

Blue

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SPARK



Congratulations on your purchase of the Spark from Blue Microphones. The Spark is a cardioid, solid-state condenser microphone designed to help you achieve professional quality recordings in any creative environment. We've designed the Spark's acoustic performance to ignite your inspiration and passion for recording, and we think you'll find its unique look and quality construction to be inspiring as well!

The Spark combines Blue's unique condenser capsule with Class-A discrete electronics to produce stunning recordings. A new feature found only on the Spark microphone is the unique Focus Control, providing two different usage modes: the Normal mode (out position) providing increased low frequency sensitivity for recordings with great impact and definition, along with the Focus mode, (in position) for even greater clarity and detail. In addition, the Spark microphone ships with Blue's custom-designed pop-filter and shockmount as well as a convenient and stylish wood case for easy transport. With the Spark, you've got everything you need to make professional recordings.

We all know Sparks and wood boxes don't mix, so let's take out your mic and have a look around.

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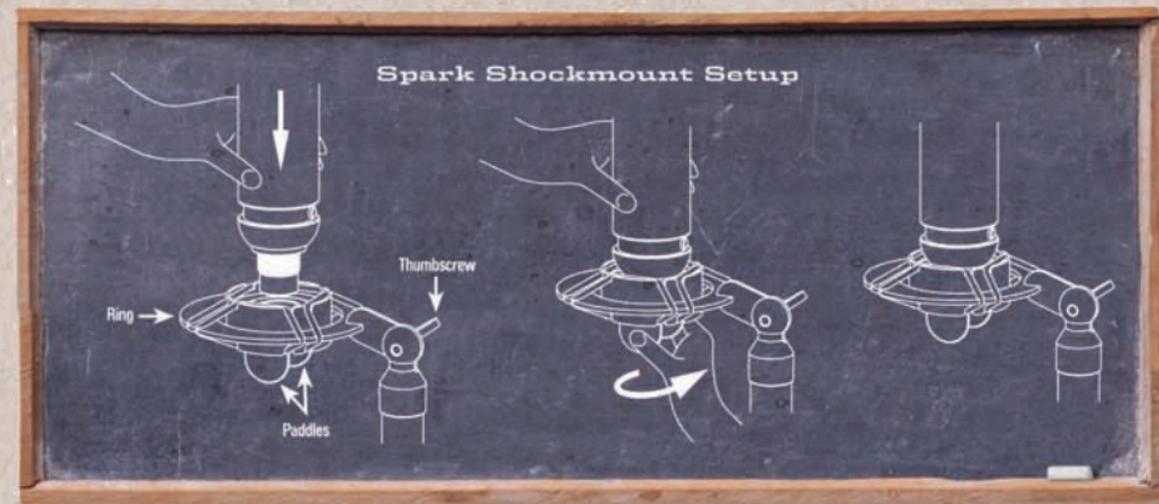
The Spark's electronics are Class A and fully discrete with a transformerless output. Simply put, this means that the sound which arrives at the diaphragm (mic capsule) is converted to electrical energy (transduced) is then amplified as accurately as possible, with minimal coloration and absolutely no integrated circuits (also known as "IC's") in the signal path. Integrated circuits, by the way, are smaller and inexpensive versions of large 'discrete' components that talk a big game but really don't perform quite as well.

The engineers at Blue take your sound seriously, so we designed the Spark's signal path exclusively with those high quality discrete components. The individual differences may be subtle, but when added up it's a difference you can appreciate. As a result, we think you'll find the Spark's overall sonic character is superbly detailed and pleasing to the ear, a microphone with truly professional capabilities. These features make it your ideal microphone for recording vocals, drums, guitars, pianos, brass, woodwinds, and just about anything else that you can throw onto the fire.

Shockmount Setup

The Spark includes a uniquely-designed shockmount that is designed to help isolate your microphone (and, thus, your recordings) from vibrations, bumps, and any low frequency noises you may have resonating through your recording area (air conditioning unit, nearby computers, passing semi-trucks, whales in your bathtub). First, mount your Spark shockmount to any standard threaded mic stand. You can adjust the angle of the shockmount by loosening the large “Blue” thumbscrew, adjusting the shockmount basket to the desired angle, and tightening again. Next, simply thread the bottom of the Spark microphone into the shockmount by grasping the paddles at the base of the ring and rotating counterclockwise while firmly holding the Spark microphone. After the mic is tightened down against the shockmount, you can rotate the mic and lower rotating ring so that the Blue logo (and address side of the microphone) is facing your sound source.

