



Audio Labs

# VANGUARD V13

## Multi-Pattern Tube Condenser Microphone

**Thank you for choosing the VANGUARD V13 Microphone!**

Your **VANGUARD V13** microphone is carefully packed at the factory. The padded pinewood mic box and aluminum carrying case are designed to protect the microphone during shipping and storage. In addition, before any microphone is released, the final assembly and testing is performed here in sunny Southern California to make sure the mic is ready for you to reliably enjoy in professional recording situations.

**TO AVOID DAMAGE TO YOUR MICROPHONE, PLEASE READ THE ENTIRE MANUAL BEFORE PLUGGING IN THE V13 FOR THE FIRST TIME!**

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### OVERVIEW

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Crafted by experts over the course of 2 years, the VANGUARD V13 is designed to offer true world-class performance. It combines vintage warmth with smooth modern detail, all while being visually stunning and reliably designed. After exhaustive research, testing, and listening by world-class engineers, we can say with pride that the performance of this mic will rival or exceed that of both iconic vintage and modern microphones, **at a fraction of the cost.**

### PERFORMANCE

The **VANGUARD V13** was conceived and commissioned to establish a new performance standard at an until now unachievable price point. While being visually stunning, the V13's audio performance will inspire confidence from any artist, engineer or producer, with a sonic signature that is rich, yet natural. We designed the V13 with the character of yesteryear's iconic vintage tube microphones in mind, while also utilizing the latest technology to ensure that every nuance and detail of the performance is faithfully captured. We specifically engineered the V13 with warm, full lows, a precise and detailed midrange, and buttery-smooth high end. The result is a microphone that unifies warmth with clarity, depth with detail, and character with precision.

After hundreds of hours of listening and testing dozens of design variations with world-class engineers, the V13 has proven itself to be a top-shelf microphone with an incredibly low noise-floor. This is truly a professional, world-class microphone.

## **DESIGN**

The VANGUARD V13 is very different from other mics in its price range. It is designed and precision built in limited quantities to “no-compromise” standards.

We started with a 34mm edge-terminated, gold-sputtered Mylar 3µm dual-capsule assembly and custom-voiced it with a proprietary hand-tuning process, placing it in an open-weave headbasket for a natural sound with low internal reflections. We then designed a circuit that compliments the unique musical properties of our capsules, loading it with premium-grade, low-tolerance, ultra-reliable components sourced from highly-respected manufacturers around the world. We cryogenically treated critical components in the signal path, including a hand-selected European vacuum tube. We placed the low-frequency roll-off and -10dB pad toggle switches on the rear of the microphone, where they are easily accessible to the engineer. We topped off the electronics with an ultra-linear, fully shielded, custom-wound, dual-bobbin/humbucking transformer for the output stage to drive long cable runs.

Aesthetically, the precision-machined brass body is coated with our signature Pinot Noir finish with a deep, lustrous gloss. We accented the color with polished nickel trim and a precision-cast Vanguard badge. Machined into the rear of the microphone is a cooling vent to prolong component life. Your V13's serial number is laser-engraved on the lower rear of the microphone.

The V13 was designed by a team of experts with more than 65 years of experience and vetted by world-famous engineers and producers.

## **QUALITY**

The V13 was designed in the USA, and undergoes final assembly in sunny Southern California. We perform 100% quality control - every single microphone undergoes a series of stringent audio and visual tests here in Southern California before being hand-packed.

Every part of the V13 was designed to be robust and reliable. Wherever possible, over-specced components were utilized. The deep-cycle cryogenic treatment improves the lifespan, efficiency, and performance of critical electronic components. Brass, steel, aluminum, and zinc are part of the heavy-duty construction. Every Vanguard microphone is confidently backed by our FIVE-YEAR WARRANTY.

## **ACCESSORIES**

When you buy a V13, you also get a VLSM Heavy-Duty Shockmount. We wanted to rethink the standard “spider-style” shockmount of old, and designed the VLSM with a few nifty features. First is the open front, which allows you to position the microphone as close to the source as necessary. Second, we install aerospace-grade suspension rings that won't break, sag, crack, or stretch over time.

