

Garrard
SYNCHRO-LAB 72B

instruction manual

Garrard

Synchro-Lab 72B auto transcription turntable

(Patents pending)

110/125 volts 60Hz MODEL

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The Garrard SL 72B is a transcription turntable with the added facility of automatic record playing if desired. This turntable will play 12", 10" or 7" records singly at speeds of $33\frac{1}{3}$, 45 or 78 rev/min. or up to eight 12" records of identical speed automatically. Eight 7" records having large centre holes may be played automatically using large record spindle LRS 25 (available as an optional extra). An adaptor is supplied for playing large hole records singly. Among many distinctive features are — a tone arm of advanced design, a new record release mechanism, a built-in cue and pause facility and, above all, the new Garrard Synchro-Lab motor which, in conjunction with the large, non-magnetic platter, guarantees a high degree of speed accuracy under all normal conditions.



Diagram 1 The Garrard Synchro-Lab 72B auto transcription turntable

Unpacking instructions

1 Lift out unit by gripping the two short sides of the mounting plate, in between the two polyfoam pads (diagram 2).

Warning: Do not lift the unit by the tone arm or by any component mounted on the mounting plate.

2 Remove both polyfoam pads from mounting plate, and place aside.

3 Remove plastic covering from unit.

4 Remove the wire tie from the tone arm.

5 Remove all accessories from one of the polyfoam pads

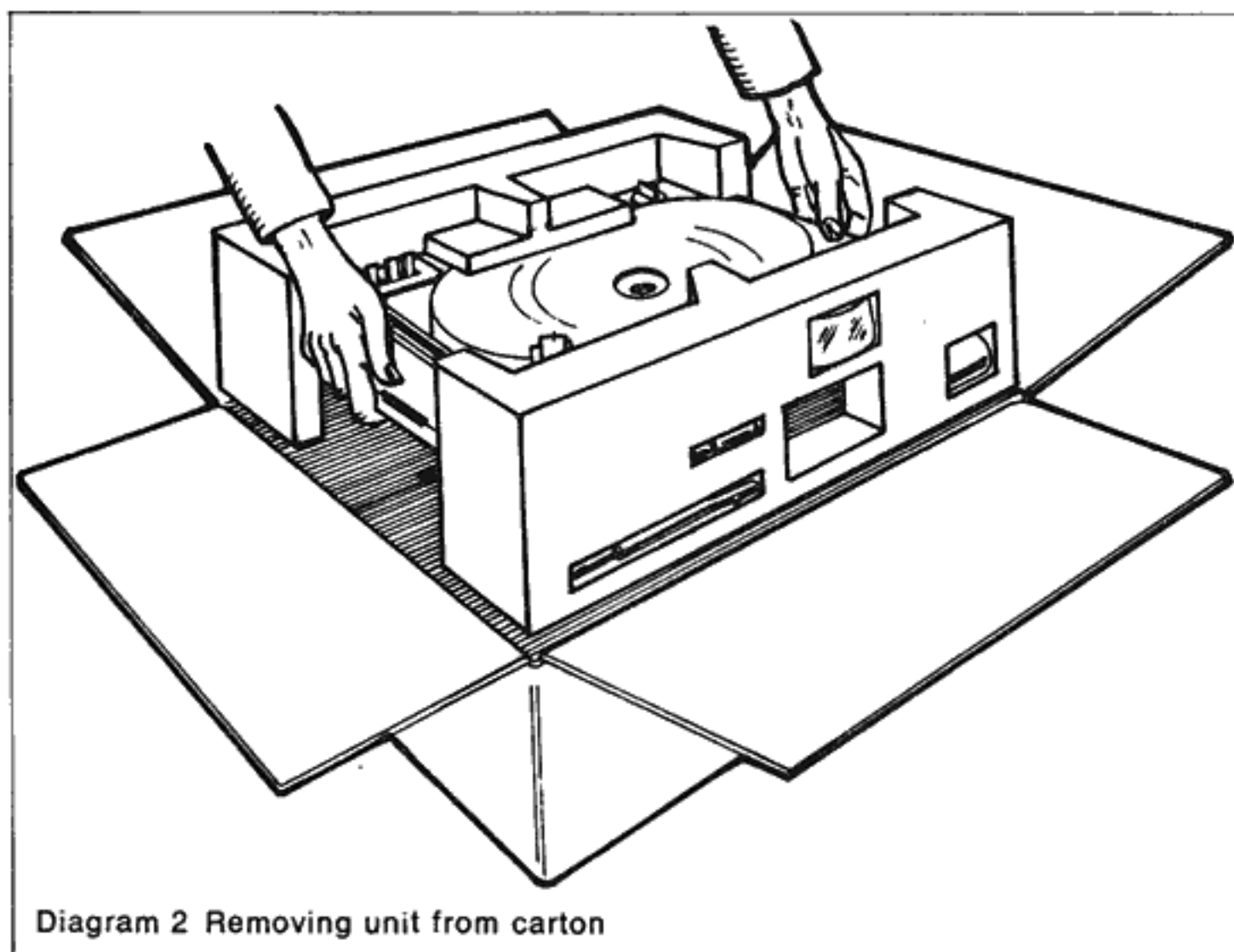
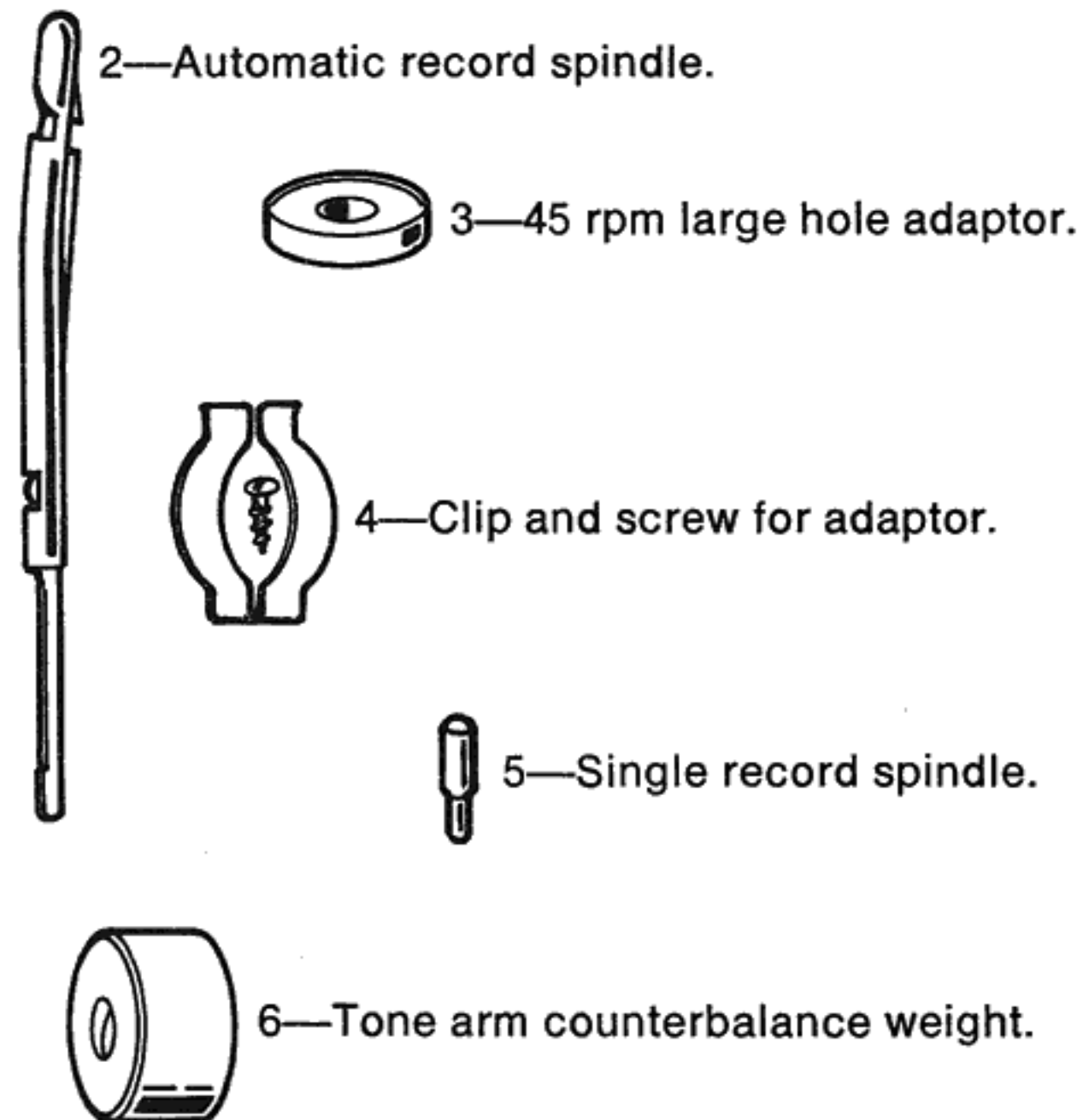


Diagram 2 Removing unit from carton

You should have the following parts:

1—Unit complete with platter and mat.