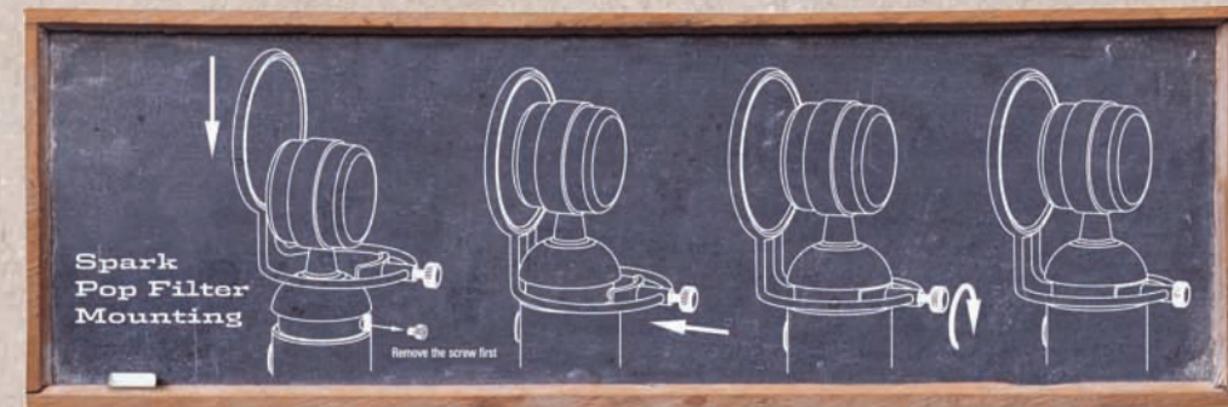
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Pop Filter Mounting Procedure

In the old days, many folks would slide an old pair of nylon stockings over their microphones, using the fine mesh to help block ‘plosive’ sounds that resulted in undesirable pops in their recordings. Well, we’ve learned that nylon stockings and Sparks certainly don’t mix, so we’ve included a custom-designed pop filter that will cut down on those plosive sounds without impacting sound quality. Mounting the Spark’s pop filter couldn’t be simpler. First, locate the installed filler plug at the rear of the Spark’s body, located inside the painted groove near the top of the mic body. Remove this plug by unscrewing with your fingers. Next, simply lower the Spark pop filter over the head of the microphone, keeping the mesh screen lined up with the front of the microphone (the logo side), and align the pop filter mounting tab with the back side of the painted groove at the top of the mic body. After ensuring that the pop filter is centered over the upper groove, tighten the thumbscrew into the hole at the rear of the body tube until the pop filter is secured against the body tube. Connect an XLR cable, such as the *Blue Quad* or *Blue Dual Cable*, at the bottom of the microphone and you’re ready to record!

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Focus Control

Just when you feel like you've gotten to know your Spark microphone, you're going to find out that the Spark actually has multiple personalities. Don't worry, though, we think you'll like both of them. Recessed in the lower groove of the body tube at the rear of the microphone you will find a small, two position in-out button. With this button in the **out** position (Normal mode), your Spark provides increased low frequency sensitivity for recordings with great impact and definition. When the button is pressed to the **in** position (Focus mode), the Spark will provide even greater clarity and detail. The Focus Control feature enacts a subtle change to the circuitry of your Spark microphone which draws focus to the heart of the recorded signal: the mid-range and upper frequencies. Remember, in recording, if it sounds good it *is* good, so feel free to experiment to find your favorite sound for each source.



