



SONTRONICS SIGMA 2 USER GUIDE

Thank you for choosing our SIGMA 2 microphone and welcome to the **SONTRONICS** family!
We hope you enjoy your new purchase and we invite you to take a moment to register your mic for our **LIFETIME WARRANTY** (see below).

We have provided this guide to help you fully understand your microphone and get the best from it. **PLEASE READ THIS GUIDE CAREFULLY before** using your SIGMA 2 as it also contains important information for your safety and for the longevity of your new microphone.

For more information on all our microphones and accessories, and about **SONTRONICS®** in general, visit **www.sontronics.com**



Email us your serial number and date/place of purchase and we'll activate your Lifetime Warranty. See full Terms & Conditions at www.sontronics.com

ABOUT YOUR SIGMA 2

Our British-made and designed **SONTRONICS SIGMA 2**, based on our original multi-award-winning SIGMA launched over a decade ago, is a phantom-powered ribbon microphone that delivers superb, unmatched results on a wide variety of sources whether using it live or in the studio.

Each SIGMA 2 boasts a British-built circuitboard of our proprietary design and a custom-wound transformer made here in **SONTRONICS'** hometown of Poole.

Inspired by classic ribbon microphones of the 1930s and '40s in both its looks and its sound, SIGMA 2 is much more flexible and much easier to use than a traditional passive ribbon mic. Whatever you're recording, SIGMA 2 delivers a smooth, silky, vintage character with a rich depth to the mid and low frequencies and beautiful detail in the highs.

SIGMA 2's high sensitivity and low self-noise are simply incredible for a ribbon microphone, enabling it to capture every subtle detail of your source. It excels when used for recording solo woodwind, strings, guitar, piano or vocals, resulting in an extremely pleasant, natural sound. SIGMA 2 is also superb when put to work on percussion or for overhead and ambient room recording.

You can also achieve stunning results when recording guitar amps with SIGMA 2 but you must take care to position the mic carefully (see opposite) so as not to damage the delicate ribbon element.

Supplied with our unique Sontronics shockmount and a rugged ABS flightcase, SIGMA 2 is a must-have for any mic collection.

If you're looking for beautiful, natural results with a classic vintage ribbon character, **SONTRONICS SIGMA 2** is for you!

SIGMA 2 KEY FEATURES

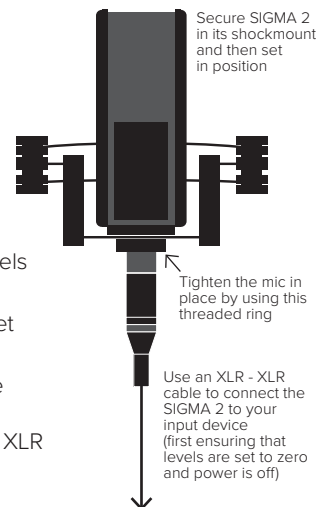
- Phantom-powered ribbon mic
- Made in the UK
- Clear, natural sound
- Captures every intricate detail
- Rich mid & low frequencies
- Covered by Lifetime Warranty
- Ideal for vocals, acoustic guitar, piano, solo strings & woodwind, guitar amps, in pairs for overhead and room miking

TECHNICAL SPECIFICATIONS

Polar pattern: Figure-of-eight
Frequency response: 20Hz - 15kHz
Sensitivity: 18mV/Pa -33dB -1.5dB (0dB = 1V/Pa @ 1,000Hz)
Impedance: ≤ 150 Ohms
Equivalent noise level: 10dB (A-weighted)
Max SPL (for 0.5% THD @ 1kHz): 125dB
Power: Phantom power 48V required
Connector: 3-pin XLR
Dimensions: 164 x 50 x 32mm
Weight: 741g (1291g with shockmount)
Comes with: shockmount, flightcase

SIGMA 2 QUICK START GUIDE

- Attach the supplied shockmount on to a microphone stand.
- Sit SIGMA 2 in the shockmount and secure firmly in place by turning the threaded ring at the base of the mount (not by turning the microphone).
- Position SIGMA 2 at the ideal distance and angle from the source being recorded (see opposite for Placement Advice).
- If using SIGMA 2 with guitar amps, ensure that gain/volume levels are set to ZERO or very low before you start.
- Connect the female end of an XLR cable to the three-pin socket at the base of SIGMA 2.
- Ensure that all input, output and EQ levels on your input device (eg, mixer, interface, soundcard) are set to ZERO and phantom power is switched OFF before connecting the male end of the XLR cable to the 'Mic In' socket on your device.
- Connect your input device to your computer and make sure it is communicating with your DAW program, ensuring that all up-to-date drivers have been downloaded.
- Turn on phantom power and adjust the levels as required (gradually increasing gain/volume on your amp to find the perfect tone) and you are ready to go!



