№515
№515 MC

TURNTABLE OWNER'S MANUAL

mark LEVINSON® by HARMAN

IMPORTANT: READ BEFORE PROCEEDING!

- Read and follow the instructions
- Keep all instructions for your reference.
- Save all packing materials. The №515 should only be moved or shipped in its original packaging to reduce the risk of damage in transit.

IMPORTANT SAFETY INSTRUCTIONS

PLEASE SEE ADDITIONAL SAFETY INSTRUCTIONS INCLUDED IN THE PACKAGE

FOLLOW THE INSTRUCTIONS BELOW TO REDUCE RISK OF ELECTRICAL HAZARD OR INJURY.

1. To avoid electrical shock, do not open the motor housing.
2. To avoid electrical shock, always plug the №515 into a grounded outlet.
3. If the power cord provided with the №515 does not reach an outlet, use a heavy-duty, grounded extension cord.
4. Use the №515 in a controlled temperature environment.
5. Install in accordance with the manufacturer's instructions.
6. Refer to the operating instructions for power requirements. Be advised that different operating voltages may require the use of different line cord and/or attachment plug.
7. Never attach audio power amplifier outputs directly to any of the unit's connectors.

Please register your №515 within 15 days of your purchase. Register online at www.marklevinson.com. Retain your original, dated sales receipt as proof of warranty coverage.

SPECIFICATIONS

Power requirements: 100-120 or 220-240VAC, 50-60Hz; factory set
40W maximum
Wow and flutter: <0.1%
Unit dimensions (H x W x D): 7.9" (200mm) x 21.0" (533mm) x 15.9" (404mm)
Weight: 58lb (26kg) net; 76lb (34kg) with packaging

UNPACKING THE BOX

The turntable and platter are packed in separate boxes very carefully to avoid damage during shipping. It is important that you save the packing materials and box to use for shipping or moving the №515.

- Remove and set aside these items:

  Alignment Jig
  Record weight
  Power cord
  Stylus force gauge
  Tools
  Belts
  №515 Motor Assembly

- Remove the №515 motor assembly and set it aside in a safe place, being careful not to hit or damage the motor pulley.

SETTING UP THE №515

The №515 must be placed on a flat, level surface capable of supporting its considerable weight. This will make setup easy and put less strain on the main bearing. The stronger and better isolated the shelf or stand is, the better the №515 will sound.

- Place the turntable chassis, with the motor cutout on the left, on the shelf or stand where it will be used. Place the motor assembly in the cutout, being very careful not to hit or damage the motor pulley. The motor assembly should sit close to the chassis but should not touch it.

- Remove the turntable platter and peel the tape off the bearing hole. If there is a black cap on the bearing spindle, remove it. Carefully lower the platter on to the №515 spindle. The platter is lubed with PTFE grease and needs no maintenance for at least two years.

- Connect the power cord to the motor, put the three belts around the motor pulley and platter, spin the platter by hand and the belts will self-level.

- Verify the turntable is level by using a 9 or 12-inch bubble level front-to-back and side-to-side on the platter. If it is not level, rotate the feet up or down. If you must turn the №515 feet more than three full turns, level the shelf or platform the table sits on first.

INSTALLING AND ALIGNING A CARTRIDGE

(If you purchased the №515 MC, a pre-mounted and calibrated cartridge is included; skip this section.)

- For cartridges with threaded mounting holes, use the screws supplied by the cartridge manufacturer. Other screws may not fit properly and may cause damage to the threads and cartridge.

- For cartridges with pass-through mounting holes, use the hardware supplied with the tonearm. Be sure to use washers under the screw heads.

- The tonearm wires are color-coded as follows:

  Red – right hot
  Green – right ground
  White – left hot
  Blue – left ground.

Note that if your phono preamp inverts polarity, you should swap the hot and ground wires to the cartridge, e.g., red wire to green terminal and green wire to red terminal. Do not swap the channels.

- Using tweezers or fine-tipped pliers, grip the center of the red wire's connector – **not** the wire itself – and push it onto the cartridge's right hot terminal pin. Connect the remaining connectors in the same way. To avoid damage to the cartridge, do not push the connectors all the way on.

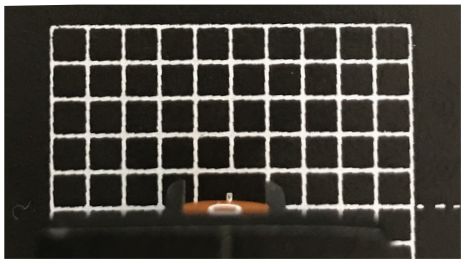
- Place the Alignment Jig on the spindle with the V-groove against the base of the gimbal assembly and the hole over the record spindle. Tighten the screws so the jig fits snugly.

