

ADC AccutracTM 4000

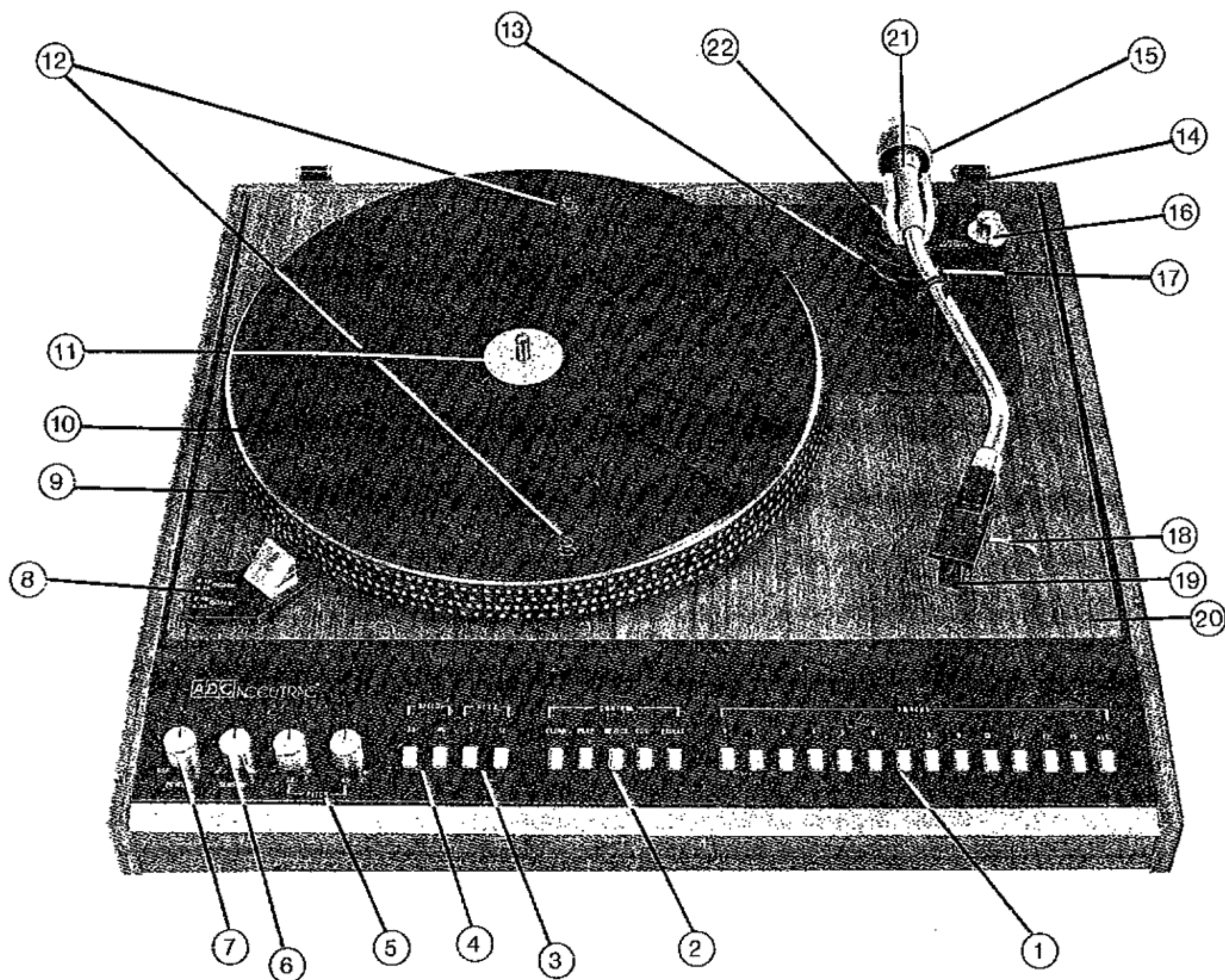
Owner's Manual



Thank you for selecting the ADC Accutrac 4000. You are now the owner of the only direct drive turntable with automatic track selection and a computerized memory bank. To insure your complete satisfaction, and years of trouble free operation, we strongly recommend that you take a few minutes to read the instructions which follow *before* attempting to install your Accutrac.