7 Accessory kit, consisting of fixing screws and spacers for assembling a variety of pickup cartridges (see diagram 3).

Assembly instructions

FITTING THE PICKUP CARTRIDGE

Proceed in the following way:

- 1 Unclip the tone arm from its rest, hold it over the platter away from the operating controls with one hand, to avoid risk of damage to the cartridge, and withdraw the slide with the other hand. The same procedure should be adopted when removing or replacing the slide.
- 2 Turn the slide over and remove the tape holding the four pickup leads in position.
- 3 Fasten your cartridge to the slide using the screws provided (see diagram 3). If a cartridge tilting wedge is supplied, fit this between the cartridge and the slide, deeper edge toward the stylus. This will tilt the cartridge down at the front for optimum tracking.
- 4 Connect the insulated leads to the cartridge according to the following colour code and to the cartridge maker's instructions.

Red	Right hand channel signal
Green	Right hand channel ground
White	Left hand channel signal
Blue	Left hand channel ground

Note: DO NOT solder the pickup leads to the connection points on the cartridge. If a cartridge has only three pins or tags, use the green lead, or green and blue joined together, as common. Insulate and tuck away any leads not required.

- 5 Replace the cartridge slide in the tone arm, pushing it gently into place (see diagram 4).
- 6 The counterbalance weight has been packed separately to protect the delicate pivots of the tone arm during transit and must now be fitted to the rear of the arm (see page 7).

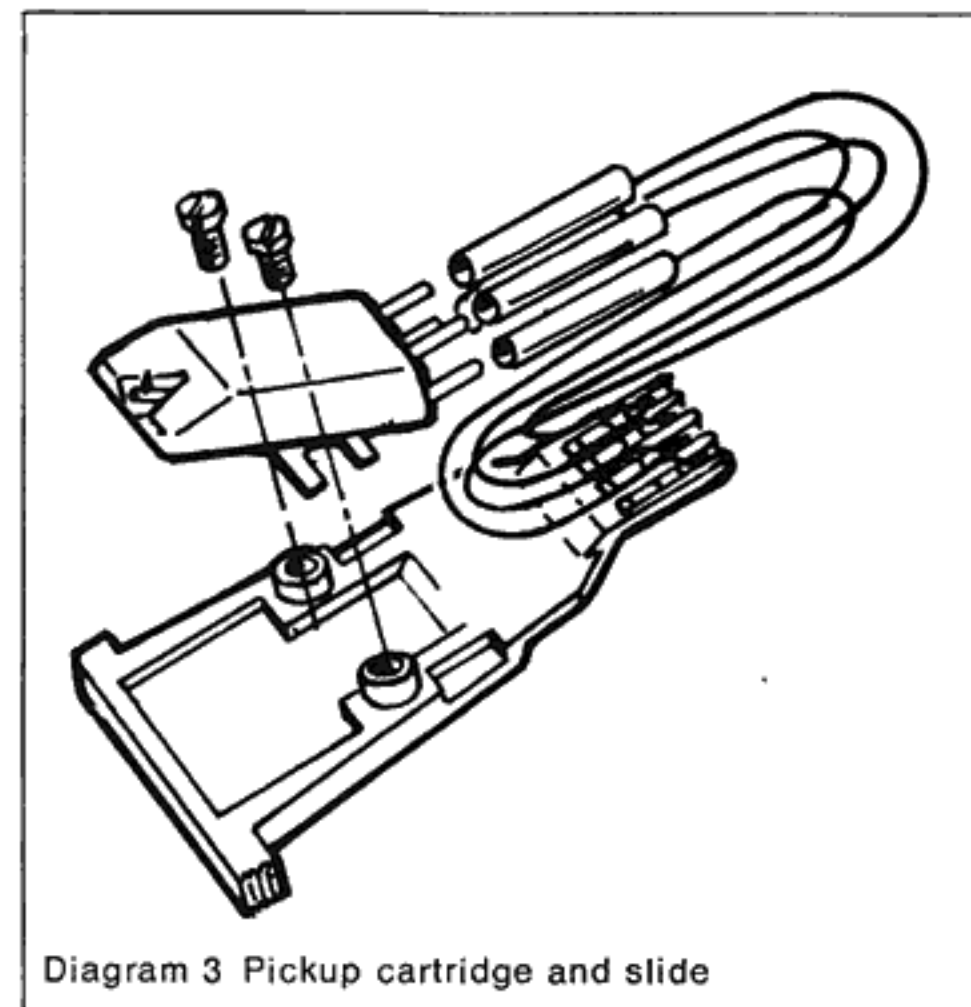


Diagram 3 Pickup cartridge and slide

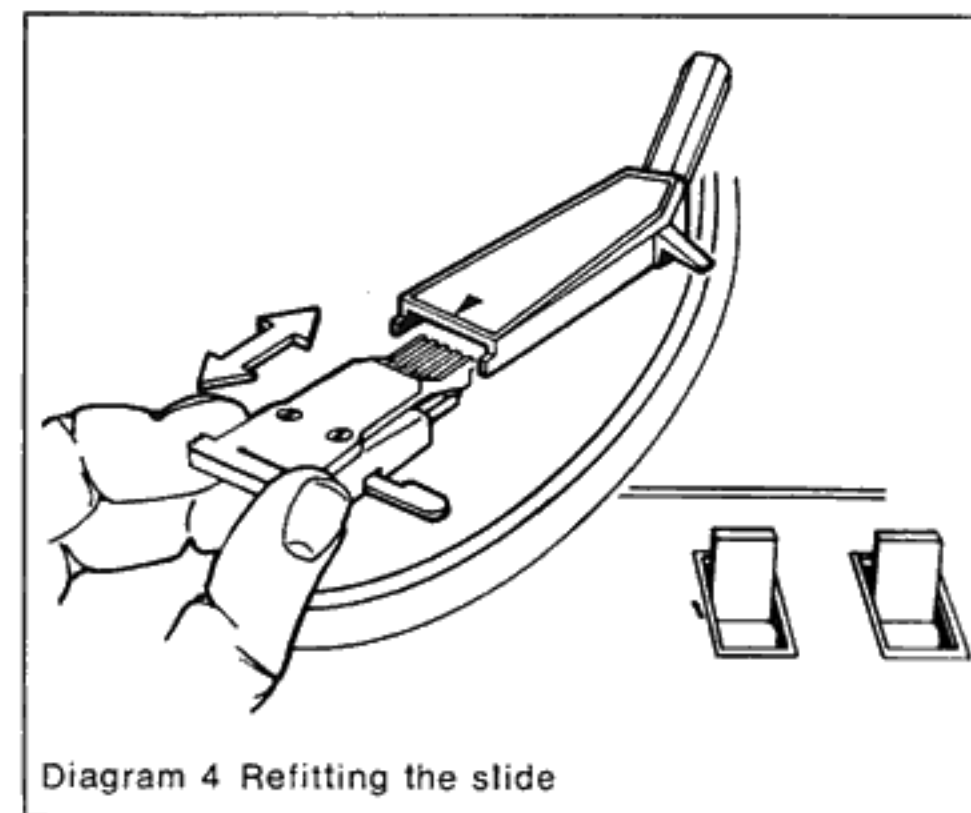


Diagram 4 Refitting the slide

General installation notes

- 1 Secure the template to the mounting board in the desired position with strips of adhesive tape. (Glue will distort the paper template.) Then, using a pointed instrument, prick around the heavy line indicating the cut-out, and mark the centres of the spring mounting recesses and transit holes (diagram 5).
- 2 Remove the template and saw around the marked cut-out (diagram 6).
- 3 Drill 2 holes for the transit screws and for the spring mountings as instructed on the template.
- 4 The mounting board can now be varnished, painted, or covering material applied.
- 5 Thread power supply, ground and audio leads through cut-out in mounting board.
- 6 Turn both transit screws fully clockwise and set locking clips vertical, then place unit in position on the board. Align transit screws and mounting springs with their respective holes and recesses, making sure that all damping pads are in position in the mounting springs.
- 7 Press unit down on its springs, then turn locking clips horizontal.
Note: For transportation, the transit screws should be turned counter-clockwise to clamp the unit against the board. Release it by turning the screws clockwise before further use.
- 8 Insert the appropriate record spindle and rotate it until it can be pressed firmly to secure it in position.
- 9 Check and, if necessary, reset tone arm adjustments.

