

Muarah MY-1/9 tonearm User Manual

Muarah

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V1.1



Our mission is to make surrounding reality inspiring for eyes and for ears. We follow the idea of Open Eyes Economy where customer satisfied of high quality product and service is more important than pure financial profit for manufacturer. Our goal is to offer novel, luxury things – things with a bit of creator’s soul. Using those special things shall be a pleasure for its owner.

So, relax and spend a while with us...
Jacek Siwiński & Wiesław Zawada



1. Muarah MY-1/9 overview

Thank you for choosing our product which is designed and manufactured in Poland. Years of experience in building high-quality turntables and great cooperation with our partners resulted in the creation of a tonearm which is very universal and refined in every detail. Quality, attention to detail and perfect operation are key features which make of Muarah tonearms unique and give our customers ability to play vinyl records with great sound quality.

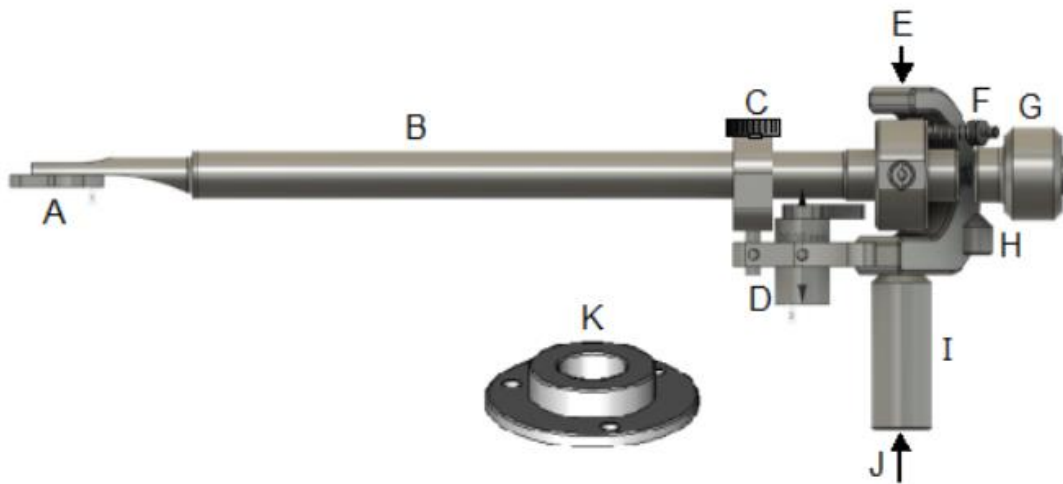


Figure 1: Side view and identification of the key tonearm parts.

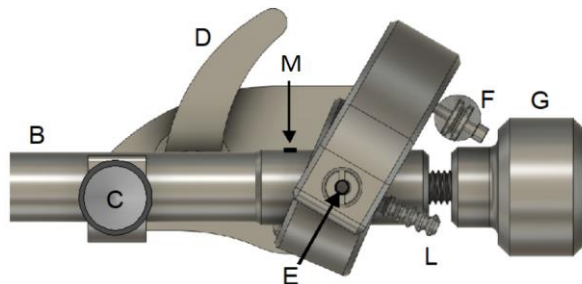


Figure 2: Top view and identification of the key tonearm parts.

- A. Phono cartridge mounting plate
- B. Tonearm tube
- C. Armrest locking bolt
- D. Armlift
- E. Vertical top bearing (pivot)
- F. Anti-skate rope support pulley
- G. Counter weight
- H. Anti-skate weight
- I. Tonearm vertical tube
- J. DIN 5P cable socket
- K. Mounting base
- L. Anti-skate lever
- M. Horizontal tracking adjustment bolt



2. MY-1/9 tonearm main features

- Cardan type of suspension with miniature ball bearing
- Twin tube construction with carbon fiber and aluminum pipes
- Great rigidity and resonances reduction
- Internal wiring made of pure copper
- Very good electromagnetic shielding of internal cables
- 9-inch effective length
- Detachable phono cartridge mounting plate
- Wide range of VTA adjustment
- Cartridge azimuth / leveling feature
- Standard DIN 5P connector / detachable phono cable
- Anti-skating system using a weight and string with miniature Teflon pulley to minimize friction
- Tonearm resting position with a safety LOCK bolt – a desired locking force can be set by user

3. Matching with turntables and cartridges

MY-1/9 is a very universal tonearm and can be used in a set with many turntables supporting 9" length tonearms. Thanks to effective mass of 15g it can also be matched with all typical cartridges available on the market. In specific cases please use the tonearm-cartridge interoperability calculator available on our web page (scroll down to the bottom of the page): <https://muarah.pl/tonearms>

4. Tonearm installation

The arm mounting hole diameter should be 18mm to 25mm – see Figure 3. Bolting pattern make 3 holes of 3,5mm equally distributed over a circle of 40mm diameter. Center of mounting hole to center of platter (pivot to spindle distance) should be 214mm (+/-1mm). Use 3mm attached metric M3 bolts or similar to attach the mounting cylinder (K on Figure 1) to the turntable plinth or the armboard. Carefully insert the tonearm vertical tube (I on Figure 1) into the hole in mounting cylinder and lock it using the small hex locking bolt located in the side wall of the mounting cylinder. After securing the tonearm with the bolt you can plug the cable connector into DIN 5P socket in the tonearm's vertical pipe (see J on Figure 1).

Note: In order to reduce static electricity effects during vinyl records playback we recommend to attach a turntable ground wire (if available) to the mounting cylinder of the tonearm – e.g. to one of three M3 mounting bolts. This type of grounding solution is used in case of all Muarah turntables. Some turntables can utilize different solutions – in such case please follow turntable's manufacturer instruction to ensure proper grounding.

