

# MU-2 Tube Phono Preamp

## User manual

Our mission is to make surrounding reality inspiring for eyes and for ears. Our goal is to offer novel, luxury things – things with a bit of creator’s soul as a contrast to pervasive trumpery and mediocrity. Using those special things shall be inspiring and nice. Our inspiration are audio and automotive worlds seemingly outlying but in fact having a lot in common. When you read about our turntable design you will notice it clearly.

So, relax and spend a while with us...

Jacek Siwiński & Wiesław Zawada



## MU-2 Tube Phono Preampfier

High end MU-2 tube phono is designed to preamplify subtle signal from turntable cartridge and make necessary frequency correction (low frequency signals are recorded on vinyl records with smaller amplitude than high frequencies). It's a must-have Hi-Fi component for every vinyl lover.

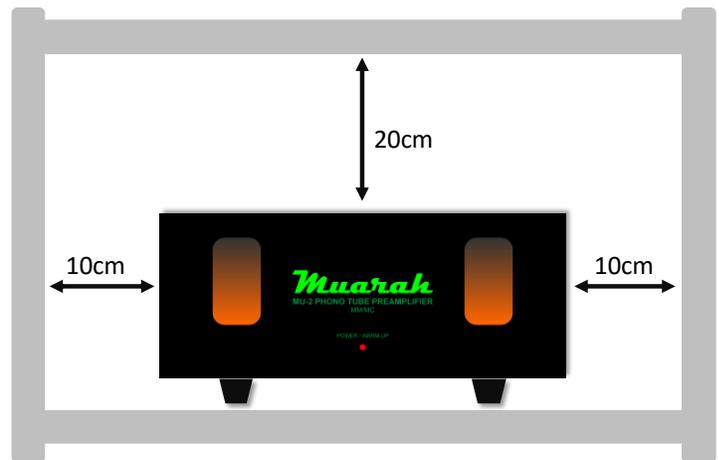


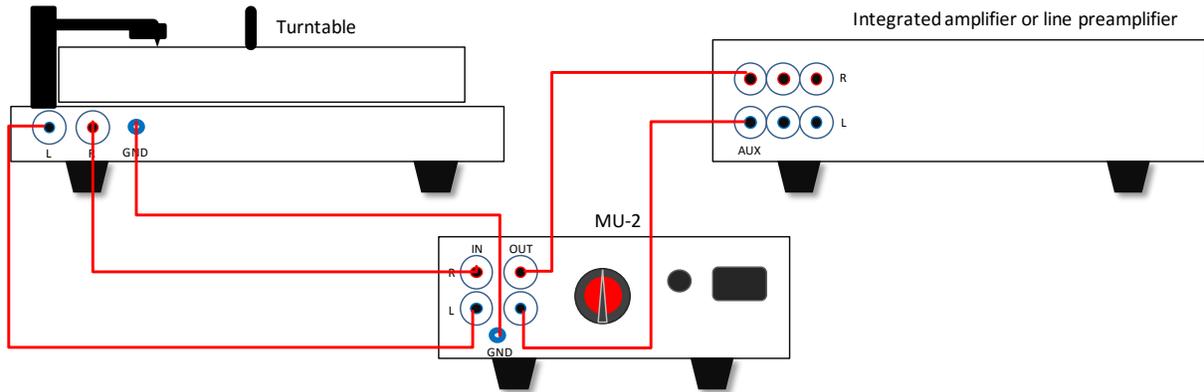
## MU-2 features

- MM (Moving Magnet) and MC (Moving Coil) cartridges support
- Input impedance matching in range 50Ω-1kΩ for MC carts.
- „On the fly” input impedance change during music listening with automatic mute function
- Warm-up function: signal is attached to outputs with delay mandatory to stabilize tubes operating points.
- Immediate outputs detach when device is switched off or in case of AC mains is down.
- Physical separation of left and right channel path to decrease stereo channels cross talk
- High quality resistors (1% tolerance) and capacitors (1% and 5% tolerance) in audio path for high stability and accuracy of RIAA frequency correction curve.
- Microprocessor controlled circuit

## Connection

- 1) Carefully take MU-2 out of the shipping carton and plastic bag. Use soft gloves if possible to avoid fingerprints on stainless steel cover. Do not hold glass front panel by hand.
- 2) Place preamplifier in proper distance (minimum 10cm) from other electrical equipment like amplifier to avoid electromagnetic interferences. Take care about proper ventilation because preamplifier generates heat.
- 3) Connect RCA cables from turntable to RCA inputs of MU-2. If turntable tonearm is equipped with grounding cord connect it to GND socket.
- 4) MU-2 outputs connect to high level inputs of integrated amplifier or line preamplifier (inputs marked AUX, CD, DVD etc..). **WARNING!** Do not connect MU-2 to input marked PHONO unless it's Muarah MU-4 integrated amplifier.
- 5) Connect AC main power. **WARNING!** Main AC Power going to MU-2 should not be applied until all the system components are connected together. AC mains power cord has to be connected to MU-2 first and then to AC outlet.

