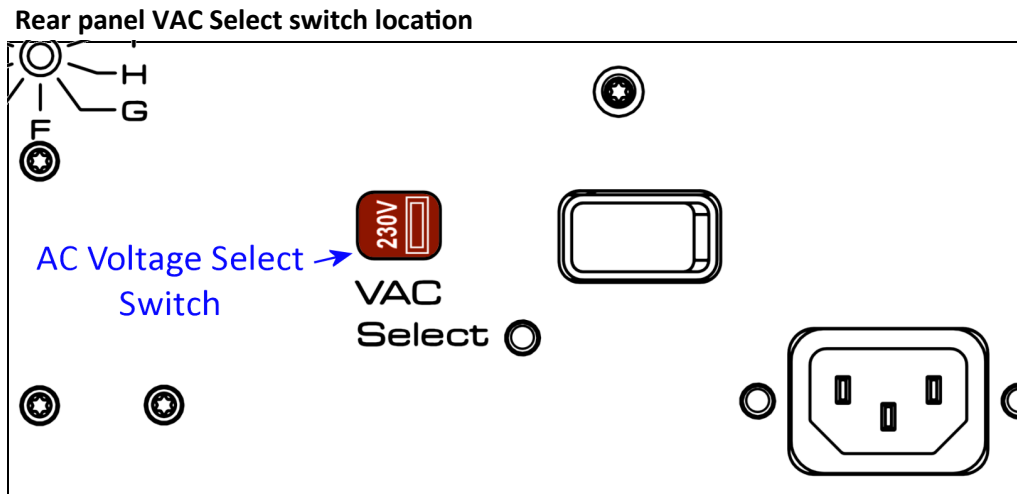
Featuring the same signal path, amplifier, and driver technologies as Barefoot Sound's flagship MiniMain12, the MicroMain45 is streamlined to deliver Barefoot's renowned resolution and translation at a more affordable price. This expertly designed 3-way speaker includes a 1-inch radiator tweeter, two 2.5-inch aluminum-cone midrange drivers, and an 8-inch aluminum-cone subwoofer, offering an impressive 40Hz–45kHz frequency response. This 610-watt studio

monitor utilizes amplifier stages for maximum sonic transparency, while Barefoot Sound's state-of-the-art MEME™ technology provides four voice models, allowing you to reference different types of speakers directly from the MicroMain45. Ideal for small and mid-sized project studios, the Barefoot Sound MicroMain45 delivers the high-level performance of the MicroMain27 and MicroMain26 in a value-packed nearfield monitor.



Warnings!

The Mains Voltage Select switch (VAC Select) on the rear panel must be in the 230V position for AC power line voltages over 132 VAC. Connecting the power cord to AC power line voltages over 132 VAC while the VAC Select switch is in the 115V position will damage the amplifier. Such damage is NOT covered under warranty.



Please read and follow the safety information below:

- Do not remove the rear amplifier panel. There is a risk of electric shock. No user serviceable parts are inside. Please refer service issues to a qualified technician.
- Do not operate this device with an ungrounded mains power cable or a mains connection that is ungrounded. This may result in personal injury.
- Do not place open flames such as lighted candles on or near this device .
- Do not expose this device to water, rain or high humidity. Do not place objects filled with liquids, such as vases, on or near this device.
- This speaker requires adequate airflow to maintain proper cooling. Do not obstruct airflow around the speaker. Do not run the speaker upside down (mains power connector on top).
- Do not operate this device in ambient temperatures above 30°C (85°F). Over-temperature may cause device failure.

Caution! This speaker is capable of producing sound pressure levels in excess of 85dB which may cause permanent hearing damage. Always verify that input signal levels are attenuated before powering on the speaker.

Input and Controls

USB



[USB] The universal serial bus connector is for factory adjustments and calibrations. This connector is NOT an audio input.

INPUT



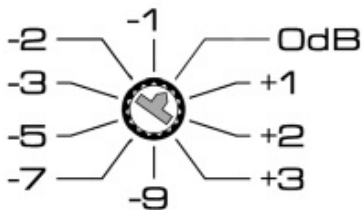
[INPUT] XLR connector is designed to receive analog balanced line level audio signal from sources such as preamplifiers, sound cards, monitor controllers and mixing consoles. Pin 1 is tied to chassis ground. Pins 2 & 3 are fully floating differential inputs. Pin 3 must be referenced to ground for single ended input signals. The analog signal is converted to 24bit/192kHz digital audio via a precision, ultra-high-fidelity analog to digital converter section inside the MicroMain45.

VOICE



[VOICE] 3.5mm stereo phone jack for connection to MEME™ Selector Switch. See MEME™ settings and connection details. The default setting with no switch connected is Flat.

