

The image shows a close-up of a Thorens TD 160 turntable and tonearm assembly. The turntable is black with a textured surface and a white logo. The tonearm is silver and black, with a clear dust shield. The background is a light orange color. The text 'THORENS' is prominently displayed in white on the left side of the turntable. Below it, 'TD 160' and 'INSTRUCTION MANUAL' are also in white. On the right side, the tonearm has 'THORENS' and '60' printed on it. There are also two small white triangles on the turntable surface and a small white circle with a plus sign on the right side.

THORENS

TD 160

INSTRUCTION MANUAL

THORENS

60



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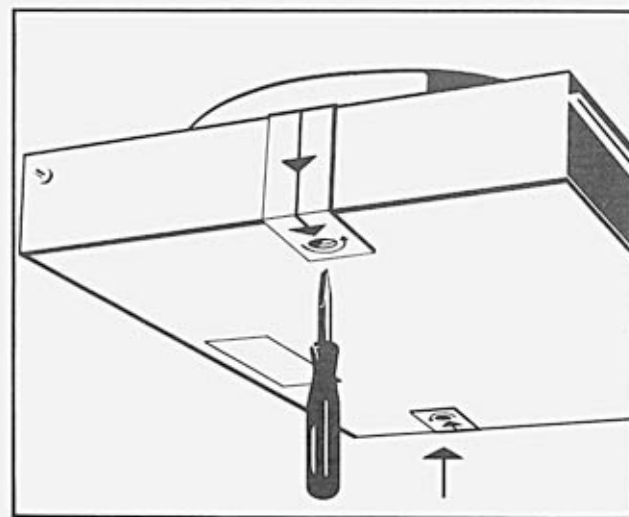
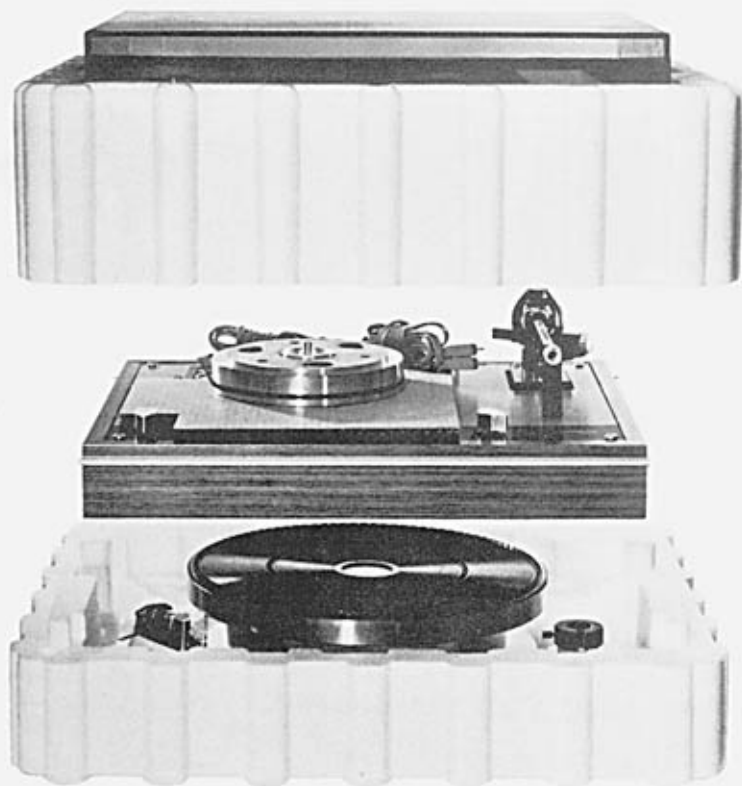
1. INTRODUCTION

The THORENS TD 160 turntable is a precision instrument which when properly operated will provide flawless record reproduction. In order to protect this instrument and your valuable records, the operation should be learned from the instruction manual and not by experimentation.

If your turntable was supplied without a cartridge, refer to chapter 4 for installation and adjustment.

Should your equipment be installed by your THORENS dealer, refer to chapter 3 for operating instructions.

Figure 1



TRANSPORT LOCKING

This apparatus incorporates transit securing of the subchassis. This must be unscrewed before the turntable is used and tightened before transporting it. Unscrew the two screws until the subchassis is freely suspended.