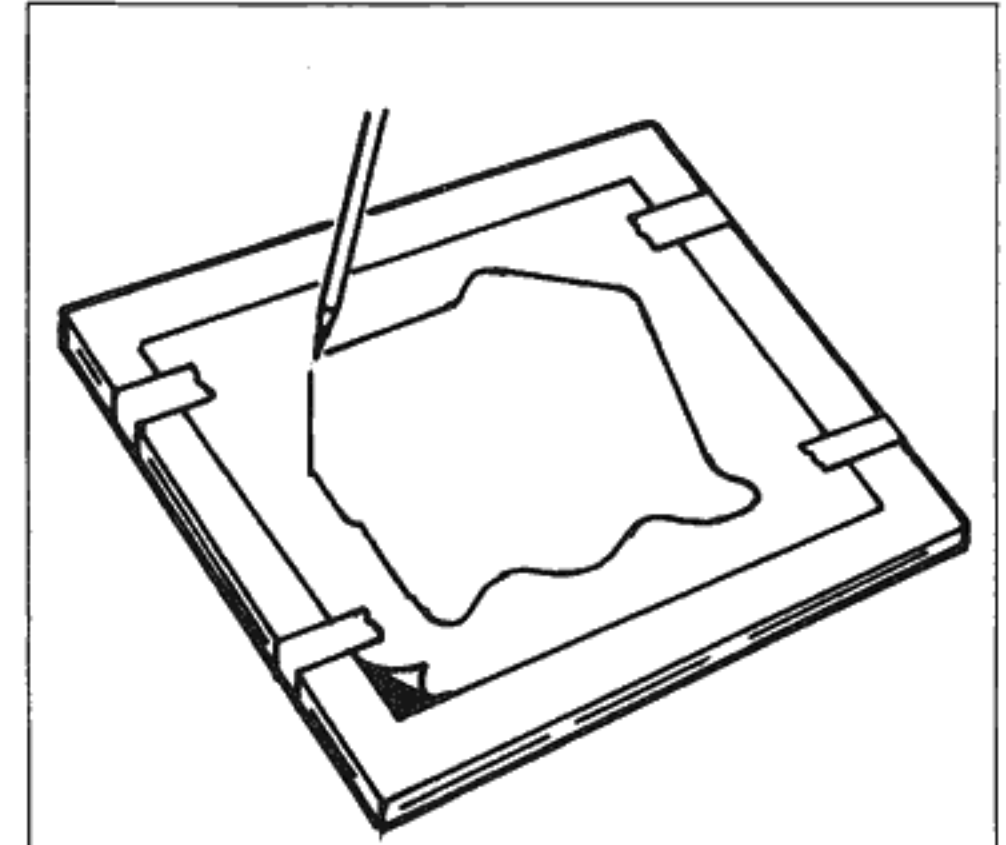


Diagram 5 Marking the board

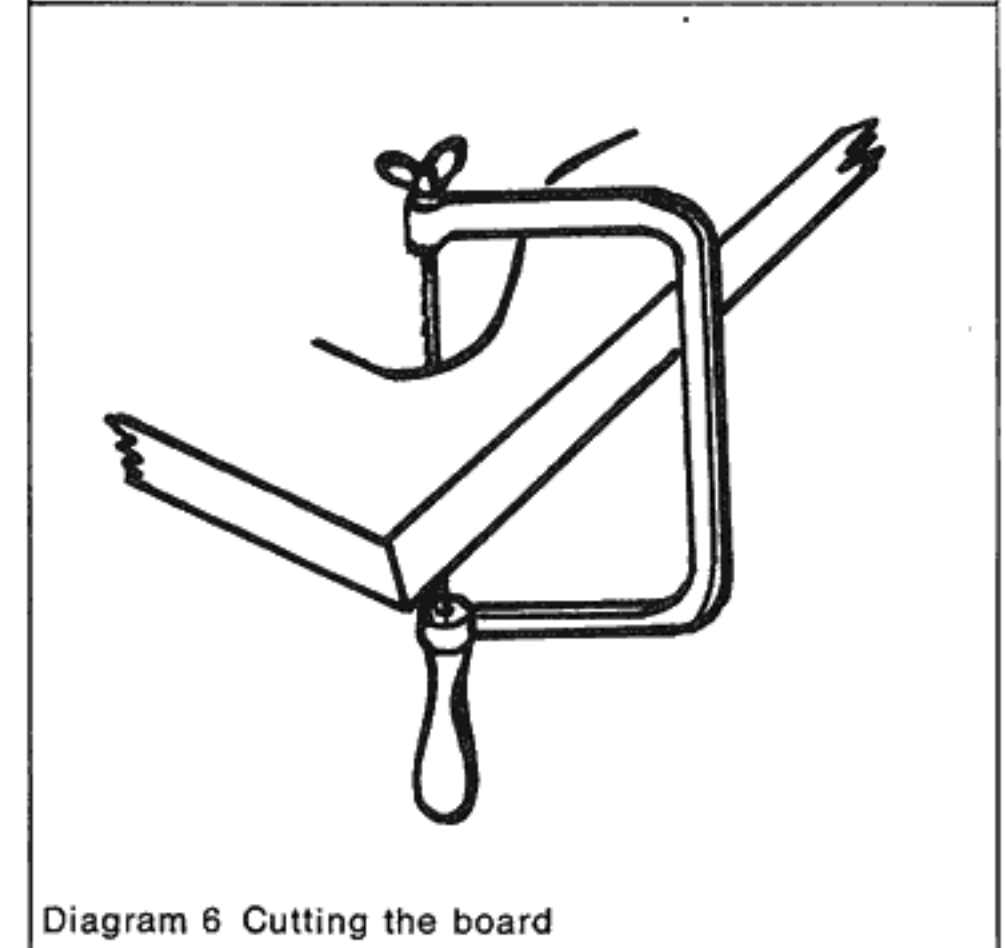


Diagram 6 Cutting the board

Cabling instructions

Note: RCA type output connectors are used on this turntable.

AC Power supply and ground connections

The brown AC power supply cord may be connected to a power supply outlet on your amplifier chassis (if one is available) or directly into a wall outlet. If the outlet on your amplifier is controlled by a switch on the front panel DO NOT switch off the turntable power without first using the controls on the unit.

The green (or green and yellow) ground lead should be connected to ground or a ground connection on the amplifier chassis.

Stereo cartridge – stereo amplifier, connections

Connect the phono leads as shown on the adjacent illustration.

Make certain that the right hand (R) output is connected to the amplifier feeding the right hand speaker and the left hand (L) output to the amplifier feeding the left hand speaker.

Stereo cartridge – mono amplifier connections

Connect the phono leads as shown on the adjacent illustration.

With this arrangement, a 'Y' adaptor must be used so that the complete output signal of the stereo cartridge will be reproduced by the sound system.

Mono cartridge – stereo amplifier connections

Use the (R) pickup output if your cartridge is connected to the red and green pickup shell leads; use the (L) output if your pickup is connected to the white and blue leads. Use a 'Y' adaptor only if your amplifier does not have provisions for connecting its left and right inputs together.