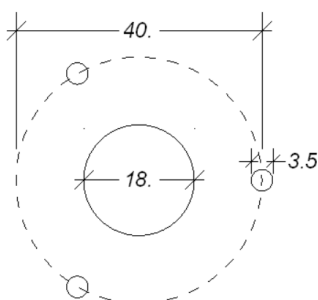


Figure 3: The tonearm mounting hole and bolting pattern

5. Cartridge installation

1. Unscrew the cartridge mounting plate (A on Figure 1) using hex key
2. Attach the cartridge to the mounting plate using bolts provided with the cartridge
3. Carefully attach tonearm wire miniature connectors to the cartridge pins paying attention to the color coding of wires and pins. Keep the wires as short as possible, don't pull wires too much from the tonearm tube outlet.
4. Attach the mounting plate with cartridge to the tube using dedicated hex bolt.

6. VTA and azimuth adjustment

1. Place a vinyl record on the turntable platter
2. Rotate the counter weight on its shaft to achieve a close to zero down-force of the cartridge stylus (a neutral position).
3. Place the dedicated miniature leveling gauge provided with tonearm on the cartridge mounting plate.
4. Pull down the cartridge on the vinyl record using the lifter.
5. Check the leveling on the gauge and adjust the height of the tonearm if needed.
6. To adjust VTA, lift up the tonearm and use the hex locking bolt located in the side wall of the mounting cylinder to unlock, move up or down and lock the tonearm pipe. Check the leveling and repeat if needed.
7. Check the horizontal position (azimuth) of the cartridge using the leveling tool. If it needs adjustment first lift up the tonearm, then unlock the bolt on the side of the pipe housing (M on Figure 2), gently rotate the tube in the proper direction and lock the bolt with an adequate force. Check the leveling and repeat if needed.
8. Never make above adjustments with the cartridge placed on the record surface.

7. Tonearm geometry calibration

1. Place the attached calibration protractor on the turntable platter with hole over the spindle.
2. Start from setting preliminary 18mm overhang of the stylus tip – the proper position is marked on the template. Unscrew the bolt on the top of cartridge mounting plate, move the cartridge as needed and lock the screw.
3. The cartridge should be rotated c.a. 23deg towards the turntable spindle from the tube axis line. Set the angle initially when adjusting overhang with use of the dedicated template on the attached protractor. The exact setting can be achieved in the following steps.
4. Move tonearm with cartridge until stylus points exactly the "a" point on the template. Check that cartridge is parallel with set of grid lines. If not, loosen the top mounting screw, twist cartridge or slide it slightly (max +/- 1mm) along the shaft as desired and lock the screw.
5. Move tonearm with cartridge until stylus points exactly the "b" point on the template. Repeat the positioning of the cartridge vs grid lines as described above.
6. Repeat the 4 and 5. Procedures if needed till you'll achieve optimum position of the cartridge vs grid lines in both "a" and "b" check points.
7. At the end lock the top mounting plate bolt a bit more tight to prevent its self-loosening.

8. Stylus tracking force setting

1. Please use a dedicated stylus force gauge to properly set the tracking force according to the cartridge manufacturer recommendation.
2. Start from setting a zero force (neutral position) by screwing in/out the counter weight appropriate.
3. Set the required force by turning the weight counter clock wise (360° turn yields in 1g force).
4. Check the reading and increase the force if needed till desired reading.
5. There is no need to lock the counter weight in the finally set position as it has special anti-loosening construction.
6. Standard counter-weight is designed to cover requirements of most of the cartridges available on the market. In case of very low mass cartridges (<5g) or high tracking force required, the counter weight can be installed in a reversed position – with the smaller diameter outside. This gives opportunity to further increase stylus tracking force.
7. If your cartridge can't be calibrated properly using standard counter-weight please contact your distributor or manufacturer to order a heavier or lighter counter-weight.

9. Anti-skate adjustment

1. Install the anti-skate weight (L – see Figure 4.) by putting the loop of the nylon string in the chosen groove on the anti-skate lever.
2. Lay the string over the black Teflon pulley (F).
3. Chose the groove according to the stylus tracing force setting using the following rules:
 - a. 0 - 1g
 - b. 1 - 1,5g
 - c. 1,5 - 2g
 - d. $\geq 2g$

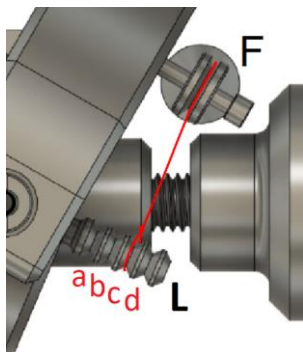


Figure 4: Top view and identification of anti skating mechanism parts.

10. Care & maintenance

1. It is recommended to keep the turntable and especially tonearms under cover, preventing from dust.
2. Don't use volatile or aggressive liquids such as solvents for tonearm cleaning.
3. Muarah tonearms are designed to operate lifetime without special maintenance. However if you feel that your tonearm needs any regulations or maintenance, please contact the manufacturer on muarah@muarah.pl

11. Parameters

Mounting distance (pivot to spindle)	214mm
Effective length	232mm
Overhang	18mm
Cartridge top height vs armboard	35-65mm
VTA setting range	30mm
Effective mass	15g
Offset angle	23,75°
Mounting hole diameter range	18-25mm
Anti-skating force range	0,8 – 2,5g
Cable connector standard	DIN-5P
Tonearm mass w/o counter-weight	180g
Standard counter weight mass	95g
Maximum tracking angle error	+1,96° / - 1,03°