LEVEL

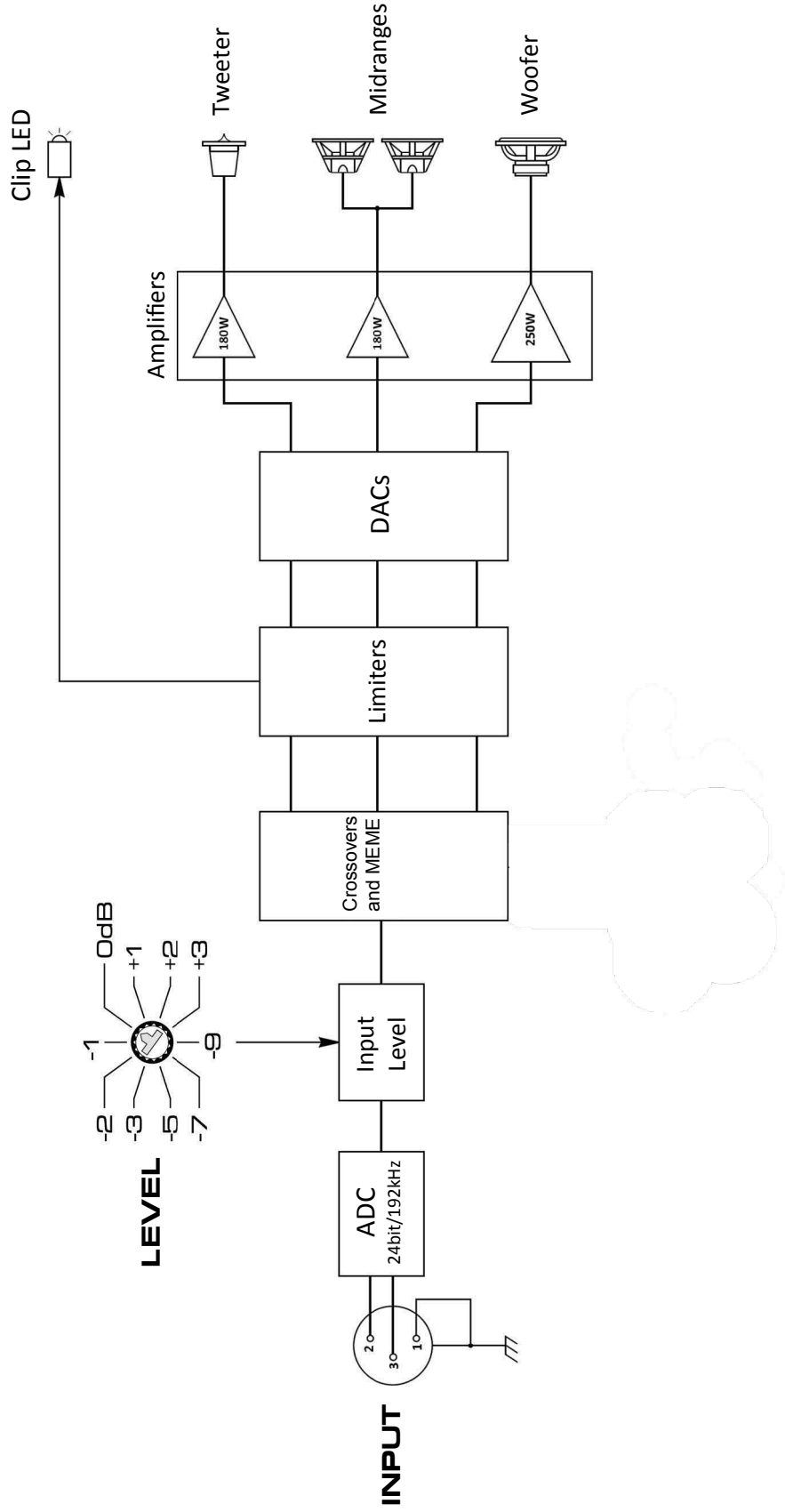


[LEVEL] Ten position rotary switch adjusts the input level in precise increments from +3dB to -9dB. The level steps are as follows: +3, +2, +1, 0, -1, -2, -3, -5, -7, -9dB.

Startup

1. Verify that the AC Voltage select switch on the rear panel is in the correct position for the AC voltage in your facility (see warnings on previous page for details) then plug in grounded mains power cable.
2. Set Level control to nominal desired input sensitivity.
3. Ensure that the audio source signal is fully attenuated.
4. Power on the speaker with the rocker switch located on the rear panel above the mains connector. The LED indicator on the front of the speaker will illuminate Red for a couple of seconds then turn Aqua.
5. Turn up the audio signal and enjoy!

Signal Flow Diagram



Protection Features

Limiters

Peak Limiter

The Woofer, Midrange and Tweeter channels have individual Peak Limiters designed to protect each driver from high amplitude, short duration audio input signal spikes that might cause damage due to over excursion of the voice coil. These limiters are implemented digitally within the DSP in such a manner that they have zero effect on the audio signal below their thresholds. The front LED indicator light will flash RED when a Peak Limiter on any of the driver channels is triggered. The duration of such events is only a fraction of a second. Therefore, the LED flash may appear pink or orange as the eye naturally blends the normally aqua-blue color of the LED with the red.

RMS Limiter

The Woofer, Midrange and Tweeter channels have individual RMS Limiters designed to protect each driver from long duration, high amplitude audio input signals that might cause thermal damage due to the voice coil. These limiters are implemented digitally within the DSP in such a manner that they have zero effect on the audio signal below their thresholds. The front LED indicator light will flash RED when a RMS Limiter on any of the driver channels is triggered.

Caution: Signals large enough to trigger any of the limiters can generate very high sound pressure levels that may result in permanent hearing damage.

Over Current

In the event of a large audio input signal that might damage the amplifiers or power supply due to current overload, the power supply is designed to enter into Over Current protect mode. This state typically results from a large, broadband input signal burst that flat lines the limiters on all three channels simultaneously. While the fault persists the amplifier power rails shut down, the speaker goes quiet, and the front panel LED turns red. Once the audio input signal is turned down the speaker should reboot within a few seconds. If the speaker fails to reboot or the LED light goes out completely, disconnect the audio input cable and power cycle the speaker. Verify the signal level is attenuated before reconnecting audio input cable.

Caution: Signals that cause Over Current protection to trigger can generate very high sound pressure levels that may result in permanent hearing damage.