The V13 also comes with the PS-13 power supply, which allows you to select any of 9 available polar patterns on your microphone. We encourage you to experiment with the different polar patterns, as each one changes the character and frequency response of the microphone. The PS-13 can operate from 110-240V.

When not in use, your V13 should be stored in its padded pinewood box.

The black aluminum locking carrying case with the V13 keeps your microphone, cables, and power supply in one place, and includes a slot for an extra vacuum tube. 12AX7, 12AT7, and 12AY7 tube types will work with the V13 microphone. Folks who experiment sonically with NOS tubes can feel safe using these tube types.

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## USAGE

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The VANGUARD V13 excels in a multitude of recording situations. It is a superior choice for studio vocals, acoustic guitar, mandolin, drum overheads, room mic'ing, the delicate nuances of piano, choral, and orchestral recording - essentially any acoustic instrument. Tested in a diversity of situations, acoustic environments, styles, and genres, we found that the V13 was often the top option, despite being matched against microphones several times its cost! Through our hundreds of hours of testing, research, and listening, we've found a few particular uses we would like to share with you.

### VOCALS

The V13 is particularly "forgiving" when it comes to vocal style and timbre. Oftentimes, microphones can be a bit choosy when it comes to how they mesh with different vocalists, but we have found that the V13 sounds great with almost any vocal complexion. If you're having difficulty dialing in "that" sound for your vocals, try experimenting with the different polar patterns via the selection knob on the power supply. One of our favorite polar patterns for smooth, open vocals is two clicks to the right of Cardioid mode. **IMPORTANT - for any vocals recorded within 12 inches of the microphone, it is imperative that you use a professional-grade pop filter to protect the capsule of the V13.**

### ACOUSTIC GUITAR

The V13 is superb for adding warmth and detail to your acoustic guitar tracks. We tested the V13 on a variety of acoustic guitars from several price ranges. We found that even when tracking overly-bright and mid-rangey guitars, the V13 brought out the very best in each instrument. Once again, polar patterns play a huge role in finding the perfect tone - try widening or narrowing the pattern for different results.

### PIANO

The custom-voiced capsule of the V13 gives it incredible low-frequency depth while providing an open, smooth top end, and allows you to capture the nuanced performance of the entire range of the instrument. In a good-sounding room, the omni-directional pattern allows for an incredibly spacious and lush piano recording, even on a mono track!

## VIOLIN, VIOLA, CELLO, AND DOUBLE BASS

Whenever we tracked these instruments, we found that the “sweet spot” was about 10-30 degrees off-angle, at least 1 foot of separation from the instrument (often up to 2.5 feet), with the microphone “listening” to the gap between the bridge and the fingerboard. Experiment with slight off-axis response by pointing the microphone towards the f-holes for different timbres.

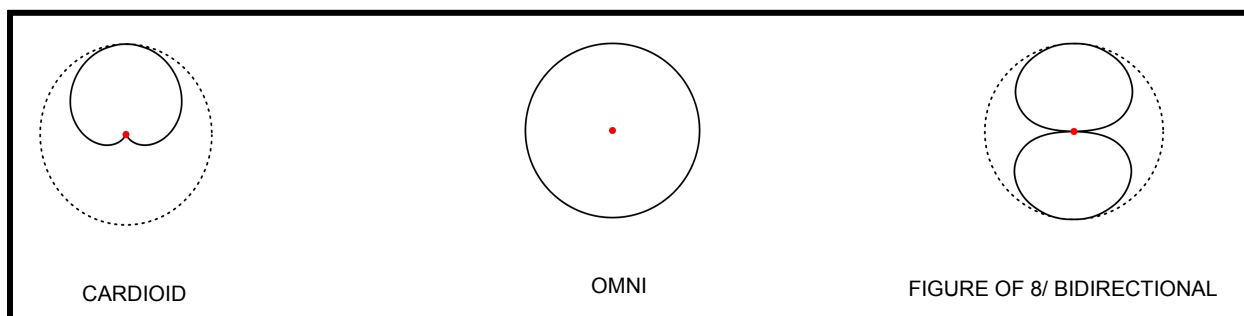
## DRUMS - ROOM AND OVERHEAD

As a room mic, some engineers find it useful to engage the low-frequency rolloff “rumble filter” switch on the rear of the V13. A spaced pair of VANGUARD V13s will give you detailed, rich drum overhead tracks.

