INSTRUCTIONS FOR MOUNTING AND OPERATING

THE

"MASTER PRO" SIXTEEN INCH

OVERHEAD LATHE

RECORDING MECHANISM

MODEL M-5S

REK-O-KUT COMPANY
38-01 QUEENS BLVD.
LONG ISLAND CITY 1, N.Y.

7/54

FOREWORD

The "Master Pro" is designed to provide the finest in recording performance with maximum efficiency, and greatest simplicity of operation. Read the instructions carefully before making any attempt to put the "Master Pro" into operation. The instructions have been very carefully thought out to make them simple, positive, and easy to follow. File them for future reference.

UNPACKING

1. Remove the "Master Pro" from Carton. Unscrew the four screws which hold the tie blocks in place.
2. Wipe the "Master Pro" with a dry, lintless clean cloth to remove the accumulation of dust and dirt acquired in shipment.
3. Remove the Leadscrew from wooden base block and wipe clean. This screw is made of stainless steel and does not require any oiling.
4. Remove Half-Nut (R-13A) by pulling upward on Pressure Pin (R54-1A) and withdraw Half-Nut from Carriage Saddle (R-30)

NOTE: In order to insure satisfactory operation and performance, follow instructions in consecutive order as listed below.

INSTALLING "MASTER PRO" M-5S

ON MODEL V OR V-DELUXE RECORDING TURNTABLE

1. Insert Mount Base (R-79-V-E) into the Socket of Model "V" Turntable as shown in Diagram.
2. Lock Mount Base into the Socket of Turntable with the Allen Wrench provided.

WITH OTHER TURNTABLES

NOTE: Universal Mount Adapter is supplied upon request at slight additional cost.

1. Place "Master Pro" on Turntable with Worm Shaft Flange (R-15X-B) mounted over the center pin also engaging drive pin.
2. Locate Mount Base (R-79V-E) with Universal Mount Adapter attached, on Motor Board, making certain Adapter lies flat. Scribe a circle around Mount Adapter where it comes in contact with Motor Board.
3. Remove Mount Adapter from "Master Pro" and place within scribed circle. Holding Adapter in position, scribe the inside circle and also spot or mark the three screw holes on Motor Board.
4. Remove Mount Adapter and drill out Motor Board to diameter of the inner scribed circle. Drill three clearance holes for the screws.
5. Place Mount Adapter in proper location on Motor Board, insert the three machine screws and fasten with nuts.
6. Place "Master Pro" Mount Base into Mount Adapter and secure by tightening two set screws located on side of Mount Adapter.

INSTALLING THE LEADSCREW

1. Move Carriage Saddle (R-30) and cutter towards Worm Gear Flange (R-15X-B) for 2/3 the length of the spiraling Lead Screw (RS-12C).
2. Lower the cutter by bringing Cam Lever (R-51A) toward you.
3. Lift Carriage Saddle to "Lock" position so that Saddle Lock Spring (R-31C) is engaged in detent of Rear Guide (R-60A).
4. Loosen adjustable Center Lock Screw (R-22) which holds adjustable Center (RS-21-1) in position and move to the right.

5. Insert large Gear End of Leadscrew (RS-12C) between Cutter Lift Spring (R-97) and Carriage Saddle (R-30) and engage with worm gear in Bearing End Housing (R-10B).
6. Grasp Spiraling Crank (RS-7-1A) with fingers of right hand and pull outward.
7. Hold free end of lead screw in fingers of left hand and place into slot of Mount End Housing (RS-20) and gently push toward rear Guide Bar (R-14C). Release Spiralling Crank allowing spur gears to mesh.
8. Push back Adjustable Center (RS-21-1) firmly against end of Leadscrew making certain flat side of center faces up. Tighten adjustable Center Lock Screw (R-22) with fingers. Check Leadscrew to make sure there is no end-play.
9. Snap Gear Housing cover into position in Bearing End Housing (R-10B) so that cut-out on edge of cover mates with Tie Bar (R-11B).
10. Insert Half-Nut (R-13A) by lifting Pressure Pin (R-54-1A) and inserting Half-Nut into it. The Serial Number on the Half-Nut should be right side up. Release Pressure Pin, permitting it to seat itself into Half-Nut.

ADJUSTMENT FOR OPERATION

1. Place recording blank on turntable so that spindle and drive pin of turntable clear holes in blank. Lower "Master Pro" so that Worm Shaft Flange (R-15X-B) rests on blank and clears both spindle and drive pin.
2. Loosen Universal Lock Nut (R-78-1B) with fingers, turning counter-clockwise.
3. Turn Universal Elevator Spindle (R-77A) clockwise to lower "Master Pro" and counter-clockwise to raise it. This levels the "Master Pro" to the turntable surface by making it parallel to it.

