Teres Model 340
Turntable Manual

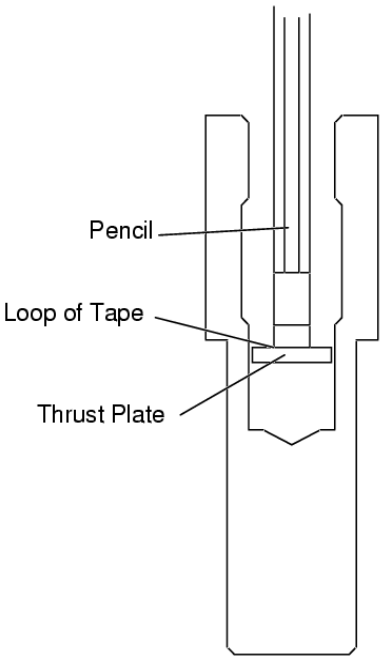
7-Mar-2006

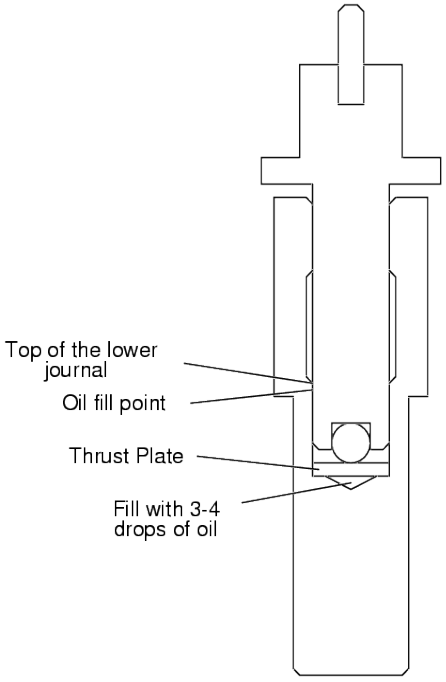
I. Bearing Assembly

The Teres bearing was designed to have a lot of viscous damping. This damping helps swamp the effects of stylus drag, resulting in better speed stability. For this reason heavy oil (30 weight) is provided. With heavy oil the bearing will turn smoothly but there will be a lot of resistance. This is by design.

Please read this information carefully before assembling your bearing. The Teres bearing has been machined with very close tolerances. The radial clearance in the bearing is only 4 to 5 ten-thousandths. This tight tolerance results in superb stability reducing rocking to microscopic levels. However, with these tolerances it is imperative that the bearing is clean and that proper procedure is used for assembly. The objective is to have the bearing completely full of clean oil, including the recess in the top of the bearing housing. If air becomes trapped in the bearing it will not seat properly. The bearing must be assembled dry to avoid trapping air. The procedure:

1. Clean the bearing housing and spindle thoroughly. Wiping down the bearing surfaces with rubbing alcohol on lint free cloth works well.
2. Fill the recess in the bottom of the spindle with oil and press in the ball bearing. This displaces air in the recess and will hold the ball bearing in place. Be sure to completely wipe away any excess oil.
3. Place 3 to 4 drops of oil into the bottom of the bearing housing.
4. Place the brass thrust plate in the bottom of the bearing housing with the white Delrin button facing upward. The thrust plate needs to be held flat as it is lowered into the bearing. A simple method is to attach a small loop of tape to the end of a pencil. Then stick the thrust plate to the pencil and lower it in place. Be sure that the Delrin button is facing up!
5. Carefully pour 3.8ml of oil into the bearing housing without getting any oil on the sides of the bearing.
6. Insert the spindle into the bearing. The spindle will stop about 3/4" before it is fully seated. And if no air is trapped it will not feel spongy or pop up when released. If air is trapped you must start over.
7. Place the platter on the spindle. The platter will generally slide onto the spindle with only a small amount of downward force. However, in some cases the clearances are a little tighter and it will take more force to seat the platter. Once the platter is in place wait for the spindle displace the extra oil and fully seat. This will take 2 to 3 hours so be patient. When fully seated the gap between the platter and the base will be about 0.140” (slightly more than 1/8th inch). WARNING, do not





spin the platter until the bearing has fully seated!

8. With the correct amount of oil the recess at the top of the bearing will be at least partially full of oil. If there is excess oil remove the platter and wipe up the excess. See section III for instructions for platter removal.
9. Once the bearing has fully seated visually check for clearance (about 1mm) between the strobe disk and the sensor.
10. Thread the chrome record centering pin into the top of the spindle. Tighten the centering pin with pliers will keep it from backing out while using the clamp.

II. Armboard Setup

The model 340 armboard is secured by a 3/8" bolt extending from the armboard to the bottom of the 340 base. A 3/16" allen wrench and a ratchet with a 11/16" socket are required to adjust and tighten the armboard. WARNING: Do not loosen the armboard bolt any more than is required. The black ring directly beneath the armboard is filled with lead shot and is only held in place by the armboard bolt tension. Allowing the armboard ring to move will result in spilling of the lead shot and a huge mess!

1. Start by using the 3/16" allen wrench to set the armboard tension so that the armboard is steady but loose enough that it can be adjusted by hand. The allen wrench is inserted into the center of the armboard bolt from underneath the turntable base.
2. Install the tonearm and cartridge and adjust the overhang by rotating the armboard.
3. After the overhang adjustment is complete tighten the armboard bolt. Start by using the 3/16" allen wrench to tighten the armboard bolt. The proper amount of torque is roughly what can reasonably be exerted using a small allen wrench. Next tighten the armboard bolt locking nut using a ratchet and a 11/16" socket. Only use light pressure when tightening the armboard nut. Use only half as much torque on the locking nut.
4. Install motor and battery option as described in the Motor manual.
5. Place the black Delrin washer packaged with the record clamp over the record centering pin. The Delrin washer must be placed directly on the platter and under the record.

III. Operation

The Teres controller utilizes an embedded microcontroller that makes operation simple and elegant. To start the motor press the controller button or give the platter a push. The red LED comes on when the motor is coming up to speed. After 10-15 seconds the green LED should also come on indicating that the speed is within 1%. The green LED will flash several times before coming on steady. After the green light has been on for about 4 seconds then the red LED will turn off indicating that the speed is locked in. To turn off the motor press the controller button again or slow down the platter by hand.

Holding the pushbutton down for more than one second will switch between 33.3 and 45 rpm.

IV. Platter Removal

To avoid damage to the bearing surfaces the platter must be removed without pulling the bearing shaft out of the bearing assembly. The removal process requires two small blocks of wood (or some other suitable material) roughly ¾" thick. Both blocks must be the same thickness. A piece of wood 8 to 14" long is also required. Use the following procedure:

1. Carefully raise the platter up just high enough to slide blocks of wood under the platter. Place the blocks on opposite sides of the platter to provide even support.
2. Lay a piece of wood on top of the centering pin and press down firmly until the spindle has been pushed down and out of the platter
3. Lift the platter off of the bearing. Be sure that the bearing spindle is fully disengaged from the platter before lifting.

V. Drive Belts

Teres turntables come with a drive belt fabricated from ½" mylar tape. We prefer the sound of mylar tape but there is not a clear consensus about the best drive belt material. Other materials such as silk thread, fly fishing line and rubber belts have been used with good results.

VI. Additional Information

Detailed product information and updates are available from the Teres web page.

Http://www.teresaudio.com