clean finish on the commutator surface to archive maximum performance. It all comes down to practice...and patience.

Before you can true the commutator, disassemble your motor according to motor factory instruction. If you do not know how to remove the armature, please consult your local hobby shop. You must mount a low RPM motor on to the lathe as your drive motor using the two supplied 3mm steel screws. Then, mount the drive pulley on the drive motor using a 3mm hex screw. Secure the armature on the V-blocks or bearing blocks by using the black O-ring. You must wrap the o-ring around the drive pulley and the subject armature. You may power your lathe drive motor with a 4-cell pack or a power supply of your choice. Just remember that lower cutting speed is usually better than higher cutting speed.

Operating a motor lathe is very similar to operating any lathe machine, you may find detail information about operating and adjusting lathe machine in your local library. Certain details about operating and fine-tuning this kind of machine is highly complex and beyond the scope of what we can explain here. Smoothness of the commutator surface finish is highly critical and is a major factor in determining how fast your motor would run. Please research / study the following subjects to optimize the performance of this motor lathe.

1. Proper cutting speed (we suggest a 55T drive motor @ 6.0V-7.2V)
2. Proper cutting bit height (factory installed)
3. Proper cutting bit angle (factory installed)
4. Cutting fluid (we suggest MATRIX R391 or WD-40)
5. Cutting amount per pass (as little as possible)
6. Identify & compare different surface finishes (Why dull is better than shiny?)

Most hobby shops do not have knowledge about machining. If you need additional help, you may find a machine shops with your local telephone yellow page. Most machinists are willing to help with a small consultation fee.

Should your lathe be in need of more than routine cleaning, put the lathe and foam in its original carrying case. Pack it carefully and return it to Xipp. Our factory technicians will give it a complete tune-up, and will replace damaged parts as necessary, for $40.00 labor plus parts. The lathe will be shipped back immediately UPS COD within the U.S.. Oversea customers please contact Xipp local area agent.