4. It is important that Worm Shaft Flange (R-15X-B) is seated so that it is flat on recording blank. The adjustment to achieve this is found in the Universal Cam (R-81B). The Allen Wrench which is supplied will loosen mechanism so that it may be rocked back and forth until Worm Shaft Flange is flat on record. Then, Universal Cam is tightened with wrench. A motion parallel to the leadscrew may also be effected while Universal Cam (R-81-B) is loose. This exclusive two way action makes alignment of the "Master Pro" simple.

NOTE: An important fact to remember is that after all the above adjustments have been made, the Worm Shaft Flange must fit over the center spindle of the turntable easily and freely. There should be no binding and the turntable should rotate freely.

OPERATION

1. Lift Cam Lever (R-51A) to an upright position. This automatically raises the cutter so that it clears the turntable, thus preventing injury to the disc when the mechanism is swung into position.
2. Place disc on turntable making certain that the Record Drive Pin protrudes through the drive pin hole in record.
3. Grasp the mechanism by lifting Handle (R-80A) and swing the mechanism over the turntable, putting it into place over the Center Pin. Rotate Worm Shaft Flange (R-15X-B) until the drive pin snaps into any one of the three holes located around the edge of Flange.

4. At this point the Rek-O-Oil supplied should be used to lightly coat Rear Guide Bar (R-14C) and Tie Bar (R-11B).

ANGLE ADJUSTMENT

1. Without starting the turntable, lower the Cutting Head carefully to the disc surface. Observe whether the stylus and stylus reflection on the disc makes a straight line. If not, loosen Elevator Lock Nut (R-53A) on the rear of the mechanism and turn Rear Elevating Screw (R-62) until the stylus and its reflection do make a straight line. Tighten Elevator Lock Nut (R-53A). (Cutting angle of Stylus to disc mut be 85^0 to 90^0.)
2. Raise Cutter off the record and lift Carriage Saddle (R-30) to the locked position. Move the Carriage to the extreme left if equipped for inside out cutting, or to the right, if cutting outside in. Lower Carriage Saddle (R-30) and release. Half Nut (R-13-A) is now engaged with Leadscrew.
3. Start the turntable and carefully lower the Cutting Head to the disc surface by grasping Cam Lever (R-51A) between the thumb and forefinger and bringing it forward. Observe the depth of cut. The thread chip should be about .003 or the thickness of a human hair. The depth of cut is controlled by cutter Spring Adjustment Screw (R-63). Rotate this Screw clockwise for light cut and counter-clockwise for deep cut.

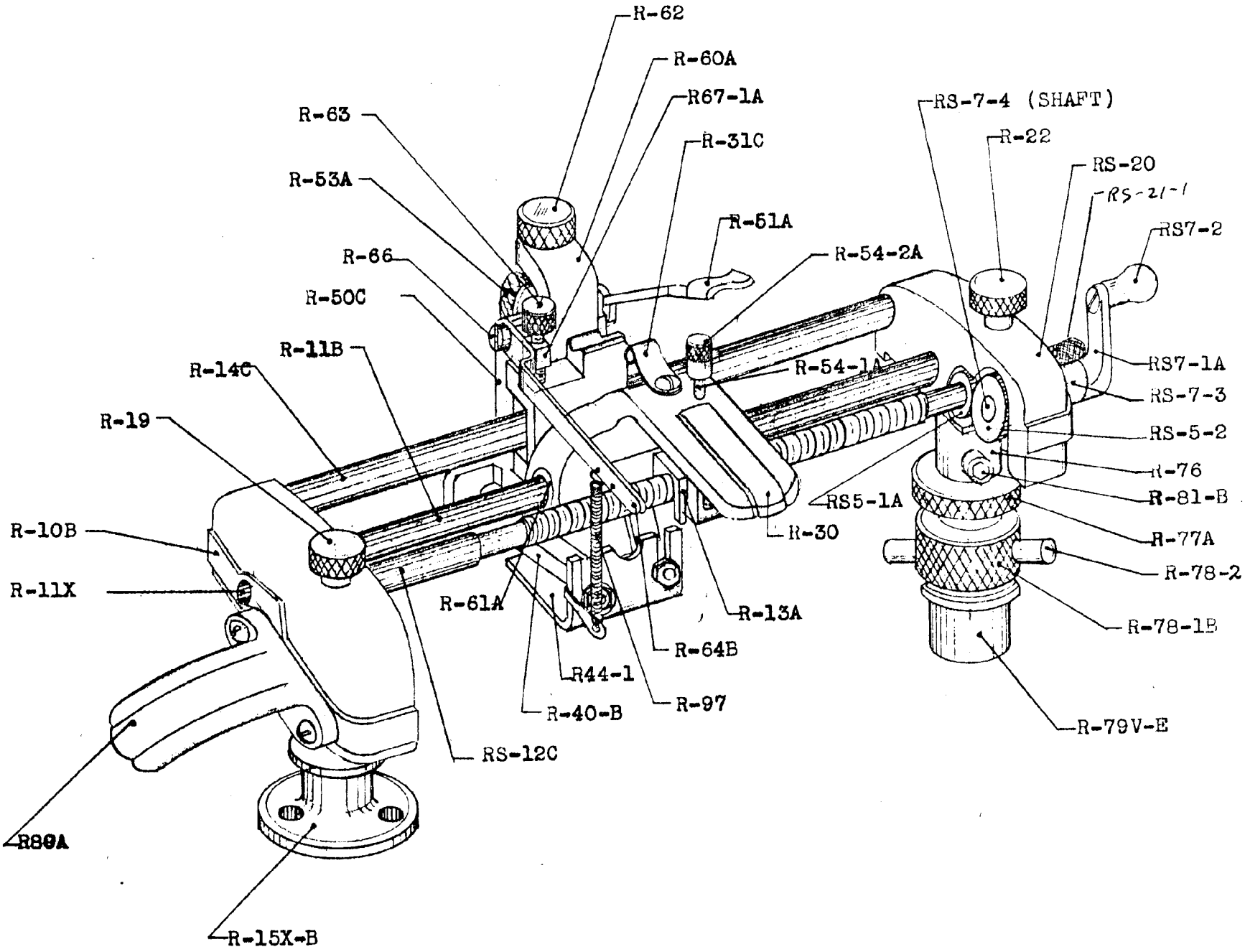
HOW TO MAKE A SPIRAL GROOVE WITH MODEL M-5S