Contents

Specifications	2	Operation	7
Unpacking	3	Automatic	7
Placement & Installation	3	Speed calibration and control	8
Connections	4	Manual	9
Assembly	5	Remote	9
		Common-sense trouble-shooting	10
		Stylus changing	12



- | | | |
|------------------------------|----------------------------|--------------------------------|
| 1. TRACK SELECTION BUTTONS | 8. STROBE-LIGHT INDICATOR | 16. ANTI-SKATE KNOB |
| 2. FUNCTION CONTROL BUTTONS | 9. TURNTABLE | 17. TONEARM REST POST AND LOCK |
| 3. SIZE CONTROL BUTTONS | 10. TURNTABLE MAT | 18. FINGER LIFT |
| 4. SPEED CONTROL BUTTONS | 11. CENTER TRIM DISC | 19. STYLUS POSITIONING LEVER |
| 5. PITCH CONTROLS | 12. TRANSIT SCREWS | 20. MOTOR BOARD |
| 6. SENSOR ADJUSTMENT CONTROL | 13. CUEING PLATFORM | 21. TONEARM BARREL |
| 7. POWER SWITCH | 14. DUST COVER HINGES | 22. PIVOT HOUSING |
| | 15. COUNTERWEIGHT ASSEMBLY | |

ACCUTRAC 4000 TECHNICAL SPECIFICATIONS

TURNTABLE SYSTEM

TYPE: Two-Speed Direct Drive

MOTOR DRIVE SYSTEM:

Low Speed, Electronically Controlled, D.C.
Brushless Direct Drive Motor

SPEEDS:

33 $\frac{1}{3}$ and 45 rpm (Electronic Speed Change)

BUILD UP TIME: Within 2 Seconds To Full Speed

VARIABLE PITCH CONTROLS:

5% Range (Individual Control For Each Speed)

TURNTABLE PLATTER:

Die-Cast Aluminum Alloy, Dynamically Balanced
Diameter 306.4mm (12 $\frac{1}{16}$ "")
Weight 1.4 kg (3 lb 2 oz)

WOW AND FLUTTER: Less Than 0.03% W.R.M.S.

(DIN 45507) \pm 0.042% Weighted Zero To Peak

RUMBLE: Better than — 70 dB (DIN 45539B)

— 50 dB (DIN 45539A)

TONEARM/CARTRIDGE SYSTEM

TONEARM

TYPE: Tubular "S" Shaped, Statically-Balanced Arm
Direct Readout, Decoupled Counter-Weight
Electronically Controlled Cue, Pause and Muting
Operation

ANTI-SKATE CONTROL

EFFECTIVE LENGTH:

237mm (9 $\frac{9}{16}$ "") Pivot To Stylus Tip

OVERHANG: 15mm ($\frac{19}{32}$ "")

FRICTION:

5 to 7 Milligrams Horizontally And Vertically

OFFSET ANGLE:

21°

SYSTEM RESONANCE:

8-10 Hz (With ADC LMA-1 Cartridge Supplied)

TRACKING FORCE RANGE:

0-4 Grams (With ADC LMA-1 Cartridge Supplied,

Operate at $\frac{3}{4}$ -1 $\frac{1}{2}$ Grams)

WIRE CAPACITANCE:

Less Than 20 pF Per

Channel. Compatible With CD-4

CARTRIDGE

TYPE: ADC LMA-1 Low Mass, Induced Magnet

(U.S. Patent 3294405)

