ASTON MICROPHONES

Owners Handbook

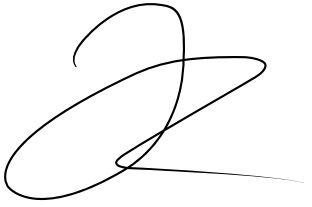

Spirit
Origin

Thank you!

On behalf of the whole team at Aston Microphones I'd like to *thank you* for investing in your Aston microphone.

Aston microphones are designed and created in the UK to the most exacting standards. Each Aston microphone is individually tested at each key stage during manufacture to ensure reliable and consistent performance and the most musical sound capture possible, so we're sure that your new baby will provide you with many years of perfect service.

Our microphones have been voiced and tuned following extensive blind listening tests by a panel of 33 of the biggest names in British music recording and production. Only when an overwhelming consensus put one particular combination of capsule and circuitry way out in front, of both competitor microphones and our other prototypes, did we approve the final designs. We hope you enjoy what we've created, and welcome your feedback.



James Young

Aston Microphones

Hitchin, UK

Aston Owners Club

Please register your product to extend your 2 year limited replacement warranty to 3 years, free of charge. You'll be automatically given membership to our exclusive Aston Owners Club once you've registered here:

www.astonmics.com/ownersclub

Features:

- Wave-form mesh head – this unique design provides shock absorption to protect the capsule, with elastic mesh memory
- Built-in pop filter using the latest stainless steel mesh-knit technology
- Direct to stand microphone mounting
- 2mm, solid stainless steel, laser-cut and etched chassis
- Capsule – The Aston Sound - developed by professional artists, engineers and producers www.astonmics.com/the-aston-sound
- Hi-spec. PCB & components
- Eco-friendly packaging. No unnecessary frills, just well-designed, re-usable and recyclable packaging

Weights & Measures

	Aston Origin		Aston Spirit	
Product Length	125mm	4.92in	175mm	6.89in
Product Width	54mm	2.13in	54mm	2.13in
Product Weight	450g	0.99lb	625g	1.38lb
100% Recyclable and Biodegradable Card Box (84% recycled fibre)	72g	0.16lb	72g	0.16lb
100% Recyclable and Biodegradable Card Sleeve	22g	0.05lb	22g	0.05lb
100% Recycleable non cross-linked Ethafoam 150 PE25 Insert	40g	0.09lb	37g	0.08lb

RoHS Compliant

Aston Origin

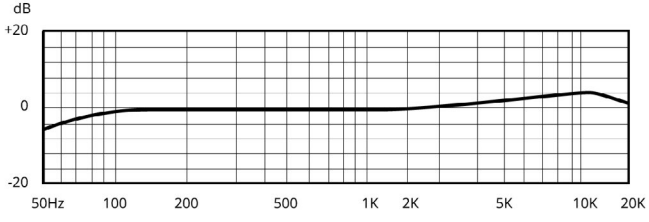
The Aston Origin is a high-performance cardioid condenser microphone utilising a one inch (1") gold evaporated capsule. It is versatile enough to use with most instruments and excels on acoustic guitar and vocals. Its hand-selected capsule is teamed with high-end transformer-less circuitry using only the highest quality components.

The Origin is designed to deliver direct, smooth and intimate sound... for a natural and transparent recording.

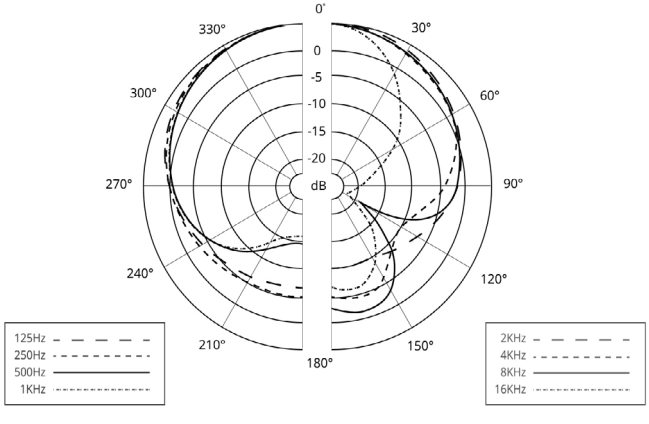
Specifications:

Transducer Type: Condenser
Acoustic Operating Principle: Pressure Gradient
Directional Polar Pattern: Cardioid
Frequency Response: 20Hz – 20kHz (+/- 3dB)
Equivalent Noise Level: 18dB A-Weighted
Sensitivity at 1kHz into 1kohm: 23mV/Pa
Maximum SPL for THD 0.5%: 127dB
Pad Switch: -10dB/0dB
Low-Cut Filter: 80Hz
48 Volt Phantom power (+/- 4 Volts) is required for operation

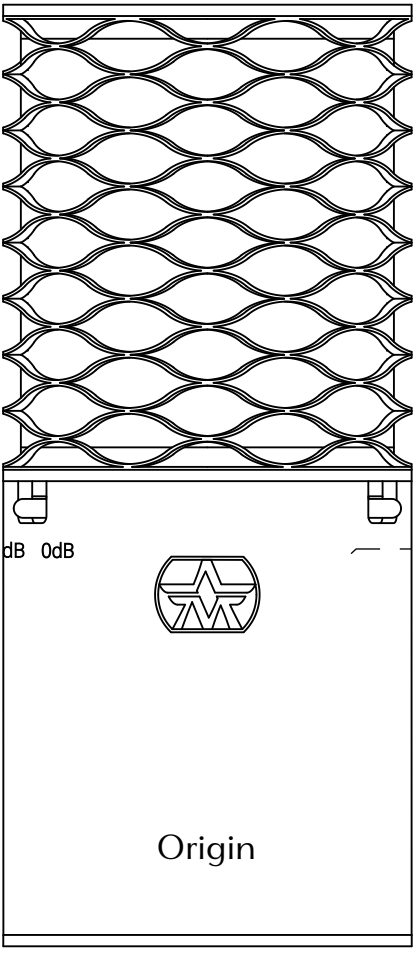
Frequency Response



Polar Pattern



Cardioid Condenser



Aston Spirit

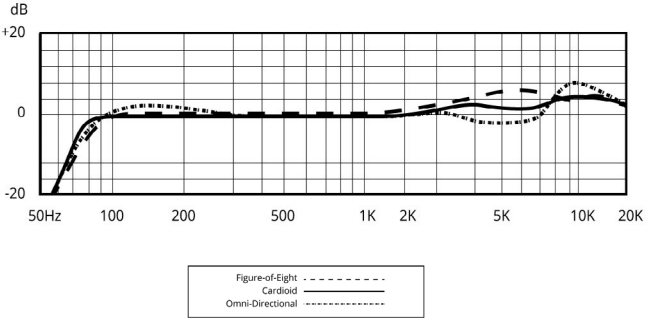
The Aston Spirit is a high-performance, switchable pattern, microphone utilising a one inch (1") gold evaporated capsule. A switch on the mic body selects from Omni, Cardioid or figure-of-eight polar patterns. It is versatile enough to use with most instruments and excels on acoustic guitar and vocals. Its hand-selected capsule is teamed with high-end transformer balanced circuitry using only the highest quality components.

The Spirit is designed to deliver a beautifully open sound with sparkling harmonics. This highly accurate microphone gives a stunningly natural and transparent recording, capturing all the detail in the high range but without adding the harshness that some condenser microphones seem to.

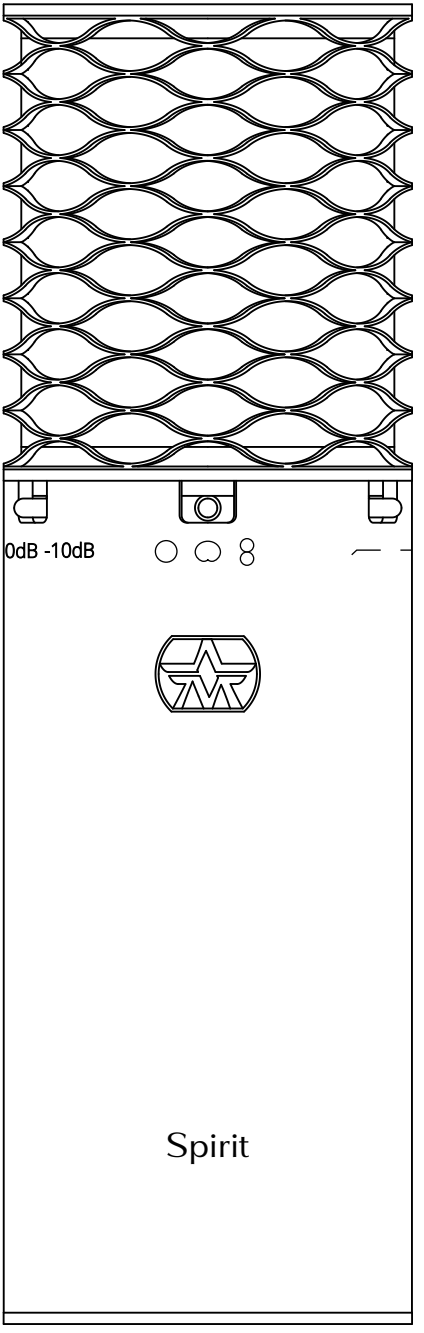
Specifications:

Transducer Type: Condenser
Acoustic Operating Principle: Pressure Gradient
Frequency Response: 20Hz – 20kHz (+/-3dB)
Equivalent Noise Level: 14dB A-Weighted
Sensitivity at 1kHz into 1kohm: 23.7mV/Pa
Maximum SPL for THD 0.5%: 138dB
Polar pattern: Omni/Cardioid/Figure-of-Eight
Pad Switches: -20dB/-10dB/0dB
Low-Cut Filter: 80Hz
48 Volt Phantom power (+/- 4 Volts) is required for operation

Frequency Response

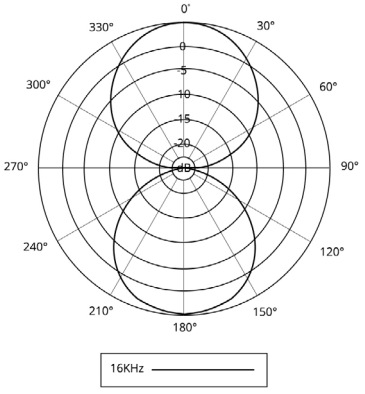


Multi-Pattern Condenser

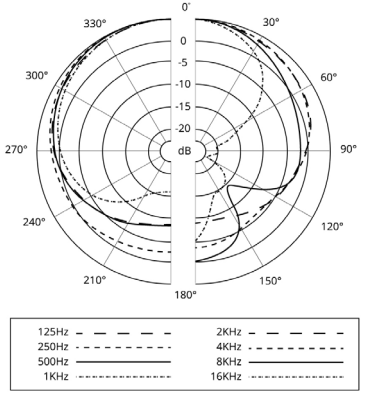


Polar Patterns

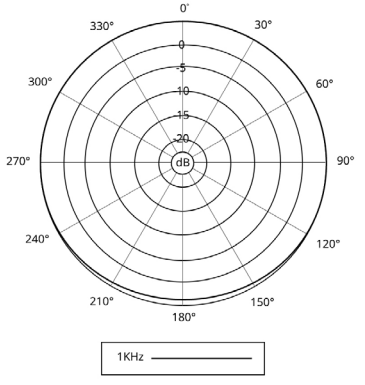
Figure-of-Eight



Cardioid



Omni-Directional



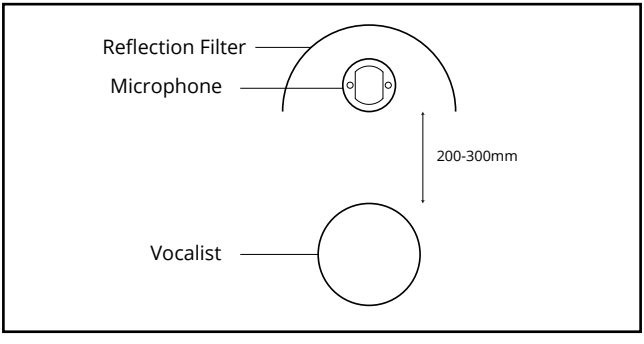
The Art of Performance

Using Your Aston Microphone

If you are an experienced audio practitioner, then you'll need little instruction to using Aston microphones — just apply standard 48 Volt Phantom power to our condenser models and you're in business. The Aston badge always denotes the front of the microphone when using cardioid pattern for main vocals, guitars etc. If you're still fighting your way up the learning curve, the following section will help get you up to speed.