1. If you have carefully followed the operation instructions as outlined previously, your "Master Pro" is in cutting position. As the machine proceeds to cut you will notice that the Spiral Crank which protrudes from Mount End (RS-20) is slowly rotating. To make a spiral, grasp the Crank and turn in the same direction but with a little more speed. The width of the spiral depends entirely upon the speed with which the Crank is turned. If the Crank should accidentally be rotated the wrong way, no damage will result. The Crank will over-run the Leadscrew and will continue to turn without hesitating. This is a safety feature which will more than pay for itself within a very short time.
2. The "Master Pro" is equipped with an entirely new infallible clutching device which is built into the Leadscrew. Do not attempt to make any repairs on this unit. This is a factory job and should be done only at the factory.

TO FINISH A RECORD WITH A LOCKED GROOVE

1. When the recording is completed and a locked groove is desired, lift Carriage Saddle (R-30) as before, and snap into the locked position. Allow the turntable to make a complete turn before raising the Cutter.

CAUTION: Do not permit the Cutting Head to remain on the disc for more than a turn and a half with the Carriage in a locked position and the Half-nut disengaged, as this will cause the stylus to cut through the disc coating into the record base, thus ruining the stylus.


R-62
R-60A
R67-1A
R-63
R-31C
RS-7-4 (SHAFT)
R-22
RS-20
RS-21-1
R-53A
R-51A
RS7-2
R-66
R-54-2A
R-50C
R-11B
R-54-1A
RS7-1A
R-14C
RS-7-3
R-19
RS-5-2
R-76
R-81-B
RS5-1A
R-30
R-10B
R-77A
R-78-2
R-11X
R-61A
R-13A
R-78-1B
R-64B
R44-1
R-97
R-40-B
R-79V-E
RS-12C
R89A
R-15X-B

PART NO.	DESCRIPTION
R-79V-E	MOUNT BASE (RECORDER)
R-78-1B	UNIVERSAL LOCK NUT
R-78-2	UNIVERSAL STUD
R-77A	UNIVERSAL ELEVATOR SPINDLE
R-81B	UNIVERSAL CAM.
R-76	UNIVERSAL HOUSING
RS-5-2	SPUR GEAR 48T
RS-7-3	CRANK CLUTCH HOUSING
RS-7-1A	SPIRALING CRANK
RS-7-2	SPIRALING KNOB
RS-20	MOUNT END
R-22	ADJ. CENTER LOCK SCREW
RS-7-4	SPIRALING CRANK SHAFT
R-54-2A	KNURLED NUT
R-51A	CAM LEVER
R-31C	SADDLE LOCK SPRING
R-67-1A	ROCKER NUT
R-60A	REAR GUIDE
R-62	REAR ELEVATING SCREW
R-63	CUTTER SPRING ADJ.SCREW
R-53A	ELEVATOR LOCK NUT
R-66	SHOULDER SCREW
R-54-1A	PRESSURE PIN
R-50C	REAR ELEVATOR
R-11B	TIE BAR
R-14C	GUIDE BAR (REAR)
R-19	JOURNEL KNOB
R-10B	BEARING END
R-11X	TIE BAR SCREW
R-80A	HANDIE
R-15X-B	WORM SHAFT FLANGE
RS-12C	SPIRALING LEAD SCREW
R-61A	CARRIAGE BUSHING
R-40-B	HORSESHOE
R-44-1	CUTTER BRACKET
R-97	CUTTER LIFT SPRING
R-64B	CUTTER ADJ. LEVER
R-13A	HALF NUT
R-30	CARRIAGE SADDLE
RS-5-1A	SPUR GEAR 36T
RS-21-1	ADJ. CENTER

3 4
30 x 4
31 93
22 99
31 93
54, 94