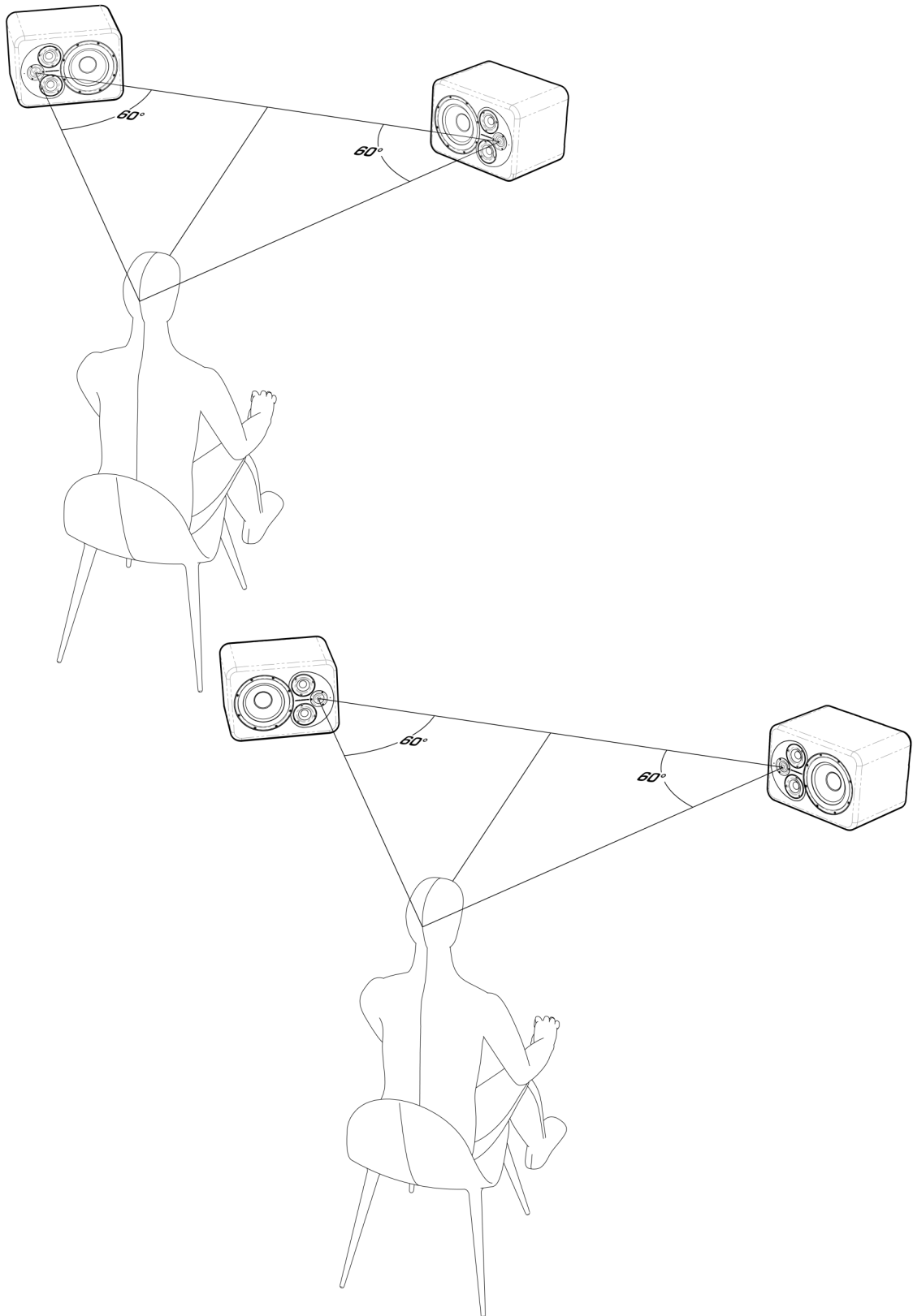
Positioning

The acoustic center of the MicroMain45 is located at the center of the tweeter. The MM45 is designed to work equally well as a nearfield or mid-field monitor. The minimum recommended listening distance is 1 meter (39.4"). While speaker positioning can often be dependent on the nature of the room, a good starting point is to create an equilateral triangle between the two speakers and the listening position. The speakers should be angled inward so the tweeter axes aim towards the listener's ears, crossing a few inches behind the head.

The speakers should be positioned symmetrically with both tweeters oriented to either the outside or inside. Both orientations are acceptable, however, we recommend starting with the tweeters oriented to the outside. You may need to experiment to determine which arrangement is optimal in your room.

Since every room has its unique characteristics, the optimal listening distances, speaker height and distances from walls are also a matter for experimentation.

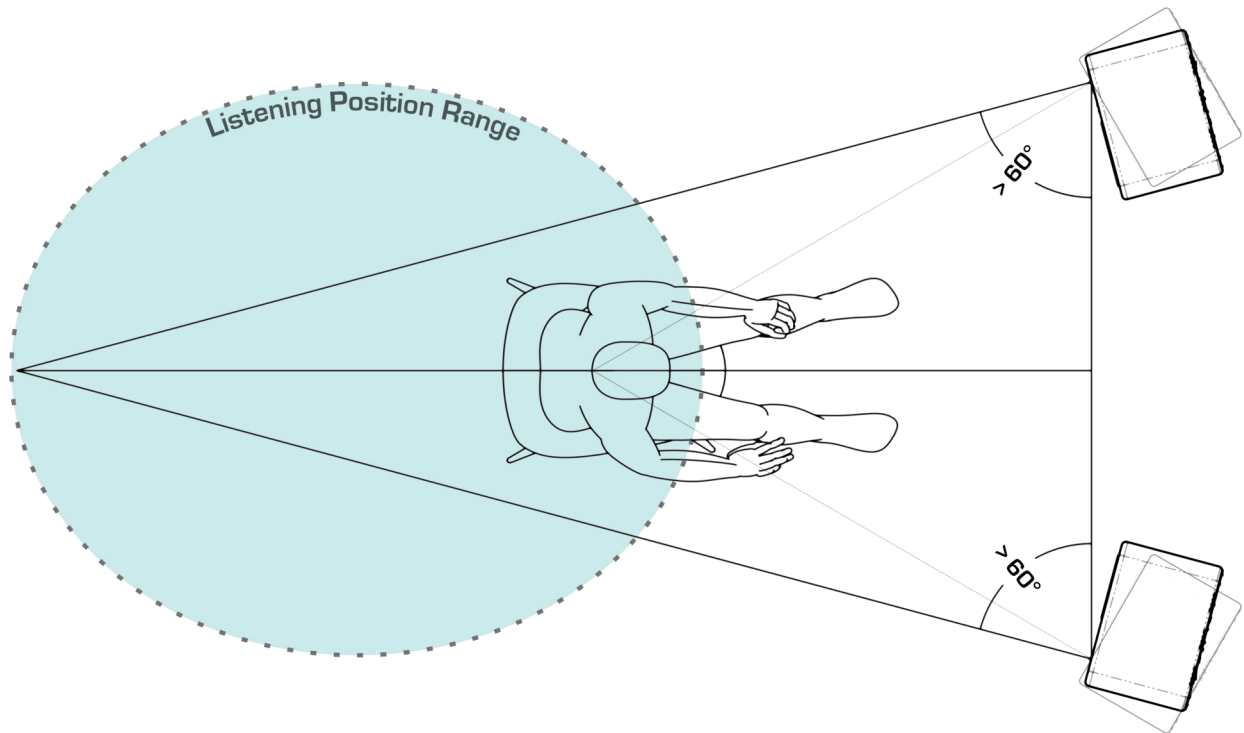
Example: Symmetrical stereo arrangements.