A.C. power and ground connections

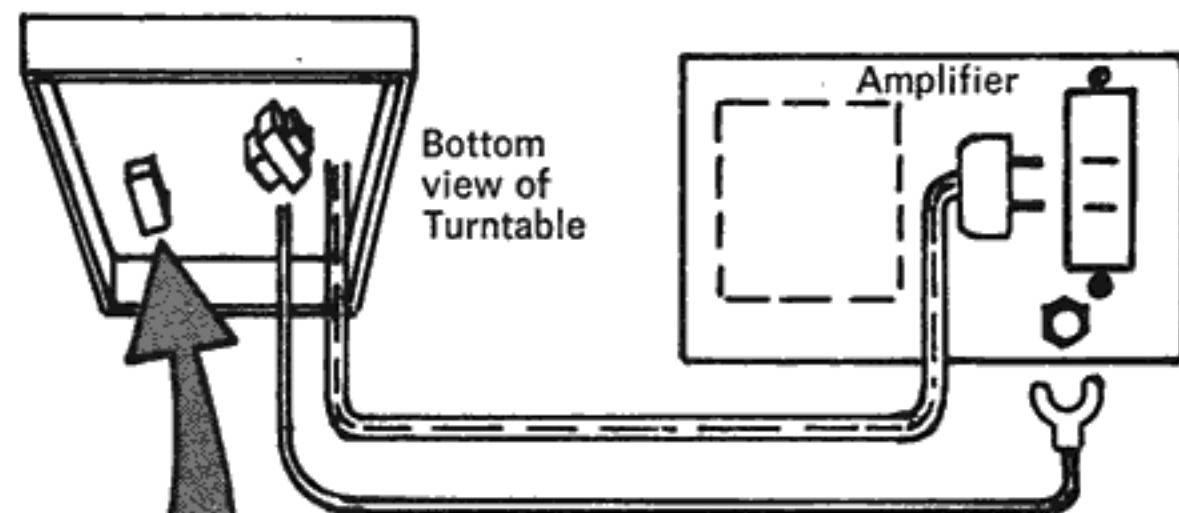


Diagram 7

Stereo cartridge – stereo amp connections

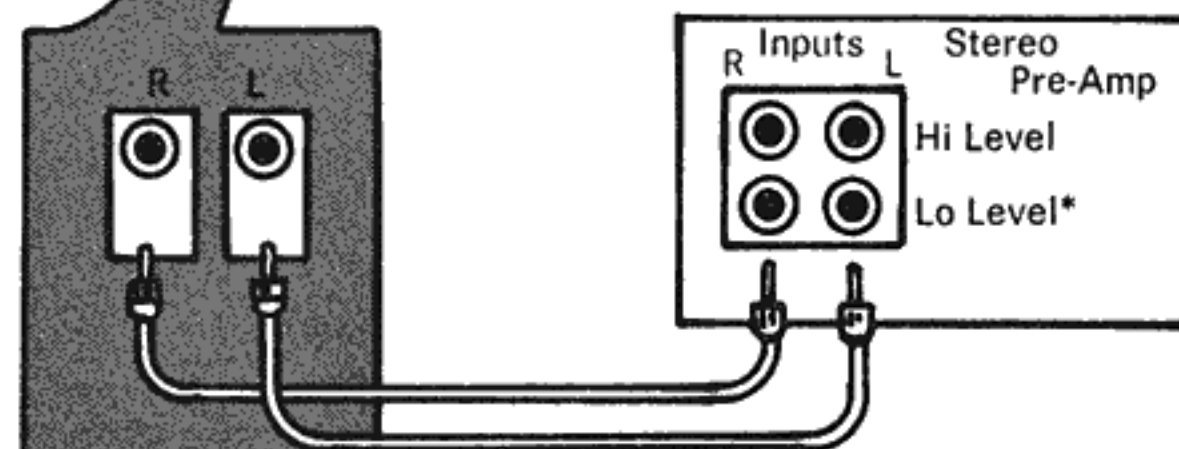


Diagram 8

Stereo cartridge – mono amp connections

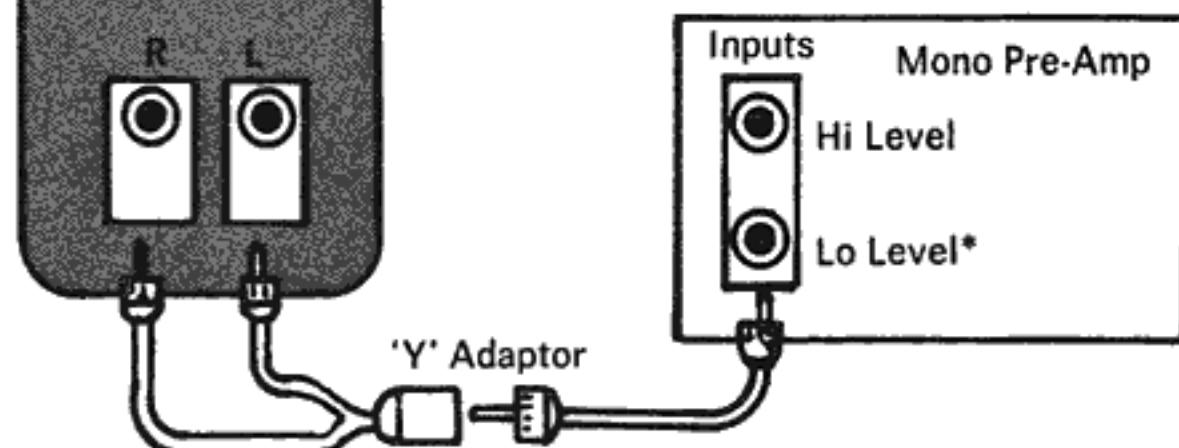


Diagram 9

* Refer to manufacturers instructions for selection of LO or HI level inputs.

Setting instructions

SETTING THE COUNTERBALANCE WEIGHT

The weight should be gently pushed on to the back of the tone arm and turned to secure it. Set the stylus force pointer to '0' on the scale by turning screw A on diagram 10 fully counterclockwise. Unclip the tone arm safety catch and move the arm away from the rest towards the turntable centre. With the arm thus free to pivot, wind the counterbalance weight B along until the arm is in balance with the stylus tip at a height corresponding to that of the top face of a single record on the platter. Return the tone arm to its rest, and secure it with the safety catch.

SETTING THE PICKUP STYLUS FORCE

Set the stylus force recommended by the cartridge manufacturer by turning adjustment screw A until the correct figure is indicated by the pointer on the scale (see diagram 11), after setting the counterbalance weight.

The stylus force scale is calibrated in grams.

SETTING THE TONE ARM ANTI-SKATING DEVICE

Adjust the anti-skating weight C by sliding it along its arm until the scale marking corresponds with the stylus force setting on the tone arm (see diagram 10).

In order to satisfy the different operating requirements of cartridges with round and elliptical styli, two scales for setting the anti-skating weight are provided.

The scale for cartridges with conical styli is marked ●, and the scale for elliptical styli is marked ○. Both scales represent grams of stylus force.

A stylus can be assumed to be conical unless its manufacturer states otherwise.

