



Tone arm AMG 12J2

Dear music-lover,

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

Technical description

The tone arm 12J2 has been developed in a completely new patented principle of engineering. Starting out from a standard tone arm with horizontal and vertical axles and the bearing play caused by the principle of design, we have totally eliminated the 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 exactly draws from your record what is truly on it. This principle is also used in the rotor heads of helicopters replacing the standard bearings and 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 two M 1.4 hexagon socket screws. By loosening them you can move them up and down and adjust the antiskating force.

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

The arm tube locking lever is plastic molded, the coupling attenuation sleeve in the counter weight is Teflon and the insert in the arm tube rest at the lift is 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 locking lever. Insert the audio cartridge into the head shell to a preliminary position and slide the color coded female connectors on to the related pins at the cartridge.

Now start with the final adjustment.

Effective length	304.8 millimeters
Distance from pivot to turntable center	291.4 mm
Overhang	13.4 mm
Offset Angle	17.89 degrees
Effective Mass	12.2 g
Null points	Inner 66.04 mm
	Outer 120.9 mm
Bore size for mounting bushing	25 mm
Screw-hole circle	30 mm

Please be advised to tighten all screws at this precision engineered product at low torque and by a sensitive touch

Drilling the mounting bore

Please mark out as precise as possible the distance from pivot to turntable center of 291.4 mm. Drill a bore in your plinth or arm board at exactly this distance. You may use the mounting bushing as a template to drill the bores for the three fastening screws. The screws are metric M 3. For a wooden plinth use appropriate screws for wood.. Insert the mounting bushing so as the locking screw for the tone arm shaft is easy accessible from the right.

If you do not have a drill press or better a milling machine, please see a machine shop.

The 12J2 tone arm is available with a SME connector in the tone arm shaft where you may directly connect your tonearm cable. AMG offers 3 levels of tonearm cable.

Adjustment procedures

Slide the tone arm with the shaft into the mounting bushing. If you got the version with the female connector in the bushing (in combination with the Viella turntable) be sure both connectors are matching before you push the arm shaft to the detent.

Slide the counterweight onto the arm tube and balance it, so the tube is horizontal and free swiveling. Be sure, to adjust the height so your cartridge clears the platter. The active range of the antiskating system is about 250 mm. Turn the arm shaft, that the cartridge is about 90 mm away from the platter.

Take a # 1.5 hex screwdriver and lock the locking screw in the mounting bushing.

To continue, it is recommended to set the antiskating to minimum. In the flange of the arm shaft are left and right two screws. Take the # 1.3 hex screwdriver, loosen them a bit and slide them all the way down. This is what moves the antiskating magnetos away from the ring magneto in the bearing case.

And your antiskating force is set to minimum.

Now adjust the vertical tracking force (VTF) with a scale. It is essential, that the arm tube is in a horizontal position while resting on the scale. If your scale sits much higher on the platter than a record, set it on a piece of wood aside the platter. When VTF is set, gently fasten the locking screw in the counter weight with the # 1.5 screwdriver.

The tone arm lift is preset at the factory. If you like to raise your stylus higher or lower, the lift slides in the bracket by loosening the locking screw in the bracket with the # 0.9 screwdriver.

Cross check your pivot to turntable center distance. If the tone arm is mounted to a Viella turntable, please check if the dial on the right side of the arm board is set to zero. This adjusts your distance correctly.

Now put a record on the platter and set the VTA until the spirit level in the arm hub shows horizontal.

Assuming your turntable is set to horizontal.

Take the # 1.5 screwdriver, loosen the locking screw in the mounting bushing flange and if you have the two connectors with a Viella turntable, loosen the connector locking screw in the arm board as well. Adjust the VTA with the height adjustment screw in the lift bracket. Tighten the locking screw(s) again.

Now set the correct overhang by using a good template.

The antiskating system is very effective. To start with leave the left hand magneto in the lowest position and bring your right hand magneto up by two thirds with the # 1.3 screwdriver.. Then continue with a measuring record or Wally Tools Wallyskater or something equivalent.

The tone arm also has a azimuth adjustment. It is set to zero at the factory. If you do not have appropriate measuring equipment, like a Fosgate Fosgometer, it is not recommended to use it. If you like to make azimuth adjustments, take the # 1.5 screwdriver loosen the locking screw at the left side of the tube hub. Then adjust the azimuth by little increments with the screw on top of the hub.

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.

Werner Röschlau