2. UNPACKING

- 2.1. Place the box right side up, open it and remove the cardboard sheet.
- 2.2. The upper styrofoam packing may be easily removed by grasping the opening at either side and lifting straight up.
- 2.3. The turntable may now be removed from the lower styrofoam packing. Do not use the tone arm as a handle! Remove the plastic bag and discard the package of moisture absorbent material.
- 2.4. Slightly raise the inner turntable platter by grasping the platter by the three finger holes and remove the cardboard support.
- 2.5. Remove from the lower styrofoam: the outer turntable platter with rubber mat, the tone arm counterweight, plug-in-shell (TP-60), package of cartridge mounting hardware and cartridge alignment gauge.
- 2.6. Carefully center the outer turntable platter on the inner one and fit the rubber mat.

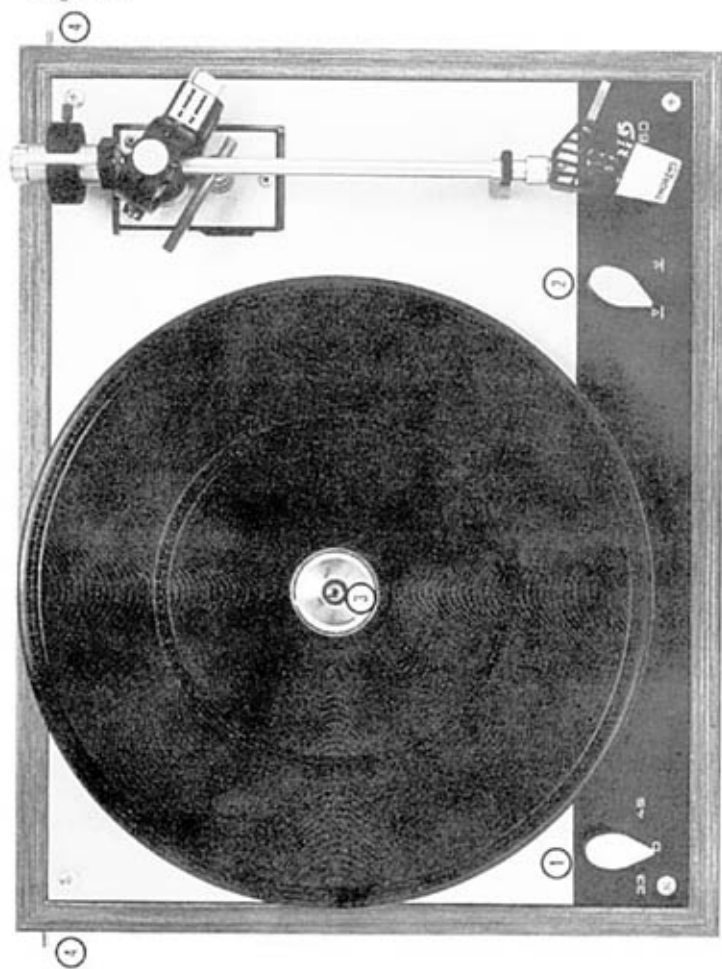
- 2.7. Position the counterweight on the tone arm as shown in Fig. 4. Attach the TP-60 plug-in-shell with pick-up cartridge to the tone arm and secure with the knurled collar. If the pick-up cartridge was not pre-mounted by your THORENS dealer, refer to chapter 4 for mounting instructions and alignment. Tone arm stylus force and anti-skating adjustments are described in sections 4.4. and 4.5.
- 2.8. Remove the dust cover from the upper styrofoam packing and fit to the wood base by sliding the dust cover pivot slots over the turntable base hinge pins (4) shown in Fig. 2.

IMPORTANT NOTICE!

NOTE: Save the complete packing materials. To avoid damage to your turntable in shipment, the unit should be repacked as shown in Fig. 1. The motor, its spindle, motor pulley and turntable bearing well and shaft and tone arm assembly are designed to very close tolerances. As delicate, precision parts, they should be protected against shock or strain when installing or transporting the turntable.

Always ensure that the most particular care is used when removing or fitting any part of the turntable or tone arm assembly.