Plug the XLR cable into the Mic Input socket on your device and then turn on 48V phantom power & adjust levels

INPUT DEVICE
(interface, soundcard, mixer)

HOW YOUR SIGMA 2 WORKS

SONTRONICS ribbon microphones feature an extremely thin strip of corrugated aluminium suspended between two powerful magnets. When sound pressure reaches the ribbon, its subsequent movement within the magnetic field induces an electrical current. This signal passes through a custom-wound transformer and is then further amplified by the internal preamp circuit.

The polar pattern of a ribbon microphone is naturally figure-of-eight; the ribbon only picks up signal from the front and rear and nothing at all from the sides. Our mono ribbon mics (SIGMA 2 & DELTA 2) give a very intimate reproduction of sung vocals or instruments, and are perfect for use in spaced stereo recording applications where rejection of sound from the off-axis positions is critical. A figure-of-eight mic can also be used in combination with a cardioid mic for mid-side stereo technique.

Ribbon mics have a very specific frequency response, reproducing less high-frequency output and capturing few ambient frequencies ('less air'), which leads to an authentic, natural-sounding result. Traditional ribbon mics were renowned for having extremely low sensitivity and required lots of gain to boost the signal in the mix, sometimes resulting in unwanted distortion and noise. However, SONTRONICS ribbon mics include a 48V-powered preamplified circuit, resulting in much higher sensitivity and making them more versatile and much easier to use than traditional, unpowered predecessors.

SONTRONICS' new ribbon mics –SIGMA 2, DELTA 2 and APOLLO 2 – also uniquely feature RFI (radio frequency interference) filters in their circuits, which greatly reduce the possibility of the microphone picking up radio signals, making them even more suitable for using in a live or stage environment.

USING YOUR SIGMA 2

- **Front & back:** SIGMA 2's pickup pattern is figure-of-eight and, as is usual for all ribbon mics, you will notice slightly different tonal characteristics when recording from the front or from the rear. This is quite normal and can actually be very useful.
- **Frequency response:** One of the primary characteristics of ribbon microphones is that they do not have an accentuated high-frequency response and if you're not used to it, this can sound unusual. However, once your ears have grown accustomed to this phenomenon, you will discover that it's a very usable characteristic, especially when recording instruments that have a high-frequency bias, as room ambience and 'air' are minimised and it can sound as if the instrument is being played right next to you.
- **Suggested use:** SIGMA 2 is perfect for recording vocals, spoken word, acoustic guitar, piano (especially in pairs), accordion, violin, viola, cello, flute, clarinet, oboe, bassoon and other wind or stringed instruments. When used with care, it will also give beautiful results on electric guitar amps, percussion and saxophone, and also sounds amazing (used either singly or in pairs) for room miking and drum overhead applications.

PLACEMENT ADVICE

NB: Take care not to place SIGMA 2 too close to any loud source as the delicate ribbon element can be overloaded or damaged by excessive pressure levels. NEVER BLOW DIRECTLY INTO SIGMA 2!

SIGMA 2 is very sensitive and therefore requires careful placement techniques to achieve the best results. Think of SIGMA 2 like your ear when considering the proximity to the source you are recording, and take care not to place it too close to any source as this could overload and damage the delicate ribbon element.

When miking a guitar amplifier, ensure that the gain/volume levels are low and then place SIGMA 2 around 5cm (2") from the grille cloth, with the front of the mic directed at the outer edge of the speaker cone. In this position, it will capture the brightest tone of your amp but you can then move it towards the inner edge of the cone where the tone gets warmer. In the exact centre of the speaker cone, there is very little tone at all.

Once you have found the right tone, you may want to move the DELTA 2 further out from the amp, and as you do so it will capture more ambience, adding a more spacious character to the sound. Although most people prefer to close-mic their amplifiers, it's worth experimenting with distances up to 1m (3 feet) away.