Widening the Stereo Field

We generally recommend angling the speaker axes in towards the listening position to create an equilateral triangle as described above. This yields the most accurate high frequency response and the sharpest stereo image at the center listening position. In some cases, however, the listener might change positions frequently. Or there might be multiple listeners. In such situations it may be desirable to have a wider and less focus stereo field which provides better coverage over a range of listening positions. This can be achieved by aiming the speaker axes more forward such that the axes cross further behind the center listening position. The figure below illustrates the general principle and is not meant to be an exact measure of speaker angles or optimal listening positions.

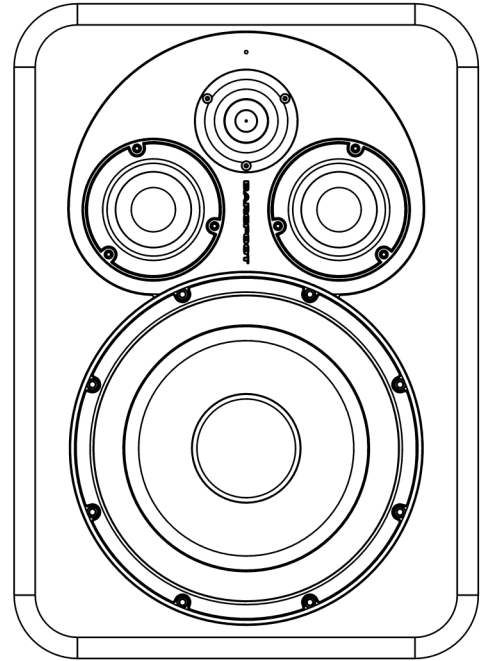
Since the MicroMain45 has such wide off-axis dispersion, the angle relative to the listener can be changed by up to 10 degrees with less than 1 dB variance in the frequency response across the audible spectrum. Angling the speakers forward in this manner will somewhat defocus the center stereo image while providing generally better imaging over a range of listening positions. For some users this may be an acceptable compromise.



Vertical Orientation

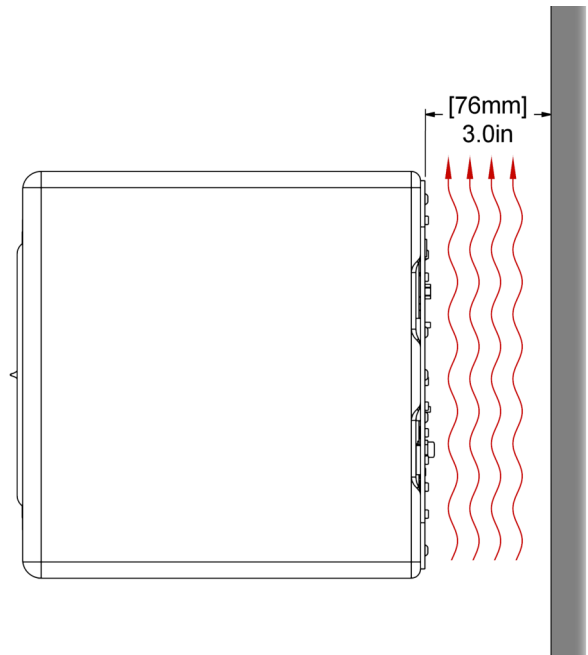
For center channel applications it might be desirable to stand the MicroMain45 in the vertical orientation. This orientation is acceptable, however, it does sacrifice horizontal dispersion. Section 13 shows off-axis frequency response graphs in the horizontal (13.1) and vertical (13.2) planes for the MM45 mounted in the normal horizontal orientation. One can see the horizontal off-axis response is smoother than the vertical off-axis response. Standing the MM45 vertically, therefore, makes the frequency response less smooth compared to the normal orientation when the listener moves from side to side. Nonetheless, the response is still quite good out to 15 degrees off-axis and provides a reasonably large sweet spot.

All the same positioning principles that are described here in Section 7 apply to the vertical speaker orientation as well.