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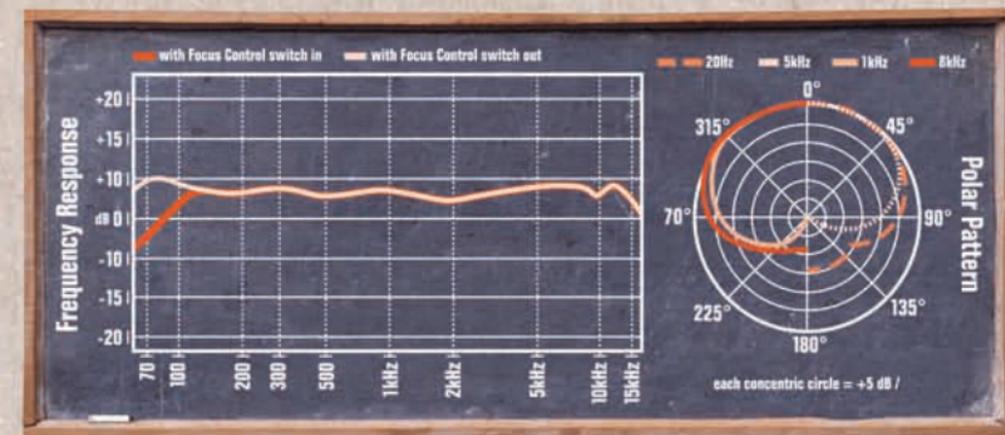
Usage Notes

The Spark requires +48V DC phantom power, which is provided by most I/O boxes, mic preamps, mixing consoles, or separate phantom power supplies. It is important to note that some units, although rated at 48 volts, may supply insufficient or unstable phantom power, which can result in distortion and/or degraded performance when used with the Spark. If in doubt, consult your equipment manufacturer to verify that it provides true +48V phantom power.

To avoid damage to audio components when connecting phantom power, always follow this simple procedure: 1) Turn down the gain on your mic preamp, headphones volume and your studio monitor volume; 2) Connect the microphone cable to the Spark and microphone input jack on your audio interface, mixing board, etc.; 3) Turn on phantom power; 4) Turn up the mic preamp gain, etc.

To disconnect or re-route the Spark: 1) Turn down the mic preamp gain, headphone volume, and your studio monitor volume; 2) Turn off phantom power and wait ten seconds before disconnecting the mic.

With the Focus Control switch out, the Spark delivers a robust timbre that creates a large audio landscape. The bump in the top end of the frequency response chart (shown below left) at 8-12kHz brings definition and clarity, creating a strong presence in your recordings, much like listening to the recorded signal right next to your ear. A slight increase at the 1kHz region helps to define the frequencies of the human voice. A small dip at the 200-400 Hz range helps to smooth out the type of harsh frequencies that often interfere with detailed top end frequencies. The bump in the low end of the frequency response around 90 Hz emphasizes the upper portion of the low end, creating a tighter, punchier sound. With the Focus Control switch in, the ultra-low frequencies below 100 Hz are rolled off to provide a sonic platform that accepts basic audio processing such as compression and EQ. The end result is a recorded signal that will easily sit in a track or your final mix, like a lead vocal that is clearly audible and sitting well in the mix of a rock & roll or pop type of track.



These charts are only a starting point for the sound provided. How the microphone reacts in a particular application will differ greatly because of many variables, like room acoustics, distance from sound source (proximity), tuning of instruments, mic cabling and other factors. For more tips on miking and recording techniques, check out the Blue website.

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As shown in the polar pattern (above right), the Spark microphone utilizes a cardioid pattern, meaning it only picks up the sound that is directly in front of the microphone and rejects the sound at the sides and rear of the microphone. This is very useful when recording while other instruments or sound sources are present, as the Spark will pick up only the sound source that is in front of it and allow you to isolate the desired sound you wish to capture. When using the Spark microphone to record a single sound source, the Spark's cardioid pattern will help eliminate unwanted room ambiance often captured with omnidirectional microphones or microphones with wider patterns that can make your recordings sound unprofessional. The end result is a clear and present recording, just like a professional studio.

RECORDING APPLICATIONS

What do you want to record with your Spark? Whatever it is, we have some great tips for you, and some interesting techniques to experiment with, in particular with the Spark's Focus Control. The Spark will excel in recording a wide range of different sound sources, so check out the sections and below for the straight story on recording each of these sources with your Spark mic.

Vocals

8 A little-known secret in the recording world is that vocalists love singing into beautifully engineered microphones like the Spark. Put it in front of any singer and you're guaranteed to get a truly inspired vocal performance. Position the vocalist at the front of the Spark microphone (the side with the Blue logo) from one to twelve inches from the microphone. The closer you get to the Spark, the more present and intimate the Spark will sound. For a "big" vocal sound with maximum presence, get the vocalist within one to three inches of the capsule. To avoid plosives at this close range, be sure to use your Spark pop filter. For a livelier sound, such as a rock or pop vocal, place the Spark a further from the vocalist. Tilt the Spark up (toward the forehead) for more projection and head tone, straight on at the mouth for maximum brightness and intelligibility, or down toward the chest for more robust lows and smoother highs.