Figure 2



3. OPERATION



3.1. Connect the turntable to the AC outlet. For operation at the other AC line voltages (210-240V), contact your THORENS dealer for instructions.

3.2. Connect the turntable to the stereo amplifier; the male RCA phono plugs are coded as follows:

L Left channel

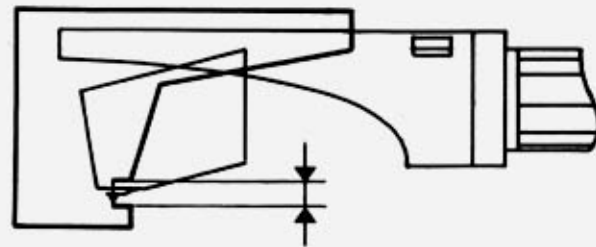
R Right channel

3.3. To switch on the unit, select speed (33 1/3 or 45 rpm) by means of the dual function knob ① at the left of the unit.

3.4. Operating the control knob at the right ② to the position marked  lowers the stylus to the record. Operating the control knob to the position marked  raises the stylus off the record.

3.5. The disc at the center of the turntable platter ③ may be inverted to accommodate records with a large center hole (7 inch 45 rpm).

Figure 3 a



Allowance of vertical needle position

4. TONE ARM AND PICK-UP

4.1. Cartridge Installation

The TP-60 plug-in-shell is designed to accommodate any standard pick-up cartridge (with 1/2" mounting centers) weighing between 3 and 14 grams.

NOTE: Use only the metric screws supplied in the hardware package to mount your pick-up cartridge.

4.2. Cartridge Adjustment

The correct position of the cartridge on the TP-60 plug-in-shell for minimum lateral tracking error (overhang) is determined with the plastic alignment gauge. Fit the alignment gauge to the TP-60 plug-in-shell as shown in Fig. 3a. Loosen the screws securing the cartridge to the plug-

