

## **My Record Slows Down or will not hold speed !!**

*I see a lot of messages on web sites from people complaining that their turn table slows down during play. Before launching into thoughts of what makes the turn table Motor slow. Consider the following,*

### **The Motor**

*Is an AC synchronous motor run from the main supply frequency of 50 Hz, for us Europeans, or 60 Hz for our American cousins. The motors principle design feature is that it will run at a constant speed directly related to the mains frequency usually with a tolerance of better than 0.1%. Any attempt to run at other speeds will cause it to heat up rapidly, and greatly increase its operating current again causing over heating. And even damage to circuit boards. The Motor produces more than enough torque to overcome slight lapses in lubrication so the MOTOR is least likely to be the Problem.*

### **Lubrication**

*As the principle bearings involved in playing disc's are the Turn Table spindle and Synchronous motor, both use a steel shafts running through phosphor bronze bushes as their bearing, they should be treated as self lubricating and Never lubricated. If in the past someone did oil them with normal household or bicycle oils, these have a Gum base and will increase drag or even lock up the bearing. Using a very light PTFE lubricant the likes of GT 85 will flush old oil, and restore free movement, without introducing more gum. Pivot points and leavers should be lubricated with light PTFE based oils or grease pending on use. The turn table and motor should be very free and spin easily.*

### **Turn Table Tyre**

*This is usually the problem, during its working life the shaft of the motor rotates against it to producing the turn table rotation, as we have already worked out the motor shaft speed is constant there fore the turn table speed should be constant. Except for the fact that over time the surface of the tyre has been contaminated with dust grease causing it to slip. How you clean the tyre will greatly affect its future life. As replacements turntables are hard to find, The way you clean the tyre will determine how long your machine will last So if you want your machine to last.*

***DO NOT** attempt to improve matters by using abrasives, wire wool or a sharp edge to roughen up the tyre, You are removing future life.*

***BEWARE** of magic liquids to recondition the tyre unless you can guarantee their long term effects on the rubber tyre, I have seen some very sick Tyres.*

*The method I find very successful for cleaning the surface of the tyre without doing it harm. Is to use an "Artists Putty Rubber" This is a knead able rubber used by artists to clean Highlights on charcoal drawings available from art material suppliers, it has the appearance of a normal rubber until it is kneaded, when it becomes soft pliable and slightly sticky. To clean a tyre and improve its surface condition, break off a small piece of the*

*rubber knead it until just tacky and use it to wipe the surface of the tyre, it will drag quite hard as it pulls on the tyre, releasing the ground in dirt, which sticks to the putty rubber, fold the putty rubber in on itself to trap the dirt and produce a clean working surface, it takes a little time but slowly the tyre will look less glazed and your speed problem should also be gone. If you suspect that the tyre has been contaminated with grease or oil. Use Isopropyl alcohol, or similar pure alcohol product to clean the surface of the tyre, using a toothbrush to assist in bad cases followed by the putty rubber. As a finishing note this technique works wonders for old printers that have problems picking up sheets or any application that uses a rotating rubber surface to grip.*