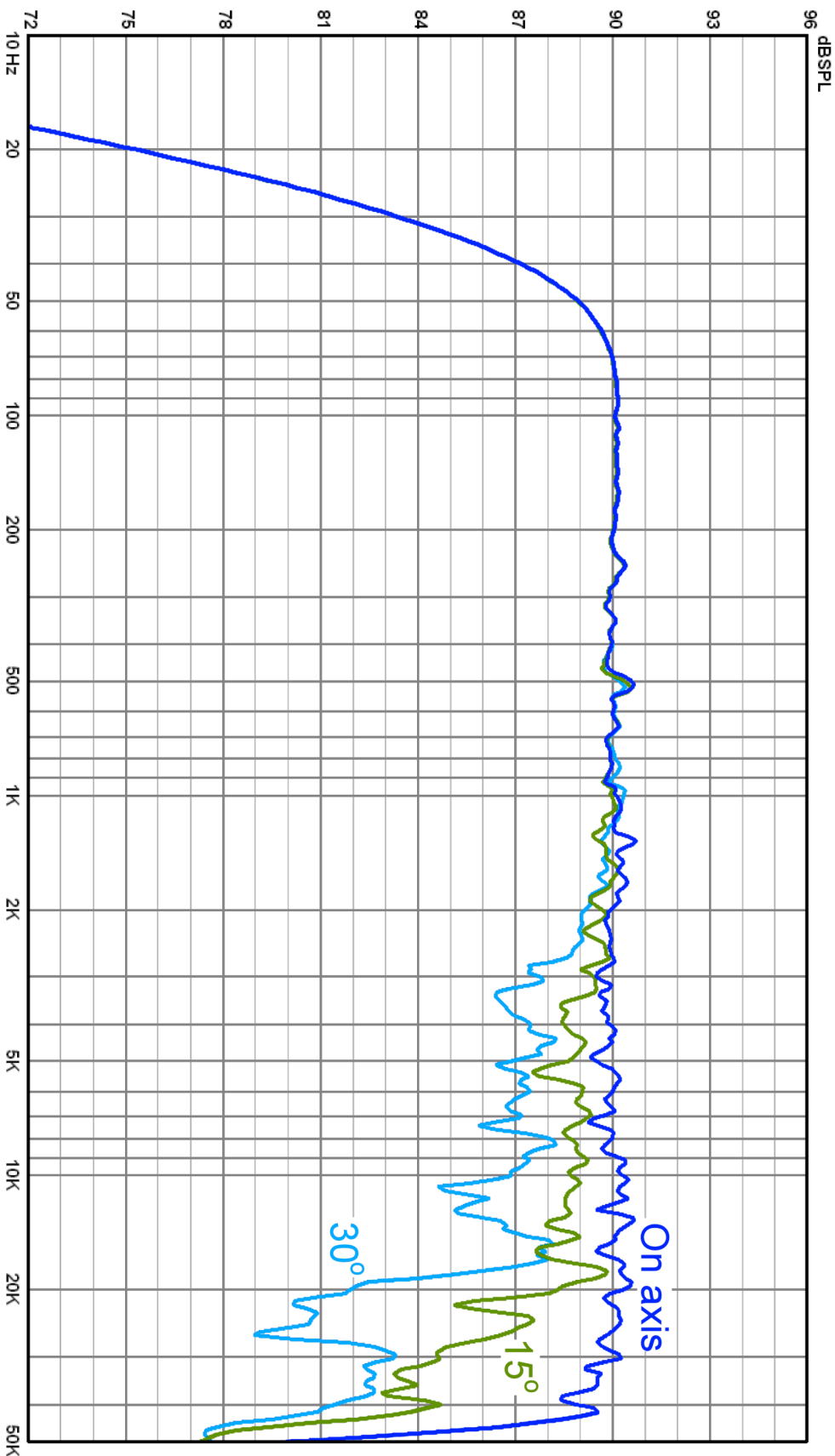
Cooling Concerns

While the Hypex amplifier modules that drive the MicroMain45 are a very efficient, the speaker still generates a significant amount of heat that must be dissipated. This heat is transmitted to the air via convection from the rear amplifier plate. In order to ensure proper airflow, a minimum of 3" (76mm) clearance should be maintained between the speaker and any large obstructions like walls. An ambient room temperature below 30°C (85°F) should be maintained. Over-temperature may cause the speaker to overheat and shut down.



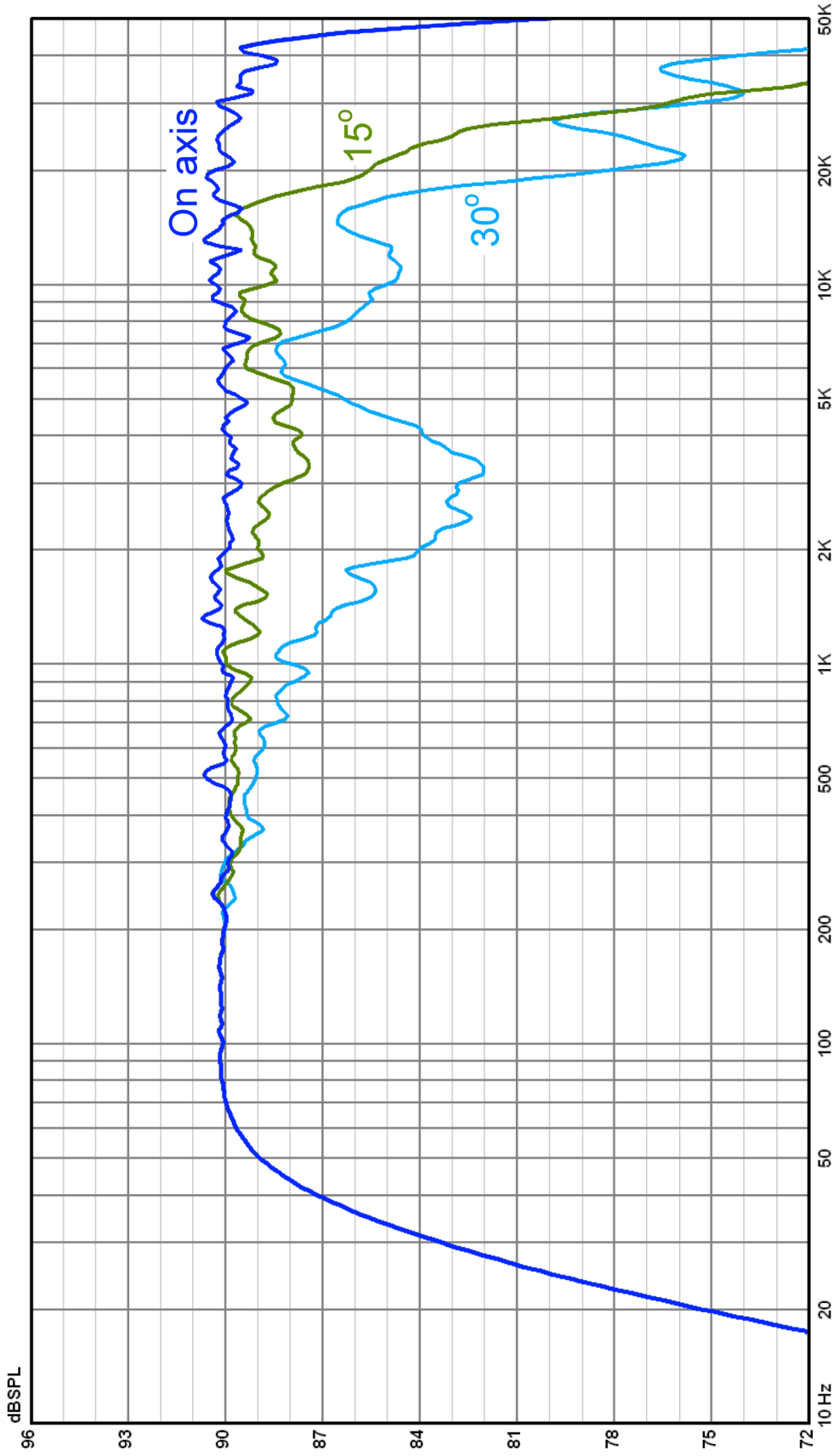
Frequency Response

SPL in the Horizontal Plane



dB SPL at 1 meter, free field, on-axis, 15° off axis, 30° off axis (-15 dBV input , attenuator = 0db)

SPL in the Vertical Plane



dB SPL at 1 meter, free field, on-axis, 15° off axis, 30° off axis (-15 dBV input , attenuator = 0db)

MEME™ (Multi Emphasis Monitor Emulation)

Barefoot MEME (pronounced “meam” like “team”) technology allows you to box up your secondary reference monitors for good. Despite the numerous advantages of high-resolution monitors like the Footprint03, many engineers still rely on their NS10s and mix cubes as secondary references. These speakers have long traditions and people find them familiar and useful for focusing in on certain aspects of their mix.