Figure 3b

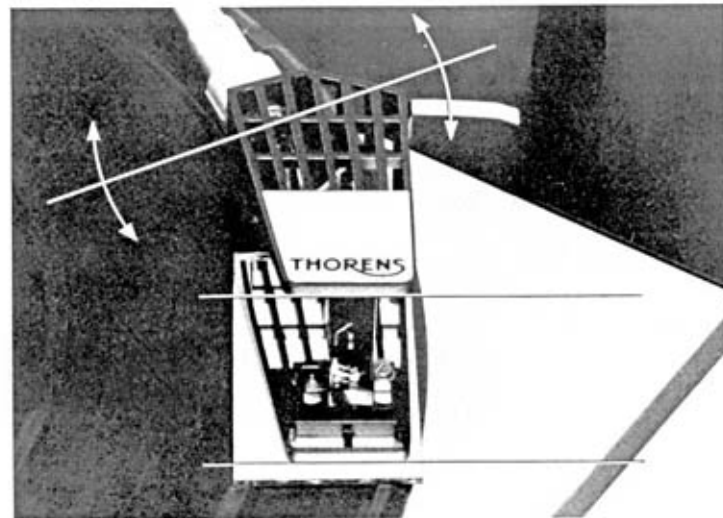
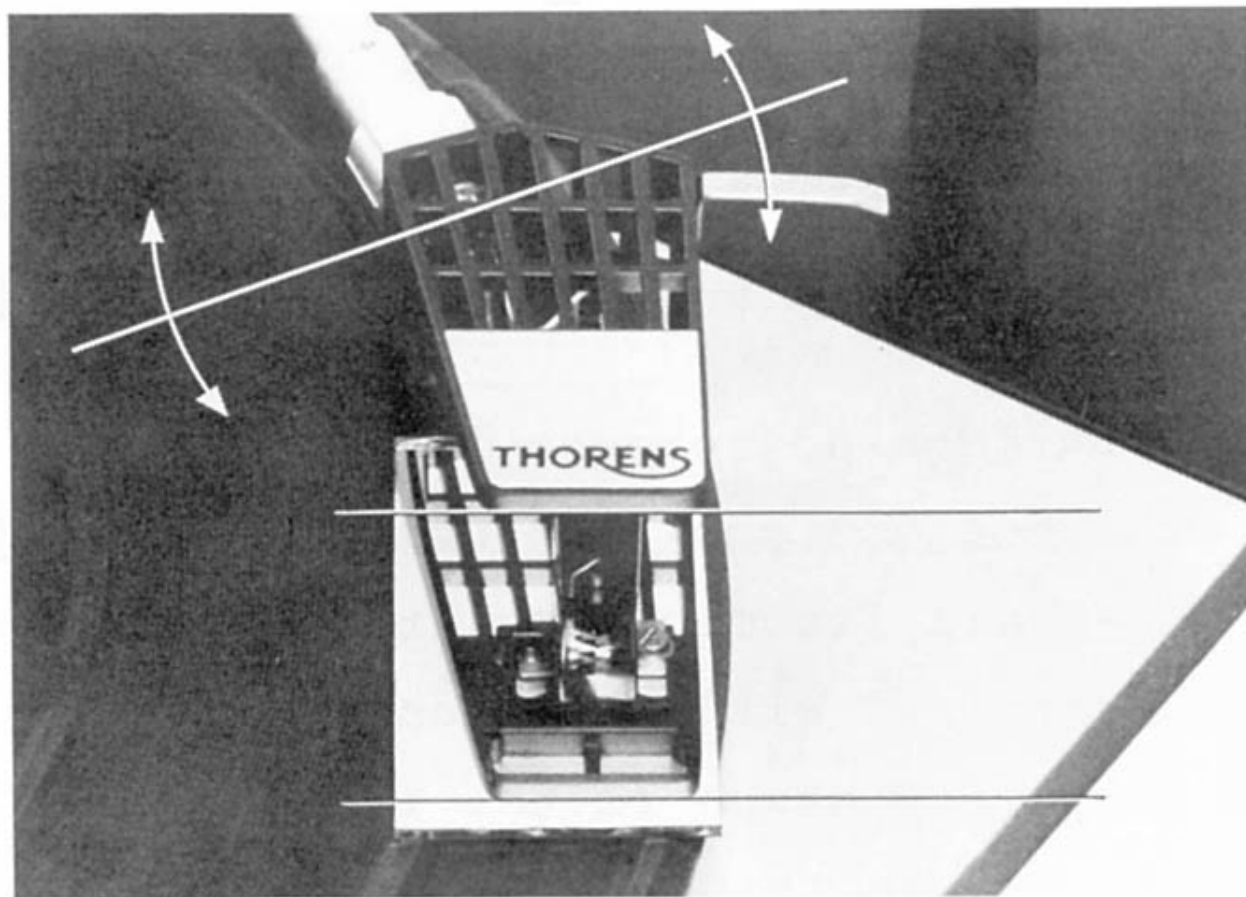


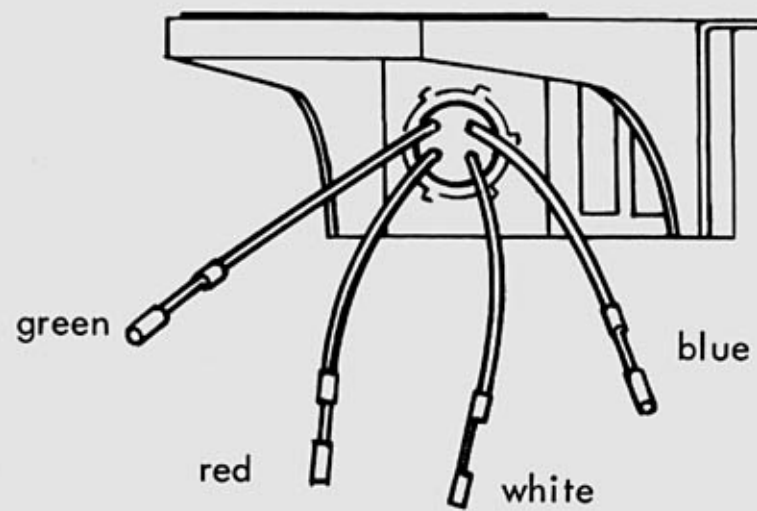
Figure 3b



in-shell and slide the entire assembly forward or backward so the stylus is centered in "V" notch. Spacers should be used, if necessary, to raise the cartridge in the plug-in shell for vertical tracking angle adjustment so the stylus fits within the "V" notch. An error of ± 1 mm in the vertical adjustment is insignificant. An error of ± 1 mm in lateral adjustment may cause a significant tracking error producing distortion and reducing the channel cross-talk figure particularly with elliptical styli. 1 mm equals 0.03937 inches or approximately 1/32 of an inch.