## POLAR PATTERNS

The robust PS-13 power supply uses a 9-position, instant-change popless switch for fast, easy comparisons which allow the engineer to fine-tune the resulting signal with the most suitable pattern. The “chicken-head” knob on the pattern selector allows for 3 basic settings, with 6 “in-between” variations that allow for dialing in just the right setting for your use.

### POWER SUPPLY BASIC PATTERNS



### Cardioid

The Cardioid setting provides optimum pickup performance from the front, less from the sides, and the least from the back of the microphone. It is primarily used to allow precise focusing on a close-miked solo voice or instrument. This pattern allows the minimal amount of room sound to get into the signal path if working close up. For even less room sound, select patterns in between the Cardioid and the Figure-8 setting to narrow the pickup pattern further and vary the distance of the microphone from the sound source. For more room sound, but a broader pickup axis, select patterns in between Cardioid and Omni-directional settings.

Cardioid microphones also exhibit “proximity effect”. This is a boost in low frequency response at close range. For example, a singer that is 1 inch away from the mic will have a much deeper tone than one 6 inches away. Keep this in mind, and experiment with microphone distance to use it to your advantage.

## Omni-directional

The Omni-directional setting will allow sound to be picked up equally from all sides of the microphone. It tends to have a more natural low frequency response, as well as a generally smoother response across the entire frequency spectrum. It also can exhibit some directional characteristics at higher frequencies. This setting allows the most room sound to be present with the recorded signal.

## Figure-8 (also known as “bi-directional”)

This pattern allows equal response on both the front and rear sides of the microphone capsule assembly, with excellent rejection of sound from the sides of the microphone. The Figure-8 pattern is used most commonly in stereo miking techniques such as Mid-Side and Blumlein, which both involve a figure-8 microphone in some way. Figure-8's can be used as room mics, to record two sources with a single microphone (e.g., two vocalists on opposite sides of the microphone).

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## HOW TO SET UP YOUR V13 MICROPHONE FOR USE

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### 1) Set up the PS-13 power supply.

- Remove the power supply from the aluminum carrying case. The PS-13 power supply comes with a 1-meter (3.3ft) power cable. Plug the power cable into the wall, and then the other end of the power cable into the AC INPUT on the back of the PS-13 power supply. **DO NOT** turn on the power supply yet.
- **Ensure that the red voltage switch labeled 210-240V / 110-120V is set to the correct operating voltage of your wall outlet.**

### 2) Set up your audio cables.

- Remove the 7-pin XLR cable from the aluminum carrying case. Plug the male end into the MIC IN jack on the front of the PS-13 power supply, and run the female end to the mic stand for your V13. *Make sure to leave enough slack and route the cable safely so it won't be able to trip someone. You may need to reposition your power supply and/or mic stand so you have enough cable length.*
- Plug the XLR cable from your mixer, interface, preamp, or other input device into the OUTPUT jack of the PS-13 power supply. You do not need to run phantom power - the PS-13 provides the proper voltages to the V13 microphone. *Once again, make sure to leave enough slack on the XLR cable and route it safely so it cannot trip someone.*

### 3) Set up the V13 microphone.

- *It's always best to set up your V13 microphone last, and take it down first, whenever setting up or putting away your gear. During other stages of setup, the microphone might accidentally be bumped or knocked over.*
- Remove the VLSM Shockmount from the aluminum carrying case. Thread it onto the microphone stand until tight, and then position the shockmount.