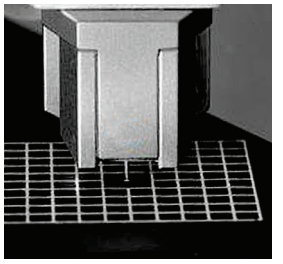
- Note that the following steps to align the cartridge must be performed without any stylus guard or protection device in place. Be careful not to bump or damage the stylus or cantilever.

- Swing the tonearm over the jig so the stylus is as close as possible to the dot in the center of the grid. Turning the black knob on the rear of the tonearm, set the counterweight for just enough downward force to keep the stylus from moving when resting on the jig. Be sure to lift the stylus off the jig whenever adjusting the counterweight so as not to damage it or the cantilever.

- With the diamond stylus resting in the white dot on the alignment jig, use a flashlight and look from the front of the cartridge to align the **cantilever** with the grid lines on the jig. The alignment of the cartridge body is unimportant compared to that of the cantilever. Adjust the cartridge mounting screws and counterweight as needed during this process.

- When the cartridge is properly positioned, tighten the cartridge mounting screws and recheck the alignment. Remove the alignment jig. Tighten the screws just enough to securely hold the cartridge in place; you can damage the surface by over tightening.





SETTING THE TRACKING FORCE AND TONEARM HEIGHT

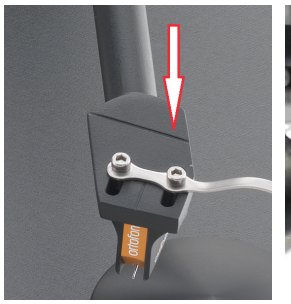
Tracking force is adjusted by rotating the black knob on the back of the tonearm. This will move the counterweight forward and back on its shaft. Although the tonearm does not have a built-in tracking force gauge, a precision digital tracking force gauge is supplied.

The following setup steps must be performed without any stylus guard or protection device in place and with anti-skating disabled. Be careful not to damage the stylus or cantilever.

- Place the gauge on the platter (stopped, with no record).
- Loosen the two black thumb screws in the mounting base of the tonearm, and turn the large black knob on top of the VTA tower to adjust the height of the tonearm so it is parallel to the platter when the stylus is resting on the stylus force gauge. When the arm is at the desired height, lightly tighten the thumbscrews. This is important to assure accurate tracking force adjustment.
- Set the tracking force according to the cartridge manufacturer's recommendation. If the manufacturer specifies a range of tracking forces, we recommend the maximum setting. High-frequency vibrations of a light-tracking stylus can cause more groove damage than secure tracking at higher force. Be sure to lift the stylus off the gauge whenever adjusting the counterweight so as not to damage it or the cantilever.
- If you choose not to use anti-skating, we recommend for most cartridges that you set the tracking force 0.1 gram above the maximum specified.
- To adjust the vertical tracking angle (VTA), put a record on the platter and lower the stylus onto the record. Using the large black knob on top of the VTA tower, adjust the height of the tonearm so it is parallel to the surface of the record. After this is set, tighten the two thumbscrews on the tonearm mounting base.

SETTING THE AZIMUTH

- Although the azimuth is calibrated at the factory, we suggest a quick check after cartridge alignment. Place the long aluminum rod in the groove behind the mounting screws on the tonearm headshell. Make sure the rod is parallel to the platter surface.



- If it is not level, carefully loosen the two set screws on the side of the tonearm, rotate the tonearm wand to align the aluminum rod, and gently tighten the set screws.

SETTING THE ANTI-SKATING

- With modern tonearms and cartridges, not all users prefer to enable anti-skating devices. The №515 anti-skating device is mounted on the rear of the VTA tower; enable it by looping the thin line around the first post, as shown. Anti-skating force can be adjusted by adding or removing rubber washers from the two posts on the device, as well as by moving the washers up or down the posts.
- Put a record on the platter, turn the motor on, and put the stylus down on the record. Looking from the front, observe whether the cantilever is deflected while the record is playing, or if the tonearm shifts when lifting the stylus out of the groove. If the cantilever is deflected toward the center of the record (i.e. the tonearm is being forced away from the center of the record) then the anti-skating force is too high. The force can be reduced by moving the rubber washers toward the central pivot or by removing one or more of them.
- Check the anti-skating force at several points between the outer and inner grooves of the record, and adjust the weight on both posts as needed. The post with the line attached has the dominant effect on tracking force near the outside of the record, while the other post has the most control over the inner grooves.
- Additionally, anti-skating can be adjusted by listening to a record. Excessive distortion in the left channel indicates too much anti-skating force, whereas distortion in the right indicates not enough force.

GENERAL USE

- Allow at least 20 hours of break-in time.
- The motor will make some low-level noise. This will not get into the system. The motor and bearings will become quieter as you use your №515.
- After two years of use the platter bearing should be re-lubed with PTFE super grease.
- You can experiment with different platter mats, but be sure to recheck and adjust the VTA setting as needed.

HARMAN International Industries, Incorporated
8500 Balboa Boulevard
Northridge, CA 91329 USA

(818) 893-8411 (USA only)

www.marklevinson.com