To test for lateral adjustment, place a small mirror on the turntable and rest the stylus on it. If the lateral adjustment is correct, the front edge of the plug-in-shell will be parallel to its mirror-image as shown in Fig. 3b. If further adjustment is necessary, raise the tone arm and holding it firmly in one hand, twist the shell slightly in the required direction with the other.

Figure 4



4.3. Cartridge Connection

Four color coded wires are fitted to the terminal pins of the plug-in-shell:

Red - Right channel (hot)

Green - Right channel (ground)

(These two leads also constitute the wiring connections for monaural pick-up cartridges.)

White - Left channel (hot)


Blue - Left channel (ground)

NOTE: Do not attempt to use the TP-50 plug-in-shell in the TP-16 tone arm in place of the TP-60 plug-in-shell.

Figure 5



4.4. Stylus Force Adjustment

To balance the tone arm, rotate the stylus force adjustment knurled wheel as far counter-clockwise as possible to zero. Move the lowering device to the "down" position  .

Position the tone arm over the chassis between the arm rest and turntable platter. Loosen the knurled thumbscrew and slide the counterweight while maintaining the position of the tone arm with the other hand to avoid damage to the stylus until the stylus is level with the surface of a record on the turntable platter. Once a horizontal balance has been achieved, tighten the thumbscrew on the counterweight and rotate the stylus force adjustment knurled knob to the stylus force setting recommended by the cartridge manufacturer. Refer to Fig. 5.

4.5. Anti-skating Adjustment

The friction of the stylus in the record groove acts against the tone arm pivot bearings to create a tangential force on the tone arm, one component of which is directed toward the center of the record. This is referred to as the skating force and is often a cause of poor tracking at low stylus forces and also increased stylus and record wear. To counteract this problem, a comparable force is applied to the tone arm directed away from the center of the record called an anti-skating force. The anti-skating force on the THORENS TP-16 tone arm is applied through a system of fixed and moveable magnets that do not create any additional bearing friction.

The amount of anti-skating force required depends upon the stylus force, needle size and shape (spherical or elliptical) and "wet" or "dry" playback. The "wet" playback system in which the record is covered with a liquid film to reduce tracking friction is rarely used in the U.S.

The anti-skating calibration scale markings are as follows:

● Spherical stylus	}	wet playback
● Elliptical stylus		
○ Spherical stylus	}	dry playback
○ Elliptical stylus		

The bold scale markings correspond to the stylus force numbers on the dial. The thin lines between are the mean values.

Select the scale corresponding to the shape of the stylus and dial the anti-skating force corresponding to the stylus force being used.

NOTE: If the stylus shape is changed or the stylus force altered, the anti-skating setting should be readjusted.

5. AC LINE AND AMPLIFIER CONNECTIONS

5.1. AC Line Voltage

The TD 160 turntable is wired at the factory for 110 volt operation. For operation at other AC line voltages (210-240V), contact your THORENS dealer for instructions. Refer servicing of the motor and motor wiring to qualified service personnel only.

5.2. Adjustment to Other AC Line Frequencies

The TD 160 turntable is set to operate at 60 Hz. For operation at 50 Hz line frequency, the motor pulley must be changed. Contact your THORENS dealer for parts and instructions.