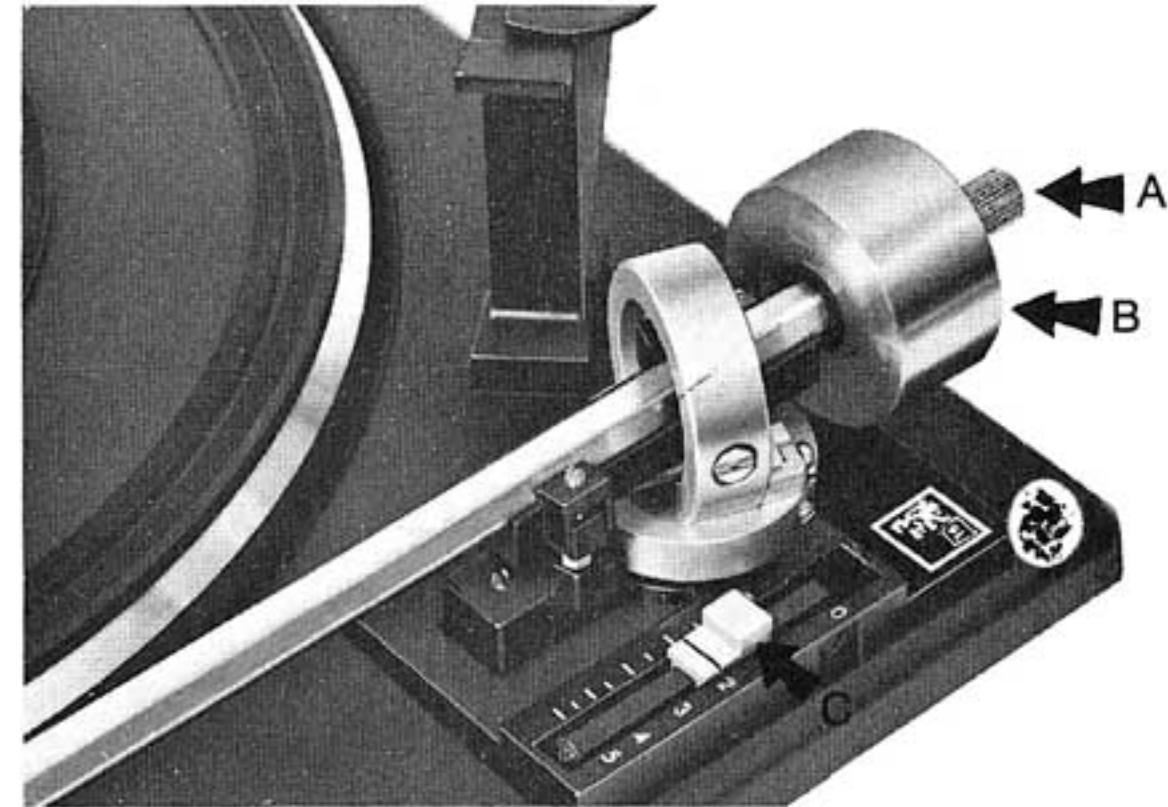


Diagram 10 Stylus force and anti-skating adjustments

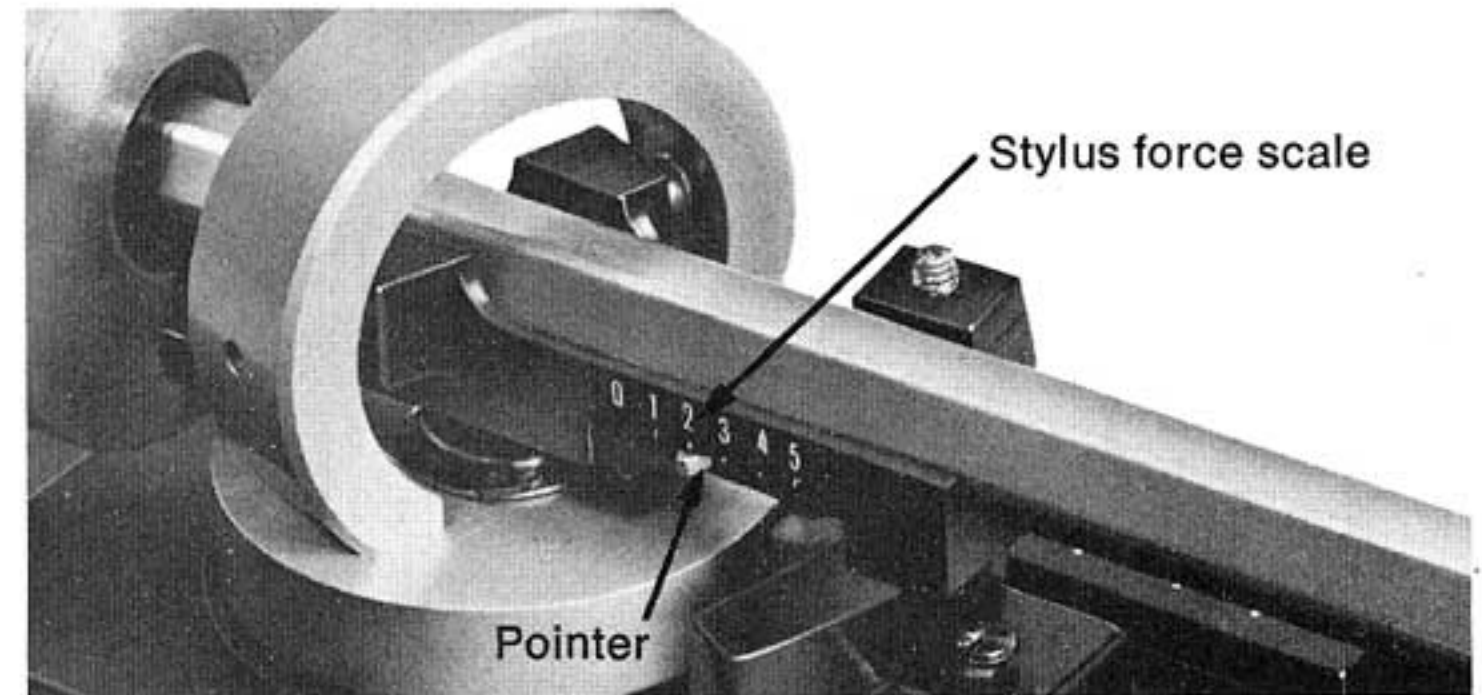
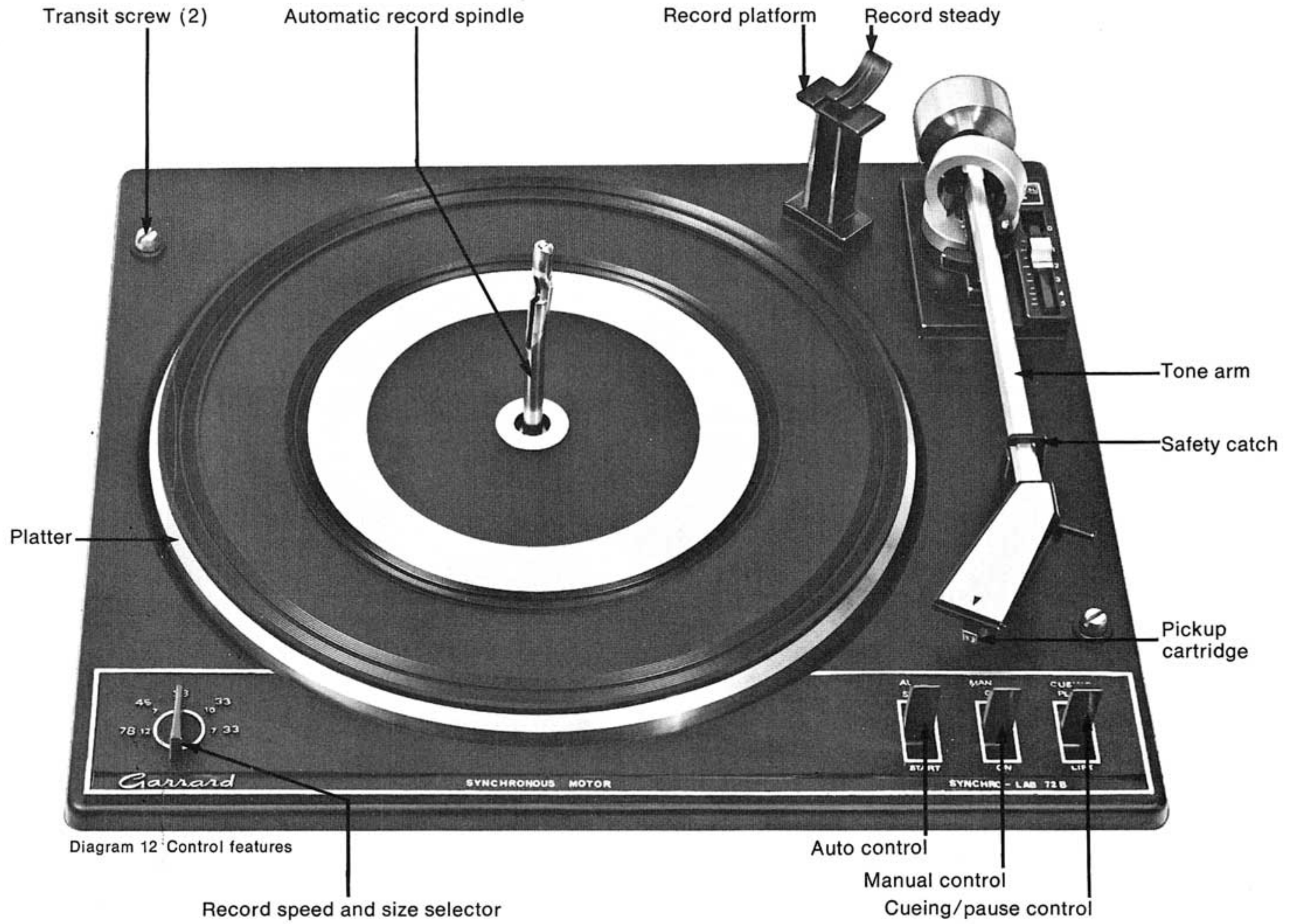