Recording Vocals

Vocals are most often recorded using a side-address, large diaphragm, cardioid-pattern condenser microphone.
It is important that the space in which vocals are recorded is free from unwanted room reflections, something best achieved by using an Aston Halo reflection filter behind the microphone. Using adequate absorption is particularly important if using omni or figure-of-eight patterns where the sides of an omni mic also need more screening.



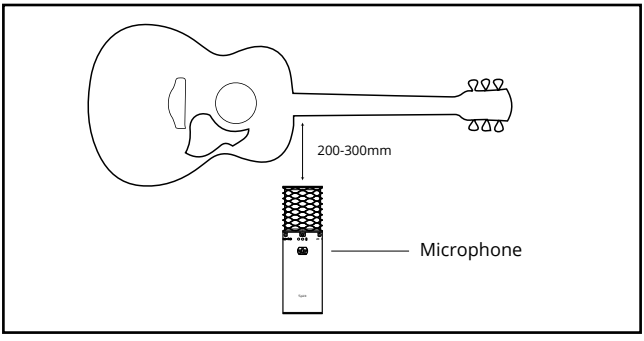
The mic is usually placed at a distance of 200 to 300mm from the mouth. The built in knitted mesh pop filter will minimise plosives, and switching in the low-cut filter can also help.
When using cardioid or figure-of-eight patterns, the proximity effect will cause the sound to become more bass-heavy the closer the microphone is to the mouth. A skilled vocalist can sometimes exploit the proximity effect to control the voice timbre while recording but less-experienced vocalists are safest keeping a fixed distance from the mic.

Acoustic Guitar

Setting up to record acoustic guitars is a much more complex exercise than recording single vocals. Acoustic guitar can be recorded using either large diaphragm microphones or small diaphragm models depending on what you have to hand.
As with vocals you can try different polar patterns though many users stick with cardioid so as to minimise spill. If you do use figure-of-eight or omni patterns, you'll pick up more room

ambience so use screens if the sound of the room isn't sympathetic to the instrument.

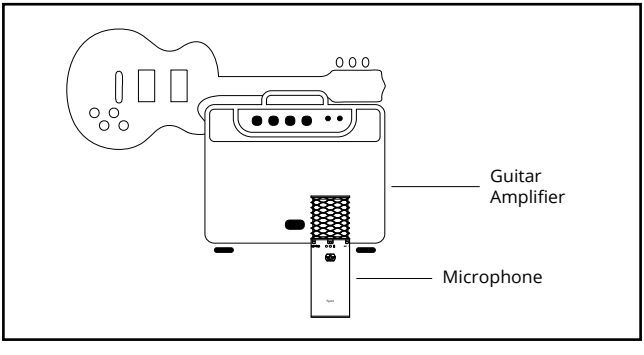
Every guitar is different and its interaction with the room will also affect the sound to a degree. A hard floor helps maintain a lively tone so if you have carpet in your recording area, try placing a sheet of hardboard, ply-wood or MDF on the floor under the instrument.



The key to a great sound is experimentation, but a good starting point is to have your microphone about 200 to 300mm from the body of your guitar (aimed at the point where the guitar neck joins the main body), and to listen to the sound you get on good isolating headphones while moving the body of the guitar in relation to the mic until you get a sound you like. Isolating headphones are crucial to this process to eliminate the sound of the guitar in the room from what you're hearing.

Electric Guitar

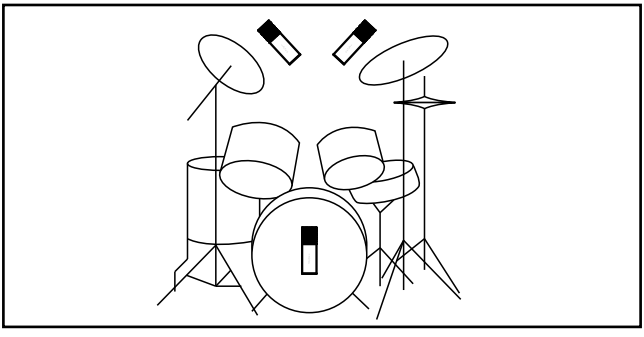
There are many ways to record the electric guitar but the classic approach is to use a cardioid pattern microphone fairly close to the amplifier's speaker grille. Some engineers like the mic to be almost touching the grille while others may back it off by 150mm or more so make a few test recordings and see what sounds right to you. If there's too much signal level, use the pad switch to attenuate the microphone output. The tonality will also be affected by whether the mic is aimed at the centre of the speaker or towards the edges, so again experimentation is the key.