If you're recording a vocal over a busy track, try utilizing the Spark's Focus Control. The Focus Control will help the vocal track stand out over a crowded music bed.

The key to recording a good vocal track, as well as any other track, is controlling your room environment. A room with carpet and curtains will exhibit much less reverberation of your vocal, making the recording sound less lively, allowing the recording track to be more easily manipulated with after effects such as reverb and compression during the mixing



process. By contrast, a room with substantial glass, marble, wood floors or tile will yield natural reverb, which may be pleasing to the ear but difficult to remove at a later time, and will add complication and 'busy-ness' to your track. Armed with some knowledge about these basics, you're set to experiment and find what best fits your desired vocal sound.

Acoustic Guitar

9 Acoustic Guitars come in many different sizes, shapes and stringed variations to create different sounds and timbres. Positioning of the Spark microphone can help you capture the sound that is ideal for your recording needs and is a perfect match for each of these different types of instruments. For a balanced sound with plenty of sparkling high-end, position the Spark microphone head facing the guitar neck, right where the neck joins the body (usually around the 12th-14th frets). For starters, keep the mic as close to the guitar as possible and tilt the capsule (microphone head) toward the soundhole to capture a blend of low-end and pick sound. If you need more low-end sound, move the microphone closer to the soundhole. For more high-end detail, move the Spark farther from the guitar, either at the same neck position, or above the instrument up by the guitarists head. To make your acoustic guitar recording sound thick, rich, and luxurious, try double tracking, a process of recording the same part twice (or even more times), on separate tracks. Experiment with panning the different tracks to different sides of the mix to find a sound that's just right for your artistic needs. As with vocals, if the acoustic guitar needs to stand out over a crowded mix, try engaging the Spark's Focus Control. The detailed mid-range and top-end will come to the front of a full sounding music bed. Another interesting experiment for guitar sounds is to try double tracking your recording with the Spark, at once with the Focus Control engaged and then again with the Focus Control off. Combining these two signals can give you a warm and very interesting sound.

Electric Guitar

To create a clean recorded electric guitar, such as those used in genres like country and jazz, position the capsule of the

Spark in the center of the speaker cone to capture more highs, or move the capsule toward the edge of the cone for a fuller sound with more low-end frequencies. For overdriven or distorted tones, used in genres such as rock or metal, place the Spark close to the amplifier and move the mic toward the outer edge of the cone. Or, for a more lively sound, back the Spark away from the amp a foot or more to add in a little room sound (room sound is the inherent reverberation you get from the room, which adds liveliness) and soften the extreme high end frequencies. For lead guitar sounds, try engaging the Spark's Focus Control, which will help the guitar to sit better amongst a wall of sound.

Drums

The Spark's fast transient response, crisp highs, and high-pass filter make it an ideal mic for recording drums. For kit and hand drums, begin by placing the microphone two to four inches above the rim or hoop (where the head is secured to the shell). Angle the front of the capsule toward the player's stick or hand to pick up more attack and definition. Turning the capsule toward the shell will soften the sharp attack of a hand drum, or pick up more of the bright, crackling buzz from a snare. Moving the microphone closer to a drum generally increases the low end, shell resonance, and separation from other sound sources, while more distant placement emphasizes the interaction of the drum and the environment, producing a blended and airy sound. If you are recording a snare drum or using the Spark as an overhead microphone, try engaging the Focus Control. Engaging the Focus Control will help to eliminate unwanted kick drum sound on your snare or overhead track and bring a more direct hit to each attack.

Saxophones, Flutes, and Reeds

For soprano sax, clarinet, oboe, and related instruments, position the Spark directly above and in front of the keys between the middle of the horn and the lowest pads. Try moving the Spark up or down along the length of the body to adjust the balance of airy highs (toward the mouthpiece) and cutting midrange (toward the bell).



On flute, start by placing the Spark above the middle of the instrument, and move the diaphragm closer to the mouthpiece if more high frequencies and breath sounds are desired.

For other members of the saxophone family, start by placing the Spark two to six inches in front of the lip of the bell. Angle the Spark upward toward the mouthpiece to capture more air, brightness, and high notes. For a mellower sound, orienting the diaphragm toward the floor will emphasize the low range of the sax, and will tame the biting upper midrange that projects straight out of the bell.