Figure 6

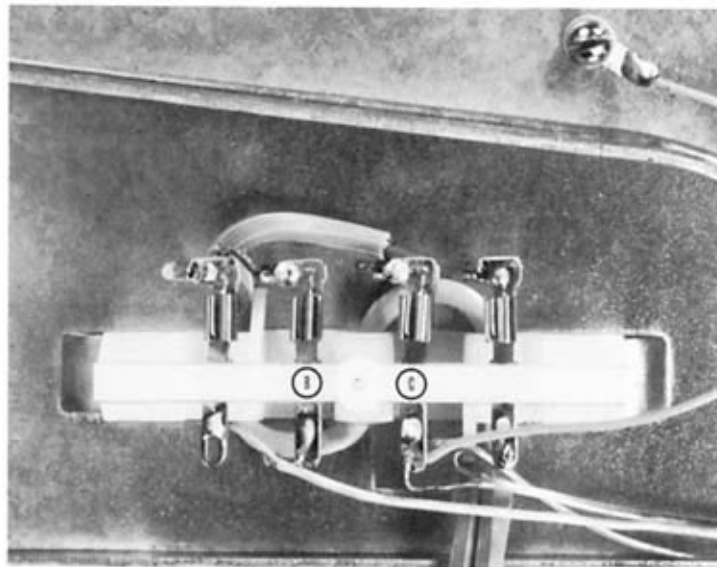
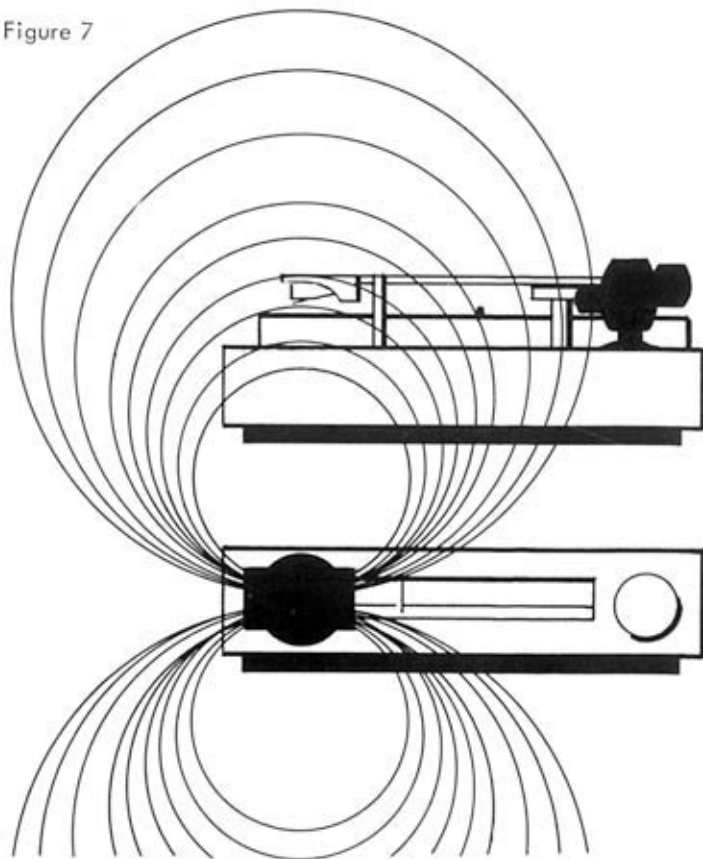


Figure 7



5.3. Connection to the Amplifier

The audio cable is fitted with male RCA phono plugs marked as follows:

- L Left channel
- R Right channel

The right channel shielded wire is connected to the chassis ground. If a cartridge with combined ground connections is used, hum from a ground loop may be avoided by disconnecting either connector, B or C, as shown in Fig. 6.

NOTE: When assembling your Hi Fi system, avoid locating your TD 160 turntable near the power transformers of your other equipment. Magnetic cartridges are sensitive to the magnetic fields of power transformers which may induce hum into your system.

6. MAINTENANCE

6.1. Drive System

The TD 160 turntable rubber belt, motor pulley and outer rim of the inner turntable platter should be entirely free of any trace of oil or grease. If necessary, clean these parts with a clean, lint free cloth lightly dampened with denatured alcohol or methylated spirits.

6.2. Turntable

The turntable bearing shaft revolves in a self-lubricating bearing. Under normal operating conditions, lubrication should not be necessary for several thousand hours of operation. When lubrication of the turntable bearing is required, use only Caltex Regal Oil B (ROB) as supplied with the THORENS Lubrication Kit available at your THORENS dealer.

6.3. Motor

Due to the slow operating speed of the 16 pole synchronous motor, no lubrication is necessary under normal operating conditions.