Drums

Drums are 'usually' mic'd using one close-up cardioid pattern mic for each drum plus a pair of overhead mics to capture the cymbals and overall kit sound. A separate hi-hat mic can be used if the hi-hat isn't loud enough. Condenser mics are the usual choice for overheads though ribbon mics are sometimes chosen in this role. The close mics can be either dynamic or condenser but must be small enough not to get in the drummer's way.

A high SPL handling is necessary because the mics are so close to the drums so use the pad switch on your Aston microphone. The Spirit is particularly useful for drums as it has both 10 and 20dB pads. Use a condenser mic for the hi-hat if you need a separate hi-hat mic.



If you don't have enough mics or fancy trying a simpler approach, use a mic on the kick drum, a pair of overheads to pick up the rest of the kit and perhaps a separate snare mic. You might also want to try bringing the overheads forward so they are a metre or so in front of the kit. The trick is to find the place that gives the best balance of drums and cymbals.
The close drum mics are set up typically 30 to 60mm from the drum heads, usually 'looking' over the rim and aimed down towards the centre of the head. Just make sure that they are placed where the drummer isn't likely to hit them!

You can mic the hi-hat from the side at a distance of 150mm or so, but place the mic above or below the plane of the cymbals to avoid it receiving a blast of air when the hi-hats are closed suddenly. Also try to aim it where it will pick up the least spill from the other drums.

For the kick drum, using a front head with a hole cut into it is very common as this allows the mic to be positioned just inside the drum shell, 100 to 150mm from the inside of the shell and aimed towards the beater impact point. Most engineers choose a moving coil microphone with an extended bass response, though you can try pretty much any condenser microphone that can tolerate SPLs of 135dB or more. If there's no hole in the front head, try mic'ing the drum from behind at a distance of 100 to 200mm. Just make sure it doesn't pick up any pedal squeak.

The overhead mics are very important, and also the most problematic in small studios. Ideally drums should be recorded in a high room with the overhead mics 1 to 1.5 metres above the cymbals and spaced apart by around the same amount.

In smaller studios, ceiling reflections and wall reflections can affect the sound of the overhead mics making the kit sound boxy so use your blankets, duvets and foam panels to 'dry up' the area around the overhead mics. Absorbers placed between the mics and the ceiling can help enormously.

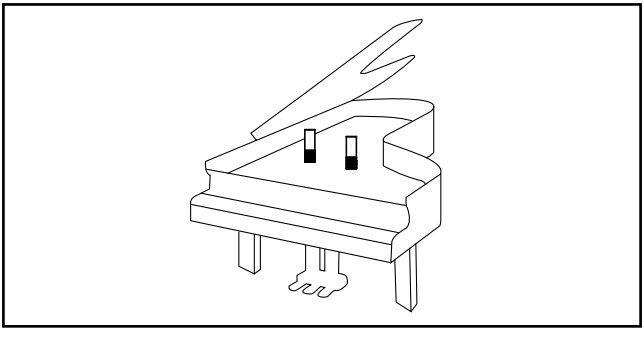
Another approach is to actually have the overhead mics almost touching the ceiling as that allows them to behave as boundary mics insomuch as reflections from the ceiling, other than directly behind the mics, can't reach them.

A useful tip is to place the two overhead mics equal distances from the snare drum centre so that there will be no phase errors if the recording is played back in mono. The snare sound is the most adversely affected by phase errors because of its high frequency content.

When mixing, ensure that the close mics are panned to match the stereo image captured by the overhead mics.

Piano

Pianos are usually recorded in stereo where you can use a pair of spaced microphones (omni or cardioid spaced 1 to 1.5 metres apart) or a coincident pair of cardioid mics set at an angle of 90 to 120 degrees. Condenser mics are the best choice as they have the widest frequency range. For upright pianos, remove the upper casework and position the mics around one metre above the piano. For grand pianos, put the lid on its prop and then stand the mics one to two metres from the piano aimed at the centre of the inside of the open lid. There are many other mic'ing variations for piano, including getting closer to the strings for a more pop-style sound, so as always, experimentation is the only way to get the best sound.



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