Piano

Pop and jazz piano recording is usually accomplished with a pair of microphones placed inside a grand piano, either close to the hammers for a defined, percussive sound, or roughly in the middle of the piano body to get a more resonant and blended tone. When using these methods, it is conventional to employ a coincident stereo pair of microphones, with one microphone capsule oriented to pick up the treble strings, and the other focused on the bass range of the instrument.

A less common, though very useful technique, is to position a stereo pair or single Spark microphone just outside of the piano, either in the curve of a grand, above an upright, or a few feet away from the cabinet. This will give you a classically-oriented sound with a significant amount of natural room reverberation to add liveliness.

Violins, Viola, Cello and Bowed Instruments

When recording bowed instruments, especially the violin, the room conditions become even more important. Since violins tend to be very bright, recording them in a lively room can leave you with a harsh sounding recording. For starters, try hanging a blanket or two on the surrounding walls to slightly dampen the room's natural reverb. Once you've taken

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control of the sound of the room, place the Spark about one or two feet in front of the bridge of the instrument. If you are recording a violin or viola, this means you will need to place the Spark above the person playing, pointed down toward the bridge of the violin or viola. If the instrument sounds harsh (too much high end), try moving the Spark microphone slightly toward the side of the instrument and away from the “f” holes. If you are recording multiple string or bowed instruments, simply place the Spark about 3-6 feet above and in front of the instruments, pointed toward the players. Try and arrange the players evenly in front of the Spark, as to avoid picking up one instrument more than all of the others.

Acoustic and Electric Bass

Recording acoustic bass (upright bass) and electric bass are very different tasks, but the Spark will help you to achieve great results for both instruments.

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For acoustic bass, start by placing the Spark about 8-18 inches away from the front of the instrument, and point the Spark in between the bridge and the fingerboard to capture a nice balance of low-end frequencies and string attack. If you want to capture more of the low-end thump of the bass, and less of the attack of the strings, position the Spark about 3-8 inches away from the bass, and aim it about halfway between the bridge and the tailpiece. The most important thing to do when recording acoustic bass is to listen to the bass while it is being played, and determine a microphone position that suits the particular bass and use case.

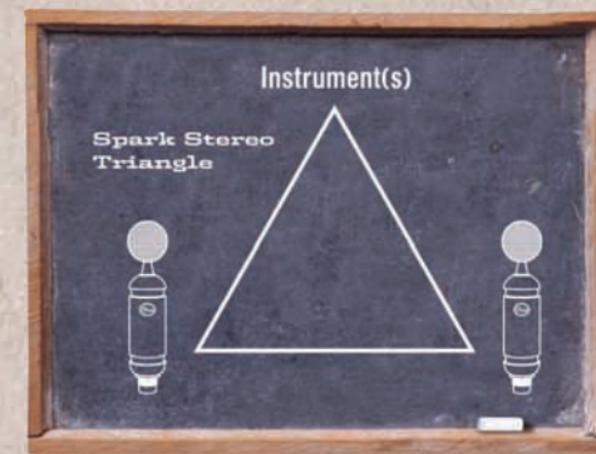
When recording electric bass, it is important to have a decent amount of available space to record in. The sound waves a bass amplifier creates have a much longer wavelength than most instruments, and as a result require a little bit of space to fully develop. Start by placing the Spark about 2-12 inches away from the speaker, directly in front of the center of the speaker cone. For less punch and more of a smooth low end, position the Spark between the center of the speaker cone and the edge of the speaker cone.



Recording in Stereo with Spark

Another great use for your Spark microphone is recording in stereo. For this use, you will need two Spark microphones.

Stereo recording is often the preferred method for many different recording situations, from acoustic guitars to orchestras, because stereo recording provides the listener with an even more realistic listening experience. Stereo recording works much like the way we hear. Our ears are pointed approximately 110 degrees in different directions, which allows us to comprehend where a sound comes from. Stereo recording involves using two microphones pointed in different directions ranging from 90 to 180 degrees, or two microphones pointed at the same instrument from different directions. Because the microphones are pointed in different directions, you are able to capture realistic spacing and depth in your recordings, similar to the way we hear. In essence, two microphones positioned in this way will better capture the reflections and formation of the sound in the room.



