

## SETTING UP THE WELL TEMPERED RECORD PLAYER

**IMPORTANT:** Arm assembly is delicate. Please read and observe instructions before installing arm.

You will need the following tools:

- Miniature screwdriver
  - Miniature long-nosed pliers
  - A Well Tempered Lab protractor
  - A stylus pressure gauge
  - 3/32" Allen wrench / Hex key
1. Position table base on flat and level surface so that motor assembly hole is on the left as you face the turntable.
  2. Level table base. Use bubble level if available. Small amounts of level adjustment can be made with the rubber feet that are threaded into the base.
  3. Put table bearing fluid in bearing cup in the center of the base. Cup should be approximately 5/8 full. Place stainless steel spindle in cup making sure bottom of spindle is resting on bottom bearing. Adjust fluid level if necessary so that it covers the top set of bearings in cup when spindle is in cup. NOTE: Table bearing fluid is thin and arm bearing fluid is thick.
  4. Carefully set main arm post in bushing on table base. Avoid stressing the two lines on which the arm is suspended. Lightly secure set screw (accessible through hole on right edge of base) using Allen wrench supplied.
  5. Put arm fluid in arm cup. Arm fluid dispenser is in bottom of arm box. Use a screwdriver handle to push plunger. When fluid settles, white paddle should be covered by 1 to 2 mm of fluid. Fluid for arm is very stiff.
  6. Install arm rest by pressing it into hole in base. Place a folded handkerchief over top to protect your hand. Line up slot in arm rest with arm before pushing arm rest all the way in.
  7. Install terminal block on back of base with screws supplied.
  8. Thread power cord down through motor hole and out to the back of the turntable. Lower the motor assembly into hole with switch facing left edge of base. Motor assembly should not touch base.

9. Place acrylic platter over spindle.
10. Put belt around platter and motor pulley. Make a 180° half twist in belt at pulley end to smooth belt's peeling off platter as it approaches pulley. Use top level pulley for 33 1/3 rpm playback and bottom level for 45rpm.
11. Mount cartridge under headshell with fingerlift on top of head shell. If possible, use bolts supplied with your cartridge. Be careful installing the gold cartridge clips to avoid damage to the clips or wires
12. Position Arm:
  - a. Place protractor on spindle.
  - b. Loosen set screw so arm assembly rotates easily yet remains in position. While holding support arm, (do not turn arm by using cup for leverage) turn arm assembly into position until stylus tip extends past the spindle and the stylus lines up with the circle drawn on the protractor.
  - c. Make preliminary VTA (vertical tracking angle) adjustment at this time by sliding Arm post vertically in bushing. This may require loosening set screw to raise or lower arm and lightly tightening it again to maintain arm position. Be careful not to rotate assembly thereby changing overhang adjustment. A small reference mark may be made at the base of the arm post with a pencil as reference for the overhang setting.
13. Make preliminary tracking force adjustment by moving counterweight on arm.  
Make sure paddle in cup is fully settled and is not touching the cup edges. It is necessary for the stylus to be at or near the level of the playing surface of a record when measuring tracking force.
14. Use protractor to adjust angle of cartridge and position bolts in headshell holes so that cartridge is parallel to lines on protractor when stylus is placed at each of the two cross points on the protractor. Rotate platter to line up stylus with each cross point.
15. Place a record on the platter and tighten the record clamp. Adjust cartridge azimuth so that bottom front of cartridge is parallel with record surface. Observe reflection of cartridge in record surface. Azimuth must be set with clamp screwed down because of angle in platter surface.

16. Adjust VTA.

- a. Loosen set screw in bushing and adjust arm vertically until side view of cartridge body is parallel with record surface. Use reference mark as described in 12c to maintain correct overhang.
- b. Tighten set screw to secure parallel VTA position.

17. Check azimuth again. Do not over-correct.

18. Check tracking force again.

**IMPORTANT:** The tonearm paddle must be given time to reach equilibrium in the tonearm fluid before final adjustment can be made. The paddle will tend to move a little each time the counterweight is moved so it is desirable to recheck tracking force after the paddle has stabilized again.

19. The amount of damping can be changed by adding or removing small amounts of fluid from the cup