Diagram 11 Stylus force gauge



Operating instructions

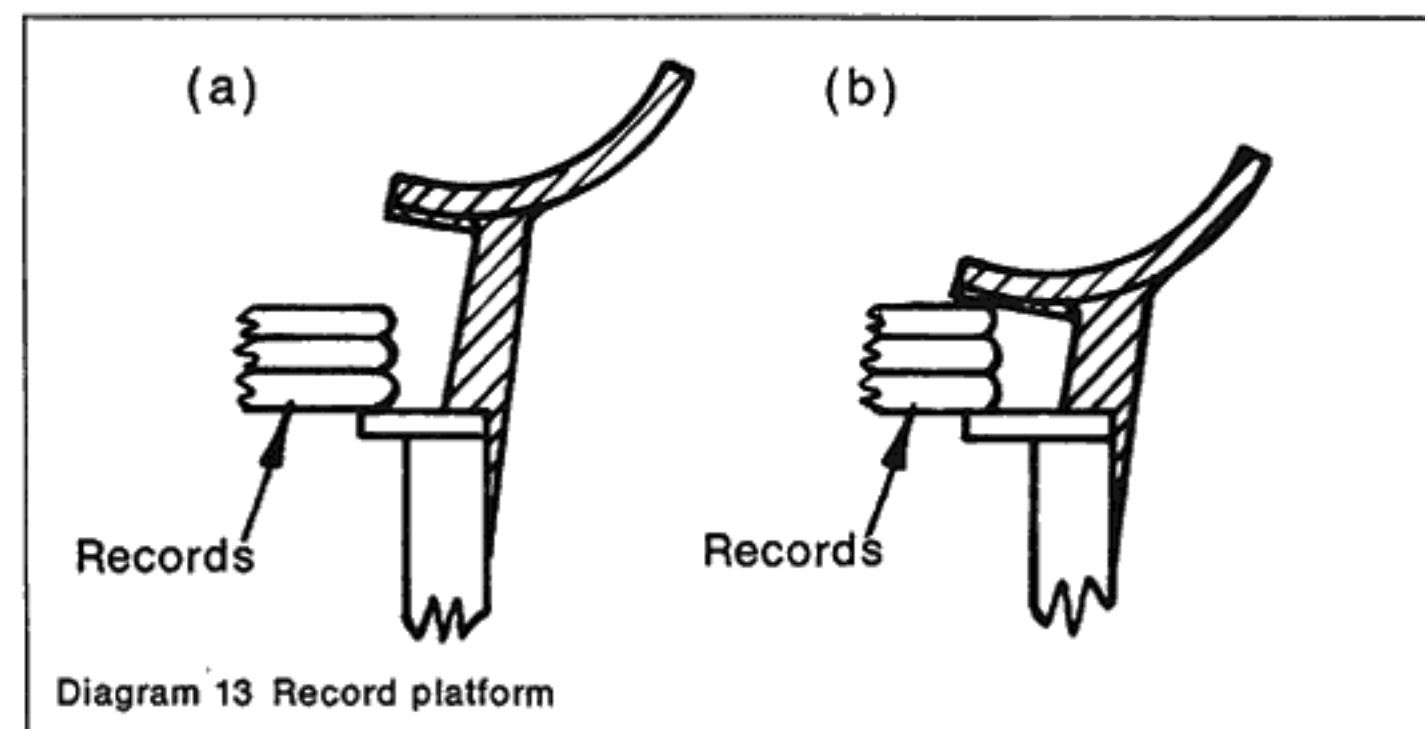
GENERAL NOTES

- 1 Always switch off the unit by means of one of its controls when discontinuing play.
- 2 Do not hold, or rotate, the platter counterclockwise.
- 3 Before transporting the unit secure the tone arm to its rest, turn the transit screws fully counterclockwise to clamp the unit to the mounting board and replace the stylus guard to protect the pickup. Before further use, unclamp the unit.
- 4 Keep the stylus free from accumulated dust, and replace it when worn.
- 5 Do not store records on the turntable, as they may warp. Store and clean them as recommended by the manufacturers.
- 6 The normal position of the control tabs is upright. They will return to this position when the unit switches off.
- 7 Before playing a record:—
 - (a) Unclip safety catch to release tone arm, remove stylus guard if fitted, and check that the stylus suits the type of record to be played.
 - (b) Never switch on unless at least one record is in position on unit.

OPERATING INSTRUCTIONS

Automatic play (long record spindle)

- 1 Fit the automatic spindle and rotate it until it can be pressed firmly into place.
- 2 Set record speed and size selector control.
- 3
 - (a) **12" records**
Locate up to eight records on step of spindle with edge resting on platform, then lift record steady outwards and up by means of the tab (diagram 13a). Position the record steady on top of the record stack (diagram 13b).
 - (b) **7" records**
Place LRS 25 spindle (optional extra) over auto spindle, and load up to eight records on to its step.



OPERATING INSTRUCTIONS continued

4 Move 'AUTO' control fully to 'START'. The first record will slide down on to the platter and the tone arm will lower to start play. After the last record has played the arm will return to its rest and the unit will switch off.

5 To unload

Lift records clear of spindle, even if replaying them. If using the LRS 25 lift records with fingers whilst pressing down on spindle top with thumbs.

Single record automatic play

1 Fit short record spindle. For a 7" record with large centre hole fit record adaptor over the spindle.

2 Set record speed and size selector control.

3 Place record on platter and move 'AUTO' control fully to 'START'. The tone arm will position itself on the record and, after playing, will return to its rest. The unit will then shut off.

Manual Cue/Pause play

1 Fit short record spindle. For a 7" record with large centre hole fit record adaptor over this spindle.

2 Place record on platter.

3 (a) Normal single record play: Move 'MANUAL' control fully to 'ON', then place pickup on record.

(b) To cue: Move 'MANUAL' control fully to 'ON', and the 'CUEING' control to 'LIFT'. Position the tone arm over any desired point on the rotating record, and gently move the control back to 'PLAY'. The tone arm will then lower on to the record.

Pause

Record play can be interrupted by moving the 'CUEING' control to 'LIFT'. The pickup will rise but the turntable will continue to revolve. Gently move the control back to 'PLAY' and the pickup will lower and resume playing. This feature is particularly useful for repeating any portion of a record and interrupting play without switching off.

Repeat

Any single record being played, or the last record of a stack, may be repeated by moving the 'AUTO' control to 'START'.

Reject

Any record of a stack being played (except the last) may be rejected by moving the 'AUTO' control to 'START'. The last record is rejected by moving the 'AUTO' control to 'STOP'.

Stop

1 When a record is playing, moving the 'AUTO' control to 'STOP' will cause the tone arm to return to its rest, whereupon the next record will be lowered and the unit will switch off. Upon re-starting (using the 'AUTO' control) the next record of the stack will be lowered and played.

2 By moving the 'MANUAL' control to 'OFF'.

Maintenance instructions

PLATTER REMOVAL

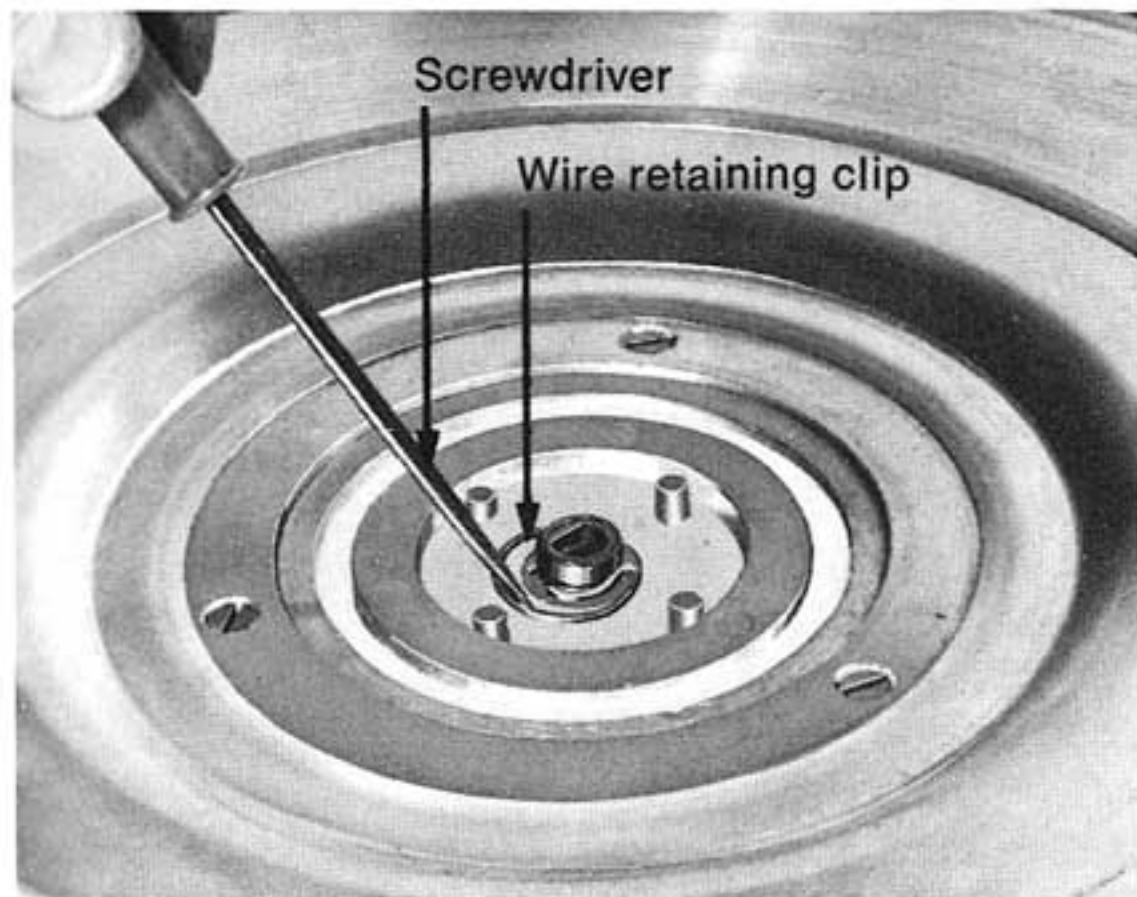


Diagram 14 Platter removal

Switch off unit by means of its control, remove record spindle and centre disc, then prise off the retaining clip using a small screwdriver. Lift the platter applying equal pressure on opposite sides. Diagram 14 shows the rubber mat removed for clarity only.