When close-miking the amp, you can tilt the microphone about 20° to 30° towards the floor so it minimises the blast pressure on the ribbon element (and don't turn the amp up to full volume either!).

When recording woodwind or sung/spoken vocals, position SIGMA 2 about 10cm (3-4") in front of the player or singer/speaker, and for brass instruments move it a little further away as their SPL is naturally higher.

If using SIGMA 2 to record vocals, speech, wind or brass instruments, we recommend using a pop filter, such as the SONTRONICS ST-POP, to protect the microphone from moisture and to reduce plosives.

ABOUT OUR MICS

All our microphones are designed and developed here in the UK by **SONTRONICS'** founder and designer Trevor Coley. We spend a long time creating and crafting our microphones with extreme care and attention, and all our new models are beta-tested with top artists, musicians and producers (including the engineers at Abbey Road Studios) before they go into production.

Each circuitboard is constructed using the highest quality components to ensure that your microphone delivers you many years of worry-free use.

The capsules in our condenser microphones are diligently hand-made using gold-sputtered Mylar film which is no more than 6 microns thick (seven times thinner than a human hair) and then artificially pre-aged to ensure stability and to also give each microphone its specific characteristics

Our ribbon microphones employ a microscopically thin strip of corrugated aluminium ribbon and the most powerful rare-earth magnets to achieve class-leading sensitivity and audio reproduction. They are built with British-made circuitboards, CNC-engineered metal parts and precision-moulded grilles made from

British stainless steel mesh. The APOLLO 2 stereo ribbon mic uses a top-quality Mogami® cable with premium Neutrik® connectors.

SONTRONICS valve microphones (ARIA & MERCURY) also employ UK-made circuitboards and utilise hand-selected, European-made (or vintage British-made), dual-triode vacuum tubes chosen for their consistency in delivering a balanced frequency response without over-colouring the original signal.

Our ribbon, dynamic and valve microphones are hand-built in our UK headquarters, where our experienced engineers put all of our mics through several levels of quality control tests using specialist laboratory equipment to ensure they meet (and surpass) a series of strict performance targets. In-depth audio tests are also carried out to ensure each mic is working perfectly.

You can be sure that your microphone has been lovingly crafted, expertly put through its paces, stringently tested and hand-packaged so that you can simply plug it in and start making professional-quality recordings straight out of the box. We hope you enjoy your microphone!

IMPORTANT CARE & SAFETY INFORMATION

As with all sensitive electrical equipment, **your SIGMA 2 microphone should be treated with care and respect at all times.** Here are a few tips to help extend the life of your mic and keep it working at its best...

- When you're not using your microphone, always keep it in its protective flightcase.
- Keep your microphone away from moisture, liquid, naked flame, direct heat or powerful light sources, and take care to avoid any knocks or bumps. Do not place hot or cold drinks near your microphone, in case of spillage or heat transfer.
- Avoid transferring the microphone from cold to warm environments as this can lead to condensation forming inside, which will adversely affect its performance. Should condensation occur, leave the microphone to reach room temperature before using it again.
- When recording vocals, **ALWAYS use a popshield** to help prolong the life of the ribbon element.
- **Do not turn on phantom power before the mic is plugged in** as this can lead to damage to the sensitive components inside the microphone. Similarly, when you've finished using your mic, **turn off the phantom power BEFORE disconnecting the mic.**
- Use a soft cloth to clean your microphone after use (especially when recording vocals or wind instruments). Do not use any solvents, thinners, chemical cleaners or aerosols as they could cause damage to the mic body.
- Due to its mechanical nature, the ribbon element will naturally stretch over time (and the ribbon motor itself is not covered by our warranty). If you notice the sound of your microphone becoming distorted or duller than usual, contact us to arrange for a non-warranty ribbon replacement.
- If subjected to sudden impact or a sudden loud sound source, the ribbon may break or disintegrate completely, resulting in no signal at all. Please contact us to arrange for a new ribbon to be fitted.
- **Under no circumstances should you attempt to open or service the microphone yourself.** There are no user-serviceable parts to the microphone and it will invalidate your warranty and may result in danger to you and to the mic. Contact us or your local stockist or distributor for advice and help if you need it.
- If your mic exhibits any unusual behaviour, noise, smell or smoke, **STOP USING IT IMMEDIATELY**, disconnect it from any other device and contact us or your local stockist/distributor for advice as soon as possible.