- Remove the V13 microphone from its wood storage box. Hold the microphone carefully and thread the base of the V13 microphone into the threaded locking nut of the VL5M shockmount until tight. *Don't over-tighten - you might need to re-adjust the microphone's angle.*
  - Ensure the power switch on the rear of the PS-13 power supply is OFF. Plug the female end of the 7-pin cable into the bottom of the V13 microphone, taking care to align the cable correctly before plugging it in. *You can look at the bottom of the microphone and see the slotted insert on the side of the 7-pin jack, and correctly align the slotted insert of the 7-pin cable with it. The power supply should always be off when plugging and unplugging the V13 microphone. Incorrect alignment of the cable may result in electric shock or damage to your V13 microphone.*
  - Position your V13 microphone as desired towards your sound source. *If you are using the V13 microphone on vocals, it is important to use a high quality Pop Filter to protect the capsule against breath moisture, as well as plosive blasts like "P", "K", "T", etc. Failure to use a pop filter may result in damage to your microphone.*
- 4) Turn on the PS-13 power supply.
- Turn on PS-13 with the red lighted switch on the rear of the PS-13 power supply, right next to the AC INPUT jack. *You won't hear any sound for about 10 seconds as the microphone warms up.*
  - Allow the tube and electronics temperature to stabilize for at least 5 minutes before recording.

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## FEATURES

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### **CAPSULE & ELECTRONICS**

- Custom-voiced, edge-terminated 34mm dual-capsule assembly with 3-micron gold-sputtered Mylar diaphragms
- 9 polar patterns (selectable at power supply)
- Vacuum tube analog circuitry with premium-grade components
- Hand-selected European vacuum tube
- Deep-cycle cryogenic treatment of critical signal path components
- Transformer-coupled output – humbucking, shielded, dual-bobbin transformer
- -10dB pad and low-frequency rolloff toggle switches
- Robust power supply design for ultra-low noise floor

### **CONSTRUCTION**

- Heavy-duty brass, aluminum, steel, and zinc metal construction
- Rear venting to prolong tube and component life
- Open-weave headbasket for low internal reflections, "open-air" voicing
- Each V13 comes with its own laser-engraved serial number

- Over-spec componentry
- Deep-gloss Pinot Noir finish
- Polished nickel trim
- Precision-cast Vanguard badge
- 100% Quality Control
- 5-Year Warranty

#### STANDARD ITEMS SUPPLIED

- V13 Vacuum Tube Condenser Microphone
- PS-13 Power Supply
- VLSM Large Shockmount with aerospace-grade suspension rings
- Padded Pinewood Microphone Storage Box
- Locking Aluminum Carrying Case
- 7-Pin Braided Microphone Cable
- Power Cable

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## SPECIFICATIONS

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<b>Capsule Type:</b>	<b>34mm / 3-micron Gold sputtered Mylar-True Condenser (DUAL CAPSULE)</b>
<b>Polar Pattern/s:</b>	<b>9 patterns selectable at power supply</b>
<b>Frequency Range:</b>	<b>20Hz-20,000 Hz</b>
<b>Output Impedance:</b>	<b>200 Ohms / transformer isolated</b>
<b>Maximum SPL :</b>	<b>144dB (0.5% THD @1000Hz) with pad engaged</b>
<b>Equivalent noise level :</b>	<b>Less than 13dB SPL (A-weighted)</b>
<b>Sensitivity:</b>	<b>-35dBV</b>
<b>S/N Ratio:</b>	<b>82dB (Ref. 1Pa A-weighted)</b>
<b>Output Connector:</b>	<b>Male XLR 7 pin</b>
<b>Included Accessories:</b>	<b>Padded Wooden Box, Shockmount, Metal case, Power Supply, 7-Pin Cable, Power Cable</b>
<b>Vacuum Tube Type:</b>	<b>Proprietary Select Premium Grade</b>
<b>Power Requirement:</b>	<b>Dedicated PS-13 POWER SUPPLY w/ selectable 110/240V Capability</b>
<b>Finish:</b>	<b>Polished Nickel trim / Pinot Noir Body</b>
<b>Warranty:</b>	<b>5 Years</b>