PLATTER REPLACEMENT

First check that the platter bushing, the centre hole and the drive rim of the platter are clean: then carefully fit the platter on to the spindle while rotating the platter clockwise, refit the retaining clip and the record spindle.

CARTRIDGE REMOVAL AND REPLACEMENT

(See page 4.)

INTERMEDIATE WHEEL HEIGHT

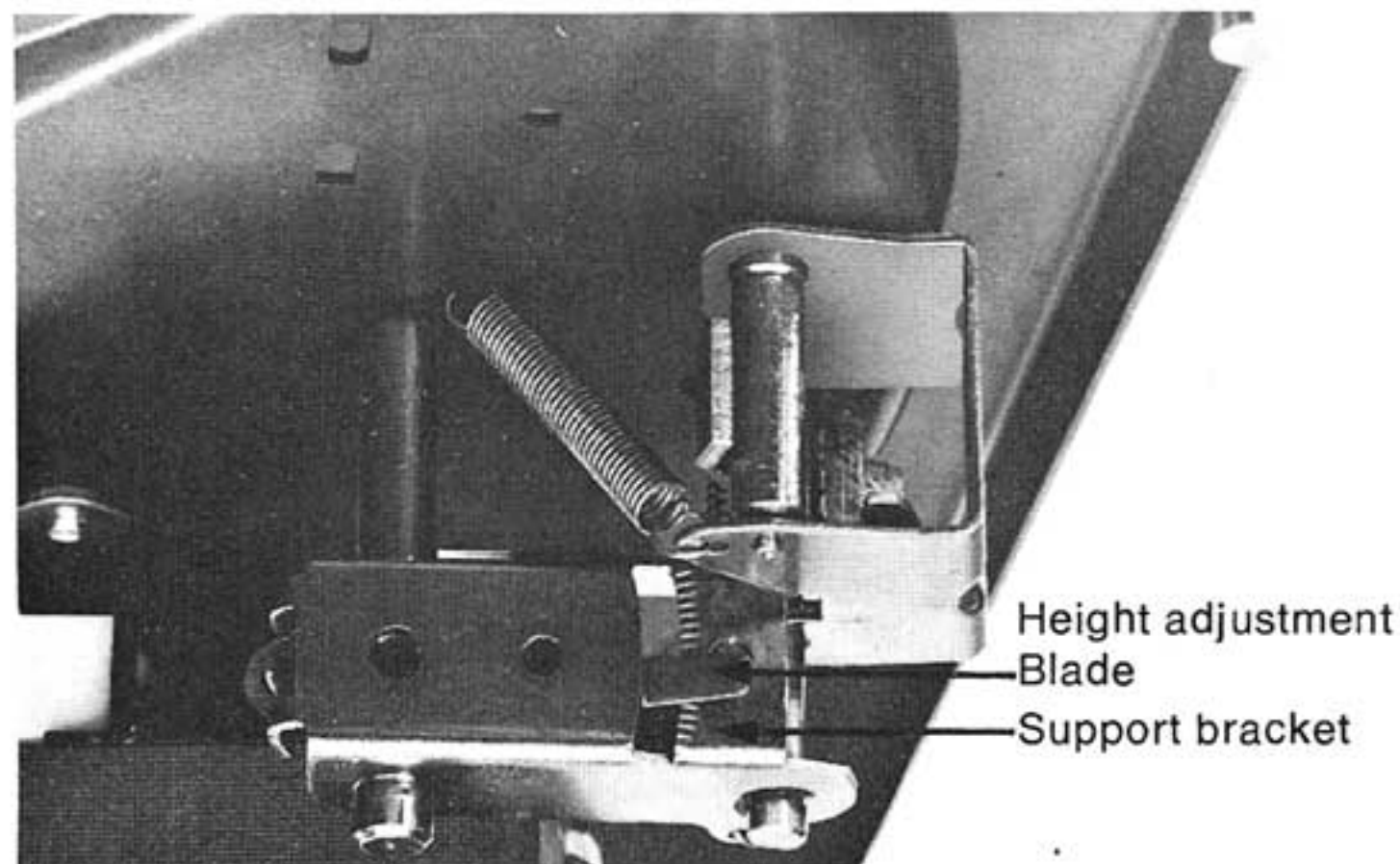


Diagram 15 Intermediate wheel adjustment

Turntable speed will be incorrect if the motor pulley is out of position.

In this case set the 'MANUAL' control to 'OFF' and remove the platter. Then set the speed control to '33' and touch the intermediate wheel against the motor pulley. The rubber wheel should contact the centre of the smallest step of the pulley. The height of the intermediate wheel is adjusted by moving the blue spring blade in the support bracket near the motor (see diagram 15).

To remove the motor pulley, loosen both fixing screws and lift it off the motor shaft. If it is a close fit on the shaft also apply a gentle heat to the base of the pulley with a clean soldering iron to expand it before removal. Fit a new pulley similarly.

TONE ARM HEIGHT

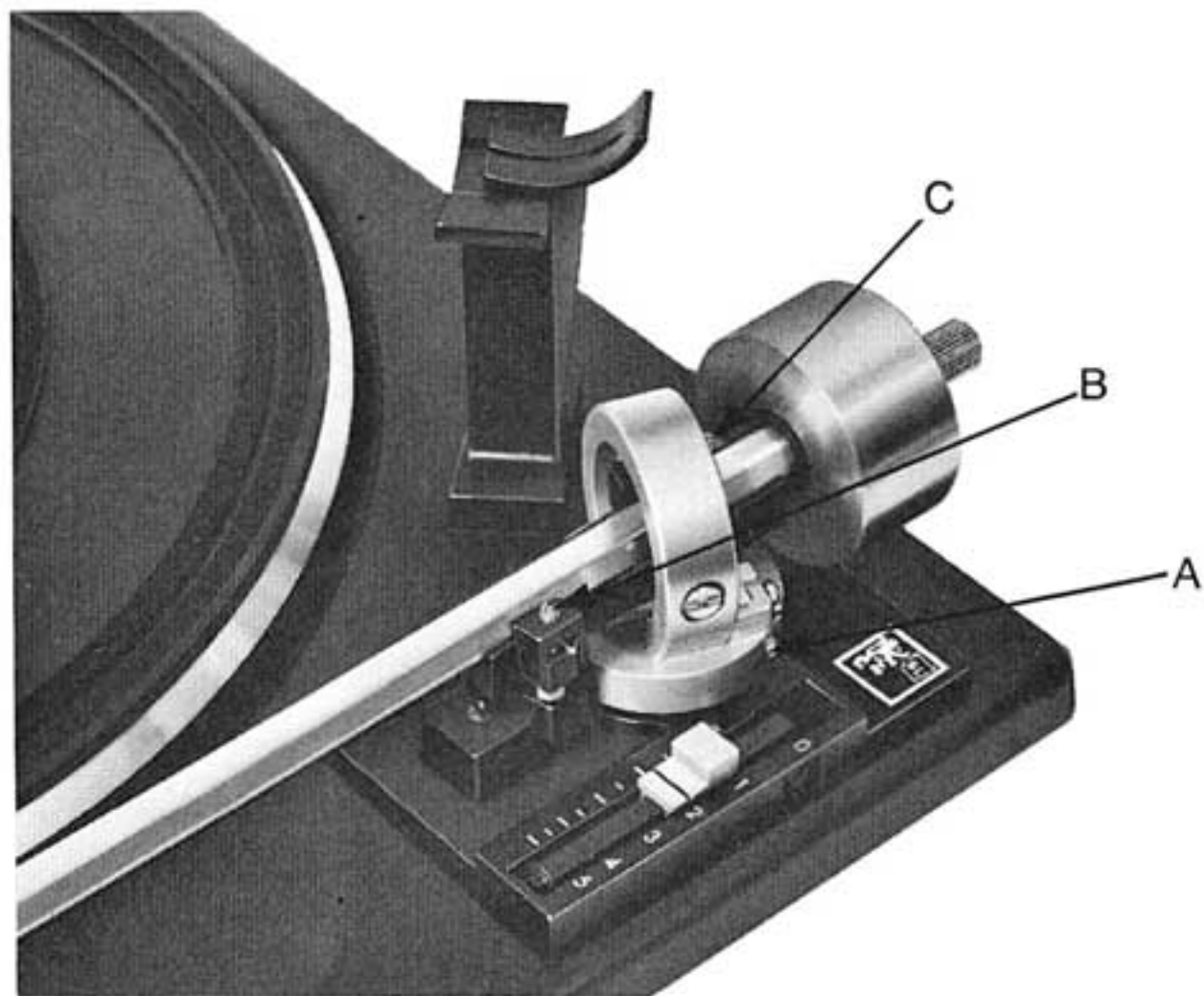


Diagram 16 Tone arm adjustments

This may need adjustment after fitting a cartridge. The height of the stylus tip, as the tone arm returns to its rest, should be $\frac{3}{4}$ " above the top face of one record on the platter.