However, it’s also a fact that crowding your console with those extra boxes degrades the sound field of the primary reference monitors. Not to mention, these speakers are no longer manufactured, need amplifiers, require cable runs, and consume more studio space. MEME offers an elegant solution by emulating the sound and translation characteristics of those other classic monitors.

MEME Voices:

FLAT

Optimal setting for accuracy, transparency and outstanding translation. Setting has a flat frequency response and extremely fast transient response. This is the default voice when the MEME Selector Switch is not connected to the speaker.

HI-FI

While it does not emulate any one speaker in particular, this setting is indicative of “hi-fi” in the colloquial sense of the term. The midrange is a bit scooped and highs are a little accentuated. The bass response is altered to have less damping, yielding a hybrid character

somewhere between the fast, tight, articulate sound of a sealed cabinet and the slower, fatter sound of a ported speaker. The result is a sweeter more forgiving sonic character.

OLDSCL

This setting emulates the frequency, phase and transient response of the NS10M.

CUBE

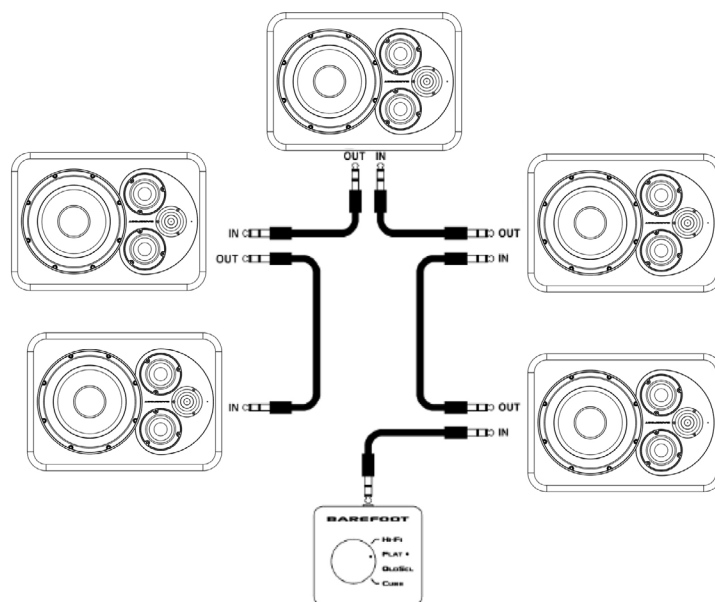
This setting emulates the frequency, phase and transient response of classic mix cubes.

MEME™ Voice Selector Connection:

The MEME Voice Selector switch box is connected to the MEME IN jack of the speaker via any standard 3.5 mm stereo phone cable. The switchbox is passive and requires no batteries. Two or more speakers can be connected to the switch box by daisy chaining cables from the MEME OUT of one speaker to the MEME IN of the next speaker. The Footprint03 MEME IN and MEME OUT jacks are opto-isolated to prevent ground loops between devices.

Barefoot MicroMain Gen2 series monitors with MEME can also be connected to the MEME OUT of the Footprint line.

Example: 5 channel MEME™ Voice control layout.