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## CARE AND PRECAUTIONS

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- When not in use, please store your V13 microphone in the provided padded wooden microphone case. We recommend keeping the plastic sleeve that the microphone is shipped in, and keeping it on the microphone when not in use to prevent debris build-up on the capsule.
- When using for close-mic'd vocals, it is important to use a high quality Pop Filter to protect the capsule against breath moisture, as well as plosive blasts like "P", "K", "T", etc. Failure to use a Pop Filter may result in damage to your microphone.
- Always protect your V13 from any hard jolts, drops, and vibrations. Although it is ruggedly constructed, it is a professional tool and should be treated with respect. Always handle with care.
- For best performance, stability, & longevity, do not expose the microphone to any moisture or smoke.
- **DO NOT** open the V13 microphone while plugged in - very high voltages are present!
- **DO NOT** open the PS-13 power supply under any condition. See the "SERVICE AND WARRANTY" section below if you have any issues with your PS-13 power supply.
- Before each use, turn on the power supply after the microphone is plugged in and allow the tube circuitry 5 minutes to warm up and stabilize.
- Don't use this product in or near water, during a lightning storm, etc. It is intended as a professional studio microphone only.

### IMPORTANT! BEFORE PLUGGING THE MIC IN

Make sure the proper AC MAINS operating voltage has been selected on the rear of the PS-13 power supply!

### IMPORTANT SAFETY INFORMATION



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



The lightning flash with arrowhead symbol, within 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 to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING: TO AVOID FIRE OR ELECTRIC SHOCK HAZARD, DO NOT EXPOSE THIS APPARATUS TO WATER, RAIN OR MOISTURE.



The VANGUARD V13 complies with all applicable CE / RoHS / WEEE European Union directives.



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## SERVICE & WARRANTY

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### LIMITED 5 YEAR WARRANTY

VANGUARD microphones purchased in the U.S.A. are warranted by Vanguard Audio Labs to be free from defects in materials and workmanship for the period of 5 YEARS to the original purchaser. In the event of such defects, the Vanguard Audio Labs product will be repaired without charge or, at our option, replaced with a new one if delivered to Vanguard Audio Labs prepaid, together with the sales slip or other proof of purchase date. The warranty excludes problems due to normal wear, abuse, shipping damage or failure to use the product in accordance with the specifications. This warranty does not apply if the product has been damaged by accident or misuse, or as a result of repair or modification by other than a Vanguard Audio Labs customer service facility authorized to service this product.

All parts except tubes (90 days) are covered under this Limited 5 Year Warranty.

Vanguard Audio Labs shall not be liable for damages based upon inconvenience, loss of use of the product, loss of time, interrupted operation or commercial loss or any other damages, whether incidental, consequential or otherwise. This warranty gives you specific legal rights, and you may have other rights, which will vary from state to state.

*Specifications and prices are subject to change without notice or obligation.*

Do not attempt to service this unit yourself, as it will void your warranty. Please check your unit carefully upon receipt and return to place of purchase immediately if there are any problems with the product. After that, the standard VANGUARD AUDIO LABS 5-YEAR WARRANTY will apply to defects in materials and workmanship.

**(U.S.A)** Should your VANGUARD microphone require service, please contact the VANGUARD AUDIO LABS Service Department. (909) 920-5600 -or- e-mail [service@vanguardaudiolabs.com](mailto:service@vanguardaudiolabs.com)

To claim warranty in USA, microphones and accessories must be delivered in their entirety to VANGUARD AUDIO LABS freight prepaid, IN PROPER/SAFE PACKAGING. All returns must have prior authorization before shipping. Please contact VANGUARD AUDIO LABS for a Return Authorization Number (RA). A sales slip or other proof of purchase must be included.