Electro-Optical Sensing System

High Energy Magnet Structure

OUTPUT: 3.5 mV/5.5 cm./sec

TRACKING FORCE RANGE: $\frac{3}{4}$ to 1 $\frac{1}{2}$ Grams

FREQUENCY RESPONSE: 10 Hz to 24 kHz \pm 2 dB

CHANNEL SEPARATION: 28 dB

LOAD RESISTANCE: 47K OHMS

STYLUS TIP:

Nude .0003"x.0007" Elliptical Diamond

GENERAL

POWER REQUIREMENTS:

Model 4000/EW-1 120 V.A.C. 50/60 Hz

Model 4000/EW-2 240 V.A.C. 50/60 Hz

Model 4000/EW-3 100 V.A.C. 50/60 Hz

Model 4000/EW-4 220 V.A.C. 50/60 Hz

POWER CONSUMPTION:

12 Watts

ACCESSORIES INCLUDED:

ADC TX-1 Remote Control Transmitter

with 9 V Battery

ADC SX-1 Remote Control Receiver

with Connecting Cable

Removeable Hinged Dust Cover

Wood Veneer Cabinet

45 rpm Record Spindle Adaptor

48" Dual Phono Cables

DIMENSIONS:

UNIT:

Left To Right = 470mm (18 $\frac{1}{2}$ "")

Front To Back = 441mm (17 $\frac{3}{8}$ "")

Height = 152mm (6")

All Dimensions With Dust Cover Down

CARTON:

260mm (10 $\frac{1}{4}$ "") x 530mm (20 $\frac{7}{8}$ "") x 510mm (20")

WEIGHT:

9 kg (20 lbs 4 oz) Net

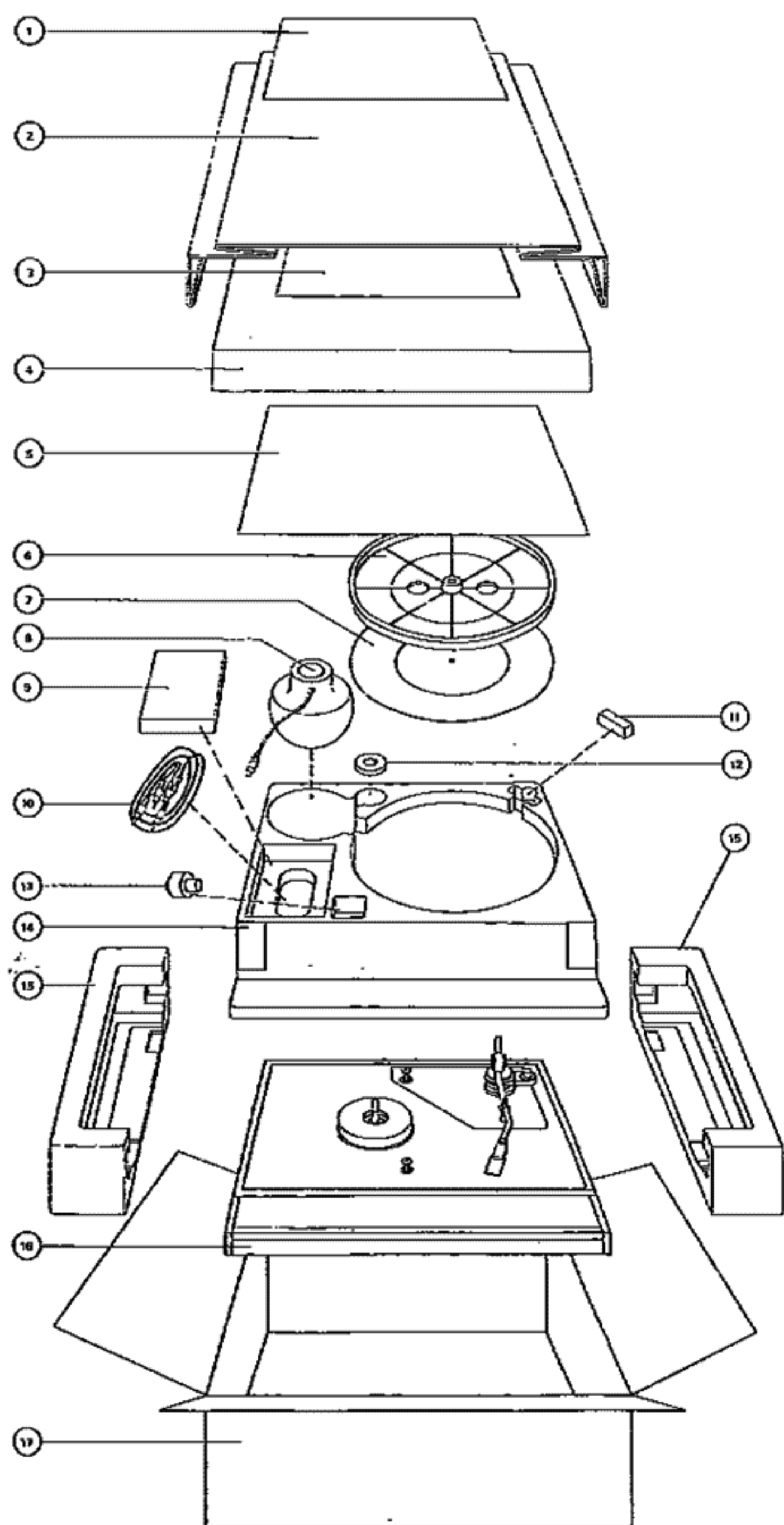
10 kg (22 lbs 8 oz) Packed

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

Unpacking

Your turntable has been carefully packed to prevent damage from shipping and handling. Carefully remove it from its carton, and remove all foam packing, tape, tie-downs, etc. Check with the diagram to make sure you have removed all necessary parts before making final disposition of the packing material. We recommend you save the carton and all packing materials, to afford your turntable maximum protection should you move or ship it in the future.

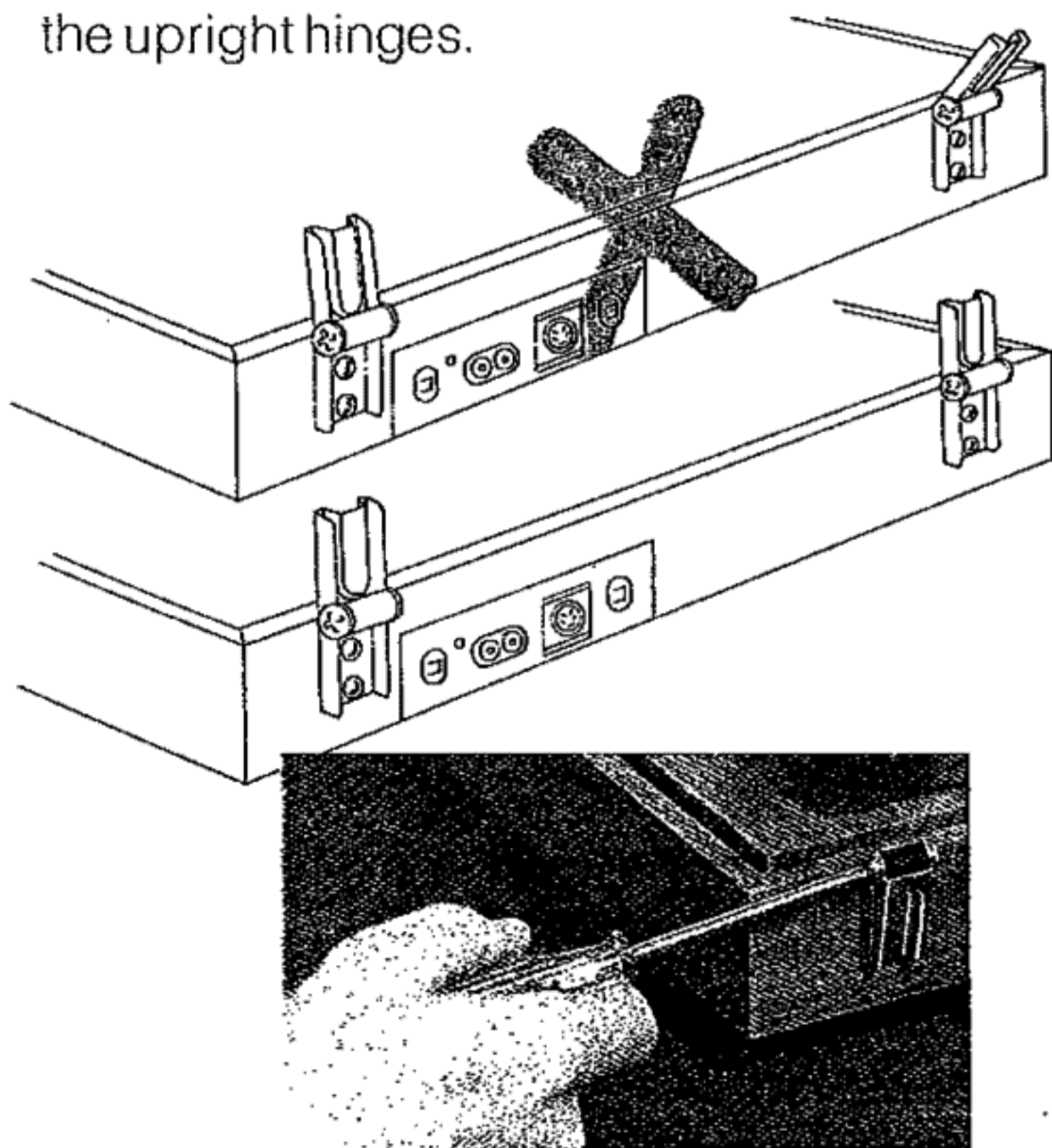
When moving your turntable from one room to another, the arm should be securely locked in its tonearm rest. (See page 12 for important packing and shipping instructions.)