6.4. Chassis Suspension

The chassis suspension has been optimized at the factory, however, your particular room environment or installation may require further adjustment to minimize the effects of floor vibrations or acoustic-feedback. Remove the hardboard bottom cover. The three large cone-shaped coil springs comprising the chassis suspension system are secured in place by hex nuts. Rotating the nuts clockwise raises the turntable chassis and stiffens the suspension, counter-clockwise will lower it and soften the suspension. After making an adjustment, gently disturb the floating chassis to assure it is floating freely.

7. THORENS WARRANTY

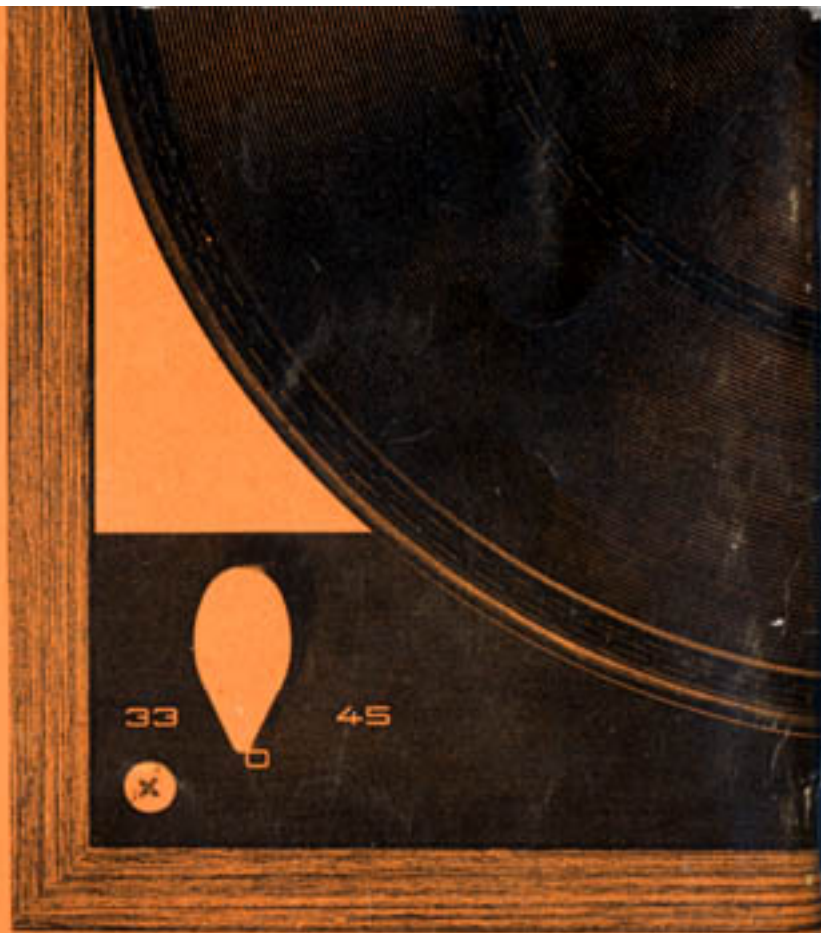
The THORENS unit you have purchased is warranted free from manufacturing defects by both ELPA MARKETING INDUSTRIES, INC. and the manufacturer, THORENS, for a period of 12 months from the date of purchase of a factory sealed carton. This warranty covers parts and labor, provided the unit is delivered or shipped (charges prepaid) to an authorized ELPA-THORENS Service

Station and the following conditions have been met:

1. Repair required is due to manufacturing defects and not caused by transit damage or other causes.
2. Purchase is made through an ELPA-THORENS Authorized Dealer.
3. Application for warranty form completed and mailed to ELPA MARKETING INDUSTRIES, INC. within ten days from date of purchase. Your warranty registration will be sent to you by return mail.
4. Do not permit any service work to be performed by anyone other than an ELPA Authorized Service Station. A list of these Service Stations is available from ELPA upon request.
5. In the event the unit is shipped to either ELPA MARKETING INDUSTRIES, INC. or an authorized ELPA-THORENS Service Station, shipment must be made in the factory carton with complete packing. The unit will be returned shipping charges collect.
6. The above warranty is agreed upon by signing the enclosed application for warranty.

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This TD160 owner's manual
Was oem with the TD160C I purchased new in 1975.
Steve @ The Analog Dept.