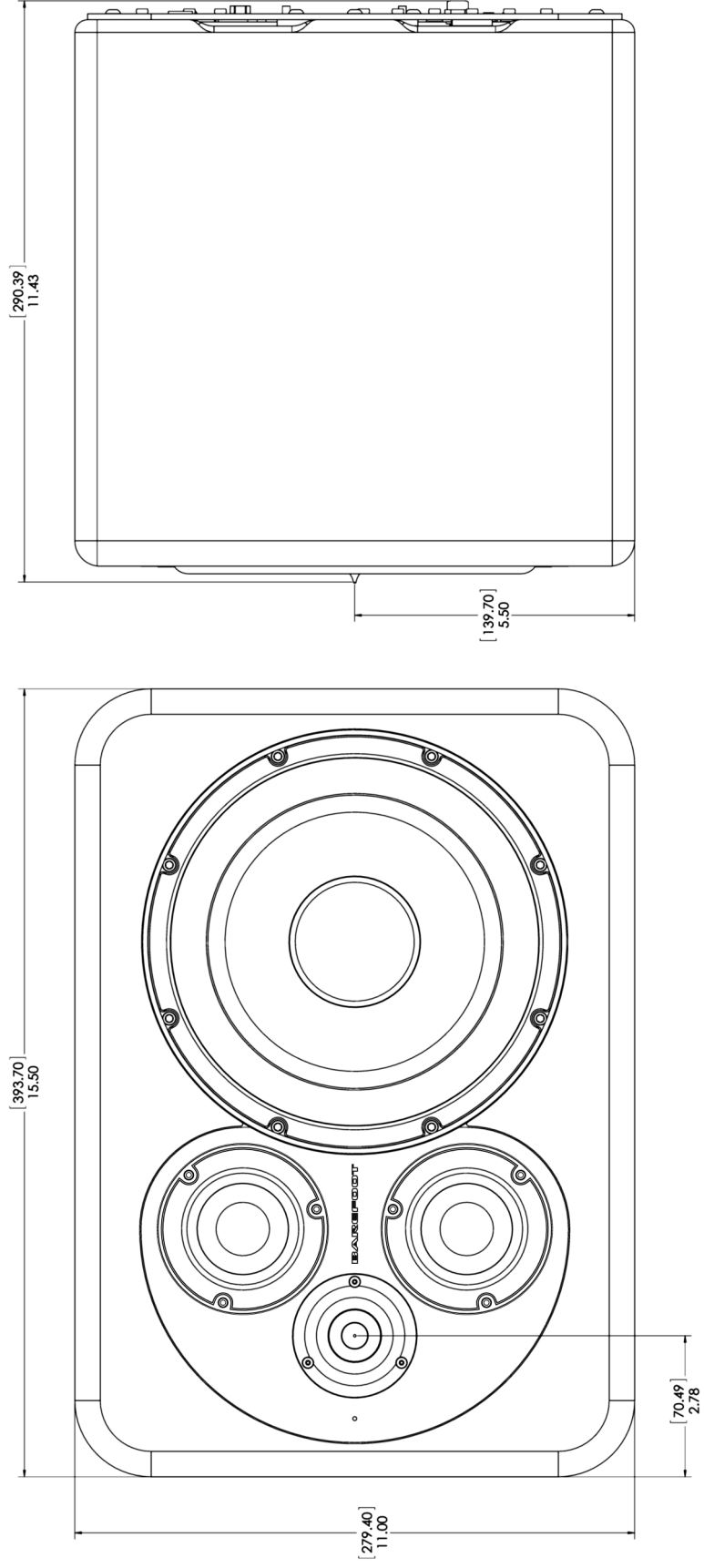


Specifications

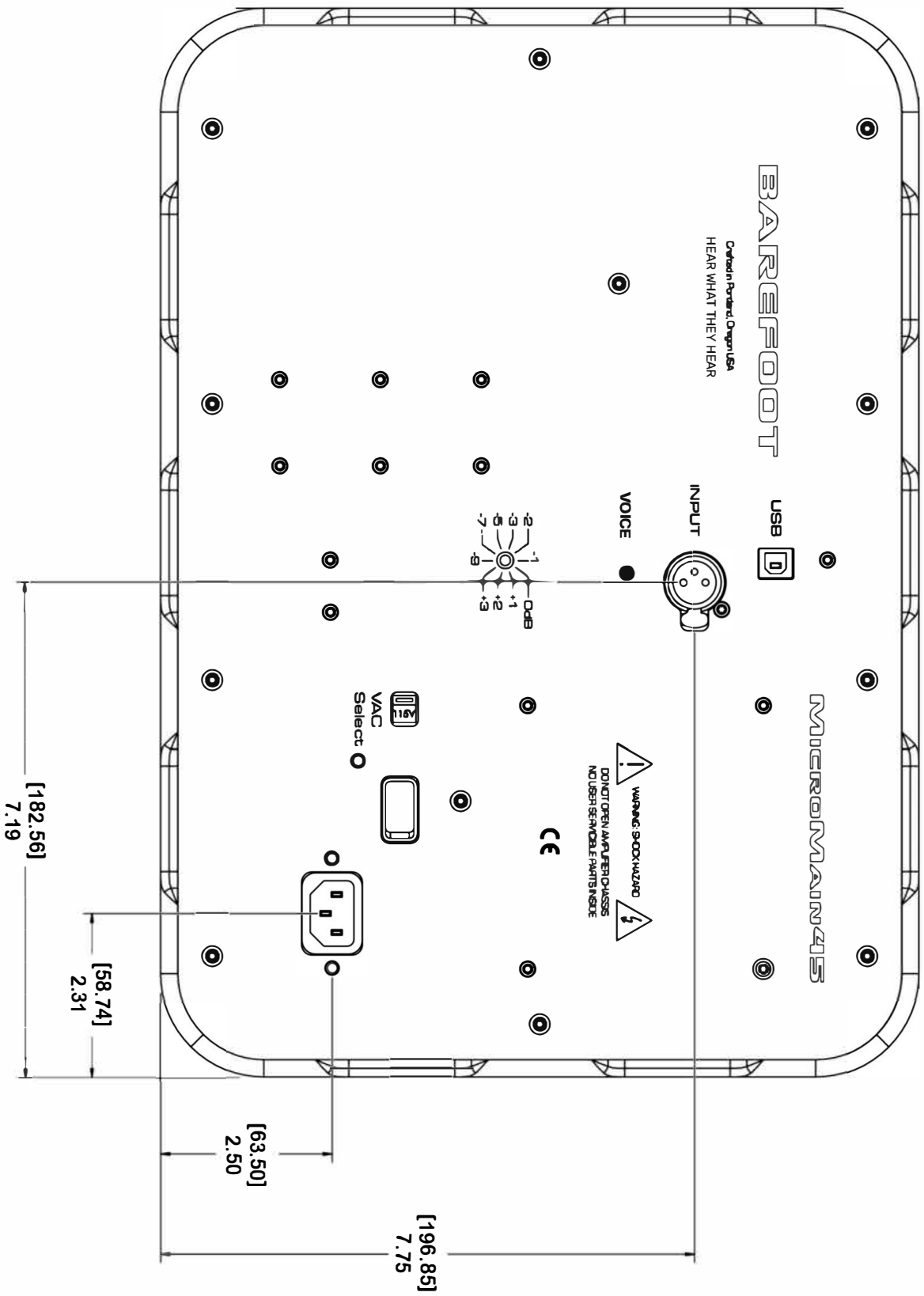
Analog Input	XLR female, Pin 1 ground, Pin 2 positive, Pin 3 negative Input Impedance = 20k Ohms Input Sensitivity (1m) = 90 dB @ -15 dBV (pass band)
Analog to Digital Conversion	Word Length: 24 bit Sample Rate: 192 kHz Oversampling = 128x Signal/Noise \geq 125 dB
Frequency Response	40 Hz - 45 kHz (+/- 3 dB), 53 Hz - 40 kHz (+/- 1 dB)
Bass Response	-3 dB @ 40 Hz Q = 0.707 Slope = 12 dB/octave
Cabinet	14 liters total internal volume Sealed Woofer and Midrange enclosures Machined aluminum baffle plate Long fiber wool acoustic damping throughout
Crossover Frequencies	600 / 3600 Hz
Tweeter	1" ring radiator with Advanced neodymium motor Rear waveguide chamber Amplifier: 180W
Midranges	2 x 2.5" aluminum cone with Advanced neodymium motor +/- 2 mm linear excursion Amplifier: 180W
Woofer	8" aluminum cone with low distortion motor +/- 13 mm linear excursion Amplifier: 250W
Power	Mains Voltage Input: 115 or 230 VAC selectable Idle Power Consumption = 18W Maximum Power Consumption = 400 W
Weight	Speaker: 37.5 lbs each (17 kg) Shipping: 47 lbs each (21 kg)
Dimensions HxWxD	Cabinet: 11.0 x 15.5 x 10.5 inches (279 x 394 x 267 mm) Overall: 11.0 x 15.5 x 11.4 inches (279 x 394 x 290 mm)

12.0 Drawings

12.1 Cabinet dimensions [mm] inches



Rear Amplifier Panel Layout [mm] inches



Limited Warranty

BAREFOOT SOUND warrants electronic components and cabinetry for a period of three (3) years against manufacturing defects, covering parts and labor for necessary repairs. Moving speaker components such as tweeters, midranges and woofers are warranted for a period of one (1) year against manufacturing defects.