Referring to diagram 16, adjust as follows:

Make sure that the unit is switched off, then engage the mechanism by moving the tone arm towards the centre of the record while turning the platter slowly clockwise by hand. Stop turning when the arm has lifted and is about halfway back to its rest and turn screw B clockwise to raise it, counterclockwise to lower it, until the stylus tip is $\frac{3}{4}$ " above the record.

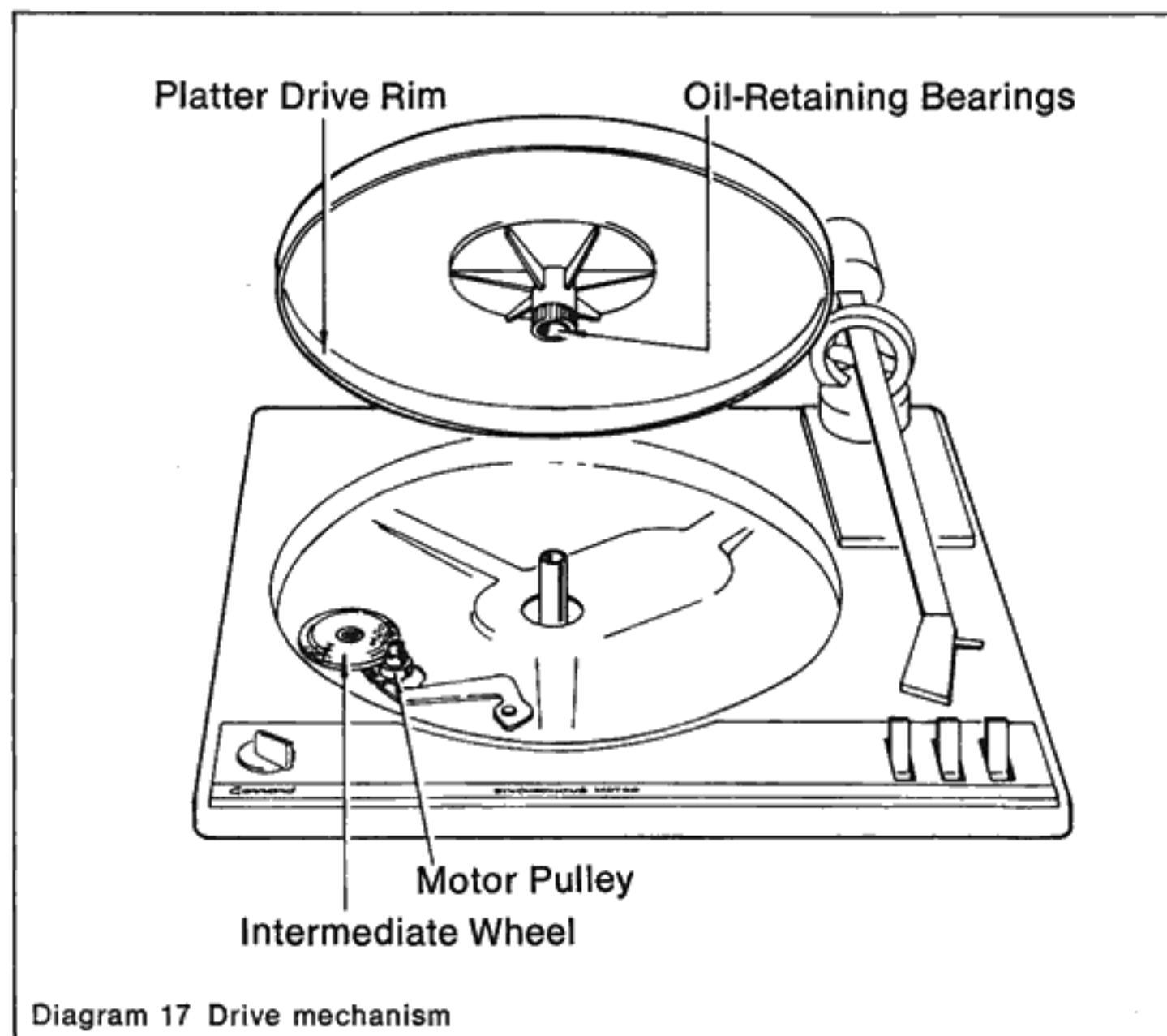
TONE ARM HEIGHT RESTRICTOR

This limits the height to which the tone arm lifts so that it cannot touch the underside of a record on the step of the automatic record spindle. It should be set to allow, but not exceed, the tone arm height setting mentioned above. To adjust, proceed as described in the second paragraph of 'TONE ARM HEIGHT SETTING' and turn adjusting screw C clockwise to increase and counterclockwise to reduce restriction.

TONE ARM LOWERING POSITION

This is factory set but after a cartridge has been fitted further adjustment may be needed. With one record on the platter, start automatic play and move the 'MANUAL' control to 'OFF' just before the stylus touches the record. Referring to diagram 16 turn adjustment screw A clockwise to move the tone arm inward and counterclockwise to move it outwards.

Cleaning



DRIVE MECHANISM CLEANING

Erratic turntable speed is often an indication that the drive mechanism requires cleaning.

When this is suspected, remove the platter (see page 11) and clean the surfaces of the platter driving rim, the intermediate wheel and the motor pulley using a clean lint-free cloth. Make certain that no oil remains on these surfaces.

PLATTER MAT

Clean the mat with a soft brush.

Lubrication

MOTOR

The bearings of the motor are of the oil-retaining type and rarely require lubrication. When the need becomes apparent remove the platter (see page 11) and place a few drops of light oil on the motor shaft adjacent to the bearing.

PLATTER

Apply a few drops of light oil to the oil-retaining bearings shown in diagram 17

INTERMEDIATE WHEEL BEARING

Remove platter (see page 11). Remove retaining spring clip and plastic washer, lift off intermediate wheel and fibre washer (this may stick to the bottom of the intermediate wheel bearing). Clean inside the bearing and the periphery of the shaft, with a clean cloth. Using a toothpick dipped in light oil, coat the inside of the bearing with oil, making sure that none touches the rubber wheel.

Re-assemble the parts in the reverse order, with the longer portion of the bearing facing downwards, then clean the rubber surface of the intermediate wheel with a clean cloth.

Service and Spares

ACCESSORIES

Accessories for model SL 72B include:

Adaptor LRS 25 for automatically playing 7" records with large centre holes.

Adaptor (Part No. 74591) for automatically playing 7" and 10" records with normal centre holes.

Mounting base and rigid dust cover.

SPARE PARTS LIST

When ordering spares please quote SL 72B code (from inspection label), part number if listed and colour, voltage and power supply frequency when applicable. Also reference number stamped on underside of unit plate.

ALTERNATIVE POWER SUPPLIES

An alternative model is available for use on voltages and frequencies other than 110/125 volts 60Hz.

Description	Part Number
Automatic record spindle	72340
Single record spindle	73475
Automatic adaptor for single large hole records	72698
Large adaptor record spindle LRS 25 with cabinet fixing kit	73376
Platter mat with trim ring	74431
Platter centre disc	73033
Platter retention clip	43857
Pickup cartridge carrier plate (slide) type C2	73361
Pickup hardware kit (state cartridge type)	59048
Stylus force spring	44440
Tone arm counterbalance weight	74402
Rubber intermediate wheel	58220
Plug-in motor lead assembly with switch	60365
Rubber motor grommet (3)	43129
Damping pad for spring mounting (4)	71084
Transit screw clip (2)	43855
Transit screw (2)	44120
Grey phono lead	59028
Brown phono lead	59029
Line cord assembly with ground lead	58999
* Motor pulley assembly 60Hz	60534
* Motor pulley assembly 50Hz	60536
* Motor pulley assembly 60Hz (for Series II motor)	60847
* Motor pulley assembly 50Hz (for Series II motor)	60848
* Synchro-Lab motor	60510
* Series II Synchro-Lab motor	60810
* Note: There are two types of motors. When ordering a motor or pulley check the underside of the motor. If it is marked 'Series II' order the Series II part: if not, order the regular part. Pulley fitting instructions on page 11.	

**Service and Spares enquiries to:
Garrard Sales Corporation
Westbury
New York 11590**

**In other territories:
Garrard Engineering Limited
Service and Spares Department
Newcastle Street, Swindon
Wiltshire, England
Telephone: Swindon (0793) 5381**