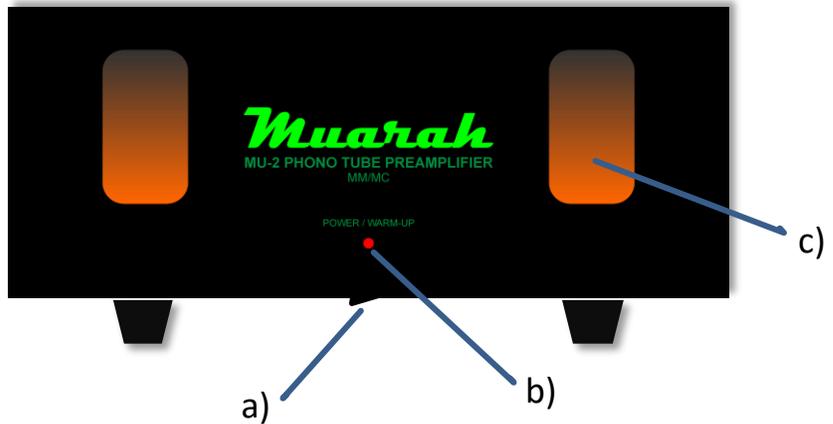




## MU-2 Operation

- 1) Before MU-2 power on set the rear rotary knob in proper position adequate to used phono cartridge. If MC cart is used set the proper input impedance level according to phono cart supplier recommendation.

- 2) After power on by switch (a) located at the bottom preamplifier starts warm up phase indicated by red POWER/WARM-UP diode (b) blinking.



- 3) Warm up phase takes 40 seconds. After that tubes (c) operating points are stable and audio signal is attached to RCA outputs.

Now listener can enjoy music recorded on vinyl records.

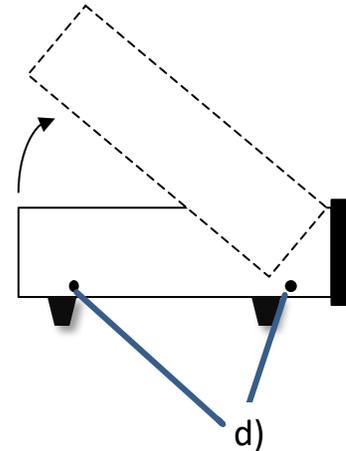
- 4) It's highly recommended to experiment with input impedance settings for MC carts during music listening. Each time you change the rear knob position audio signal is detached from RCA outputs for 2 seconds to avoid loud pops unpleasant for ears and dangerous for power amplifier and speakers.

## Tubes replacement

- 1) MU-2 tubes have to be replaced every 2000 hours of operation. Assuming listening one vinyl record per day tubes have to be replaced after 6 years so it's quite long time. High frequencies degradation in sound is clear notification that tubes have to be replaced.



- 2) **WARNING!** Before starting tube replacement procedure unplug AC mains power from MU-2 and accompanying equipment and wait 15 minutes.
- 3) To avoid fingerprints on stainless steel parts of the cover use soft gloves during procedure.
- 4) Unscrew four bolts (d) on both sides of MU-2 cover using 2mm Allen key.
- 5) Carefully remove cover starting from lifting its back (see attached picture).
- 6) Carefully remove tubes using two fingers. Pull each tube up moving gently sideways. Thin rubber coated gloves can help during this and next procedure steps.
- 7) Install brand new tubes (matched in pair if possible) in sockets pushing them down and moving gently sideways. Properly installed tubes have their pins entirely stuck in sockets. Tubes should be in ideal vertical position. Any fingerprints on tube glass should be wiped out using soft cotton cloth soaked with spirit.
- 8) Install MU-2 cover back and power on preamplifier. Typically new tubes don't require extra warming up procedure to reach nominal sound quality.



## Maintenance

Stainless steel MU-2 cover should be regularly dusted off. Gently wipe fingerprints from the surface by soft cotton cloth soaked with spirit. Front glass panel can be wiped using soft cotton cloth and glass cleaner.

## Parameters

|                                    |               |                                      |
|------------------------------------|---------------|--------------------------------------|
| ● Frequency response               | +0,5dB/-0,5dB | 10Hz-50kHz                           |
| ● RIAA curve accuracy in band      | 20Hz-20kHz    | +0,5dB/-0,5dB                        |
| ● MC gain                          |               | 51dB                                 |
| ● MM gain                          |               | 41dB                                 |
| ● Inputs/Outputs                   |               | RCA unbalanced                       |
| ● MM input impedance               |               | 47kΩ                                 |
| ● MC input impedance               |               | Switched: 50Ω, 100Ω, 200Ω, 500Ω, 1kΩ |
| ● Tubes                            |               | 2x6DJ8 (or ECC88, E88CC)             |
| ● Dimensions (width/length/height) |               | 21cm/35cm/11cm                       |
| ● Weight                           |               | 4kg                                  |
| ● Power consumption                |               | <30VA                                |

MU-2 supports most of MM and MC carts available on the market but due to limited gain we recommend to use MC carts with output level 0,4mV or higher. In case of doubts please consult it with your dealer or Muarah company directly.