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There are several different ways to record in stereo with your Spark microphones. Start by placing two Spark microphones about 4-10 feet apart, and point both of them toward an instrument (or instruments). As a starting point, it is ideal to form an equilateral triangle between the two microphones and the instrument (one point of the triangle being the instrument, the other two being the Spark microphones) but just listen to what is being recorded, and decide for yourself what the ideal positioning of your Sparks might be. This technique is great for recording drums, an orchestral ensemble, or a full band recording.

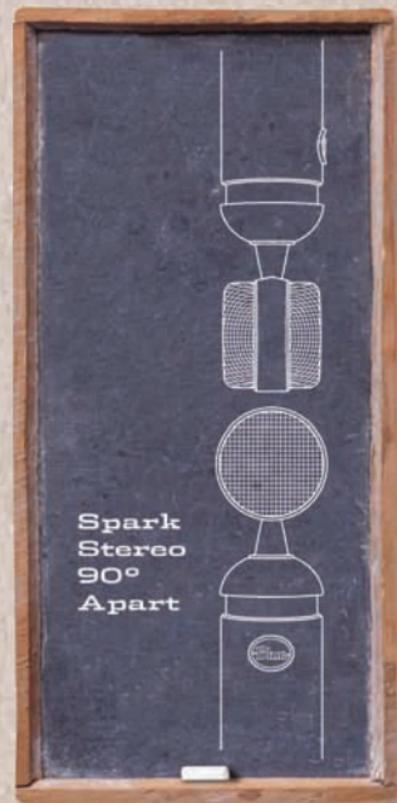
For a more intimate stereo sound, place one Spark on a stand as you would normally. Next, place a second Spark upside down, directly above the first Spark, and point them 90 degrees apart (perpendicular) from one another. Now, position the instrument (or instruments) you wish to record directly in front of the intersection of the two microphones' polar patterns, about 6-24 inches away from the Sparks. The larger you make the angle, the wider the stereo image will be. This technique is great for recording acoustic guitars, banjos, upright pianos, drums, or just about any other acoustic instruments. You can also create some fascinating sounds by using this technique with one of the Spark microphone's Focus Control engaged, resulting in a uniquely textured sound.

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Additional Applications

The Spark is not just for instruments and singers! Spark is an ideal desktop microphone for applications such as dictation, voice recording and internet telephony, and of course, podcasting! You'll also love it for looping dialog over your professional or home movies. You can connect the Spark to your computer with Blue's *Icicle* XLR to USB adapter, or other USB audio converters.

OK, we've lit the fuse – now it's your turn to light up your Spark and create some awesome professional quality recordings.



TECHNICAL SPECIFICATIONS

Transducer: Condenser

Polar Pattern: Cardioid

Frequency Response: 20Hz – 20kHz

Sensitivity: 28 mV/Pa

Output Impedance: 50 Ohms

Rated Load Impedance: Not less than 1 Ohm

Maximum SPL: 128 dB

S/N Ratio: 84 dB

Noise Level: 10 dB [A weighted]

Power Requirement: +48V DC Phantom Power

Weight: 1.25 lbs.

Dimensions: Length – 7.76 in; Diameter – 1.77 in.

INCLUDED ACCESSORIES

Pop Filter

Shockmount

Wood Carrying Case

WARRANTY

This Microphone or related part is warranted under the conditions outlined below to its original, registered owner, provided the purchase was made from an authorized Baltic Latvian Universal Electronics (BLUE) dealer. This Microphone or related part is guaranteed to remain free from operating defects for three (3) years from the date of purchase. In the event that service is required, all necessary parts and labor will be furnished free of charge during this period except for tubes, which are guaranteed for 90 days against defects. This warranty is void if the serial number has been altered, removed or defaced. The warranty is void if the equipment is altered, misused, mishandled, maladjusted, suffers excessive wear, or is serviced by any parties not authorized by Baltic Latvian Universal Electronics (BLUE). The warranty does not include transportation costs incurred because of the need for service unless arranged for in advance. Baltic Latvian Universal Electronics (BLUE) reserves the right to make changes in design and improve upon its products without obligation to install these improvements in any of its products previously manufactured. This warranty is in lieu of any or all expressed or implied. In keeping with our policy of continued product improvement, Baltic Latvian Universal Electronics (BLUE) reserves the right to alter specifications without prior notice.

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