Shipping fees incurred from returns for under-warranty service in the first 30-days will be paid by BAREFOOT SOUND. All shipping fees both to and from BAREFOOT SOUND following this 30-day period must be paid by the customer. All returns, both during and following the 30-day period, must be affected via the Procedures for Obtaining Warranty Service described below.

BAREFOOT SOUND makes no other warranty, either express or implied, including but not limited to implied warranties of merchantability, fitness for a particular purpose, or conformity to any representation or description, with respect to this product other than as set forth below. BAREFOOT SOUND makes no warranty or

representation, either express or implied, with respect to any other manufacturer's product or documentation, its quality, performance, merchantability, fitness for a particular purpose, or conformity to any representation or description.

Except as provided below, BAREFOOT SOUND is not liable for any loss, cost, expense, inconvenience or damage that may result from use or inability to use the product. Under no circumstances shall BAREFOOT SOUND be liable for any loss, cost, expense, inconvenience or damage exceeding the purchase price of the product.

The warranty and remedies set forth below are exclusive and in lieu of all others, oral or written, expressed or implied. No reseller, agent or employee is authorized to make any modification, extension or addition to this warranty.

Warranty Conditions

The above Limited Warranty is subject to the following conditions:

This warranty covers only normal use of the product. BAREFOOT SOUND shall not be liable under this warranty if any damage or defect results from (i) misuse, abuse, neglect, improper shipping or installation; (ii) disasters such as fire, flood, lightning or improper electric current; or (iii) repairs, service or alteration by anyone other than an authorized BAREFOOT SOUND representative; (iv) damages incurred through incorrect connection or handling, abnormal conditions, high humidity, deliberate abuse, power surges, water spills, or any other accidents.

You must retain your bill of sale or other proof of purchase to receive warranty service.

No warranty extension will be granted for any replacement part(s) furnished to the purchaser in fulfillment of this warranty.

To return a defective product, please contact our Customer Service Department at service@barefoot-sound.com for a Return Merchandise Authorization (RMA) number and follow the Return of Products Instructions below. The RMA is valid for 10 days from date of issuance. Returns will not be accepted without an RMA.

Procedures for Obtaining Warranty Service

RMA (Returning Merchandise Authorization) Policy:

If repairs are required, the customer must obtain a RMA number and provide proof of purchase. RMA and services are rendered by BAREFOOT SOUND only. Any shipping costs after 30 days (starting from the original date of purchase) on any item returned for repair is the customers' responsibility. All returned parts must have a RMA number written clearly on the outside of the package along with a letter detailing the problems and a copy of the original proof of purchase. No COD packages will be accepted. No package will be accepted without a RMA number written on the outside of the package.

1. If the product must be repaired, a RMA number (Return Merchandise Authorization Number) will be issued for shipment to our repair department. Please follow the instructions given by BAREFOOT SOUND technical support staff to ship your product. BAREFOOT SOUND will not accept any shipments without a RMA number.
2. Pack the product in its original box or a well-protected box, as outlined by BAREFOOT SOUND Customer Service. BAREFOOT SOUND will not be responsible for shipping damage/loss of any product not shipped in its original packaging. BAREFOOT SOUND will not be responsible for shipping damage/loss of any product outside the original 30-day paid service period. It is very important that you write the RMA number clearly on the outside of the package. Ship the product with a

copy of your bill of sale or other proof of purchase, your name, address, phone number, email address, description of the problem(s), and the RMA number you have obtained to the address provided to you by BAREFOOT SOUND Customer Service.

3. Upon receiving the product, BAREFOOT SOUND will repair or replace your product (at BAREFOOT SOUND's discretion) and will ship it back to you within 2 weeks (dependent on parts availability) via FedEx.
4. Cross-exchange (Parts only): You will need to provide a valid credit card number as a deposit guarantee when the RMA number is issued. Once approval has been obtained on your credit card, the part(s) will be shipped FedEx. You will need to ship defective part(s) back to BAREFOOT SOUND within 15 days to avoid charges to your credit card. If such charges are incurred, the shipped part(s) will be billed at the then current price.
5. BAREFOOT SOUND will pay for shipping to and from the customer only within the first thirty days following the original product ship date. Following this 30-day period all shipping fees both for under warranty and post warranty repairs are the sole responsibility of the customer. The customer also assumes full liability for losses or damages resulting from shipping as well as all responsibility to pursue remuneration for such issues with their selected carrier.

Post Warranty Repair

BAREFOOT SOUND accepts no liability for problems caused by after-market software or hardware modifications or additions. BAREFOOT SOUND is not responsible for any loss of work ("down time") caused by a product requiring service. This warranty is null and void if the defect or malfunction was due to damage resulting from operation not within manufacturer specifications. It will

also be null and void if there are indications of misuse and/or abuse. BAREFOOT SOUND has the option of voiding the warranty if anyone other than an BAREFOOT SOUND technician attempts to service the product. BAREFOOT SOUND will not warrant any problems arising from an act of God (lighting, flooding, tornado, etc.), electrical spikes or surges, or problems arising out of hardware, software, or additional devices added to

complement any product manufactured by BAREFOOT SOUND. Under no circumstances will BAREFOOT SOUND be responsible for any refund or remuneration exceeding the original purchase price of the product less any shipping fees. BAREFOOT SOUND will not be held responsible for typographical errors on sales receipts,

repair tickets, or on our website. BAREFOOT SOUND makes every effort to make sure all information on our website is correct.

Warranty Exclusions

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arising from an act of God (lighting, flooding, tornado, etc.), electrical spikes or surges, or problems arising out of hardware, software, or additional devices added to complement any product manufactured by BAREFOOT SOUND. Under no circumstances will BAREFOOT SOUND be responsible for any refund or remuneration exceeding the original purchase price of the product less any shipping fees. BAREFOOT SOUND will not be held responsible for typographical errors on sales receipts, repair tickets, or on our website. BAREFOOT SOUND makes every effort to make sure all information on our website is correct.

Service Request

In order to serve you better, please complete the service request form in the following link for your Barefoot Sound studio monitors. Once submitted and reviewed, a service representative will contact you.

<https://barefootsound.com/service-request/>

BAREFOOT

Barefoot Sound LLC

barefootsound.com