



Tonearm AMG 9W1

Dear music-lover,

Thank you for your vote of confidence in choosing the AMG tone arm for playing your records.

Technical description

The 9W1 tonearm has been developed with a completely new patented principle of engineering.

A standard tone arm with horizontal and vertical axles will have bearing play caused by the principle of design. With the 9W1 tonearm we have totally eliminated this play in the horizontal axis by replacing it with two 0.5 mm thick spring steel wires. This also enables a direct acoustic coupling which draws from your record exactly what is truly on it. This principle is also used in the rotor heads of helicopters replacing the standard bearings and eliminating their play.

The vertical axle is made of hardened tool steel and precision ground to a backlash-free fit with a needle roller bearing. The axles are maintenance free and never need to be adjusted.

The antiskating system is also integrated in the bearing case. In the upper rim of the arm shaft you see a two M 1.5 hexagon socket screws. By loosening them you can move them up and down and adjust the antiskating force. Positioning the screw higher will result in a stronger anti-skate force.

All materials we use are stainless steel, tool steel, spring steel, and aircraft quality anodized aluminum.

The arm tube locking lever is molded plastic, the coupling attenuation sleeve in the counter weight is Teflon and the insert in the arm tube rest at the lift is made of silicone.

Preparation for installation

Take the tone arm out of the wooden box and place it on a soft rag on a level surface. Please check that the arm tube is locked by the swivel clamp. If installing on a Clearaudio or Linn mount, please install the round arm collar adaptor and attach it to your turntable with the three M4 mounting screws. If installing on an SME mount, use the oval shaped SME arm collar adaptor and attach it with the four M3 mounting screws. If you have any questions regarding this please contact your dealer or Musical Surroundings.

*please note that the SME arm collar should be installed with the mounting hole positioned nearer the platter for the 9W1 tonearm.

Installation procedures

Please be advised to tighten all screws on this precision engineered product at low torque and with a sensitive touch, to avoid stripping the screws.

Cable installation:

To simplify the connection of your tonearm cable, please route the DIN connector of the cable through the underside of the mounting hole and up out of the top of the mounting bushing or arm collar adaptor.

Carefully attach this to the DIN receptacle on the bottom of the tonearm shaft. To avoid damage, be sure that the pins and the DIN connector are properly aligned before pushing the connector in.

Tonearm installation:

Slide the tonearm shaft into the mounting bushing or arm collar adaptor and gently tighten the VTA locking screw to hold the arm in place.

Mounting distance:

The next step will be to check that the mounting distance (pivot to spindle distance) is correct. The correct mounting distance for the AMG 9W1 is 223mm. If you have a turntable with an adjustable armboard, follow your turntable manufacturers instructions to rotate or otherwise adjust the armboard until the correct mounting distance is achieved. Use an alignment protractor to confirm the mounting distance. Please note that some alignment protractors require the cartridge to be installed in order to confirm this distance. If the measured mounting distance is significantly different than the recommended specification you may not be able to align your cartridge correctly. Please contact your dealer or Musical Surroundings if you have any questions.

Counterweight installation:

Slide the counterweight onto the back of the arm tube and tighten the flat head screw to lock it in place. The final position of the counterweight will be adjusted later.

Initial VTA adjustment:

Next, use the VTA locking screw and VTA adjustment screw to adjust the height of the arm so that your cartridge will clear the platter once installed. This will be fine tuned later in the setup process.

Angle of tonearm in rest position:

To ensure that the anti-skating is within it's proper functioning range, turn the arm shaft so that the center of the headshell is 80mm to 100mm away from the platter when the arm is at rest. When this is correctly set, use a 1.5mm hex and lock the VTA locking screw in the mounting bushing or arm collar adaptor.

Cartridge installation:

The next step will be the installation of your cartridge. Attach the cartridge according to your cartridge manufacturer's instructions. Connect the color-coded cartridge leads to the corresponding cartridge posts.

Tracking force:

With the cartridge properly attached to the headshell, adjust the vertical tracking force (VTF) by moving the counterweight and locking it in place with the counterweight locking screw. Check the tracking force using a high-quality, low profile, electronic scale. Make sure that the arm height (VTA) is adjusted to a neutral position when checking tracking force, as any changes to the arm height will affect the tracking force.

Cartridge alignment:

Use an alignment protractor to check that the cartridge is properly aligned in the headshell. After adjusting cartridge alignment it is advisable to double-check your tracking force, as this can change slightly.

Antiskate adjustment:

It is recommended to initially set the antiskating to minimum. In the flange of the arm shaft on the right and left side, are the anti-skate adjustment screws. Using the # 1.3 hex screwdriver, loosen them slightly and slide them all the way down. This is what moves the antiskating magneto away from the ring magneto in the bearing case. Now your antiskating force is set to minimum. To increase anti-skate force, loosen the same screws and slide them upwards. The anti-skate force on the 9W1 arm is very strong, so it rarely needs to be increased more than halfway up it's range.

Cueing device / arm lifter adjustment:

The tonearm lift is preset at the factory. If you need to adjust the range of the lift, you can do this by loosening the locking screw in the bracket with the # 0.9 screwdriver and sliding the lift mechanism up or down.

VTA fine tuning:

Now put a record on the platter in order check the VTA. Check the VTA by lowering the stylus onto the record. When the stylus is in the groove, the built in precision spirit level will indicate the relative VTA of the tonearm. If the bubble is closer to the front of the gauge (nearer the headshell), then the VTA is positive. If the bubble is closer to the rear of the gauge (nearer the counterweight), then the VTA is negative. If the bubble is centered, this indicates a neutral VTA. To fine tune the VTA, use a 1.5mm hex to loosen the VTA locking screw and then turn the VTA adjustment screw to raise or lower the arm, and lock the arm back in place with the VTA locking screw. Check your results again by lowering the stylus onto the record and repeat until the proper VTA is achieved.

IMPORTANT- after making any adjustments to VTA it is critical that you then re-check your tracking force, otherwise damage to your cartridge may occur!

Azimuth adjustment:

The tonearm also has an azimuth adjustment. It is set to zero at the factory. If you do not have appropriate measuring equipment, like a Fosgate Fozgometer, it is not recommended to adjust it. If you do need to make azimuth adjustments, use a 0.9mm hex to loosen azimuth locking screw at the left side of pivot area. Then adjust the azimuth by little increments using the azimuth adjustment screw on top of the pivot area. Press the hub gently down by your finger while tightening the locking screw again.

Now enjoy your music. We like to wish you lots of joy with this precision product.