1. PACKING LIST.
2. CARDBOARD SPRING PAD.
3. PLASTIC WALLET, CONTAINING:-
 - a). OWNERS MANUAL.
 - b). WARRANTY CARD.
 - c). TURNTABLE MAT CENTRE TRIM DISC.
4. HINGED DUST COVER.
5. CARDBOARD PAD.
6. TURNTABLE.
7. TURNTABLE MAT.
8. REMOTE CONTROL RECEIVER.
9. REMOTE CONTROL TRANSMITTER.
10. AUDIO CABLE.
11. REMOTE CONTROL TRANSMITTER BATTERY.
12. 45 R.P.M. RECORD ADAPTOR.
13. TONEARM COUNTERWEIGHT ASSEMBLY.
14. POLYFOAM CONTAINER.
15. POLYFOAM ENDCAP.
16. UNIT AS SUPPLIED.
17. SHIPPING CARTON.

Placement & Installation

Install the dust-cover before mounting the turntable in its location. Install it by bending up the hinges at the rear of the turntable base (you may loosen them, if need be with a Philips-head screwdriver) until both are fully upright, then slip the channels at the rear of the dust-cover over the upright hinges.



Adjust the friction of the hinge pins if necessary with a Philips-head screwdriver till the cover can be moved without undue force, but stays in position when you release it.

Your Accutrac 4000 can be installed on any level surface capable of holding its weight (a mere 9.5 kg, or 21 lbs), and not directly in front of a window or in direct sunlight. (Bright, direct sunlight can cause errors in automatic track selection; more important it can also warp your records.)

Slide open the remote-control transmitter's battery compartment cover, connect and insert the 9-volt battery.

Installation hints:

Pick a stable location: Your ADC Accutrac 4000 is well isolated against physical shock and vibration, but any turntable will perform best when mounted on a surface that does not shake in response to footsteps, slamming doors, or other vibrations. Shelves hung directly from the wall framing are usually best.

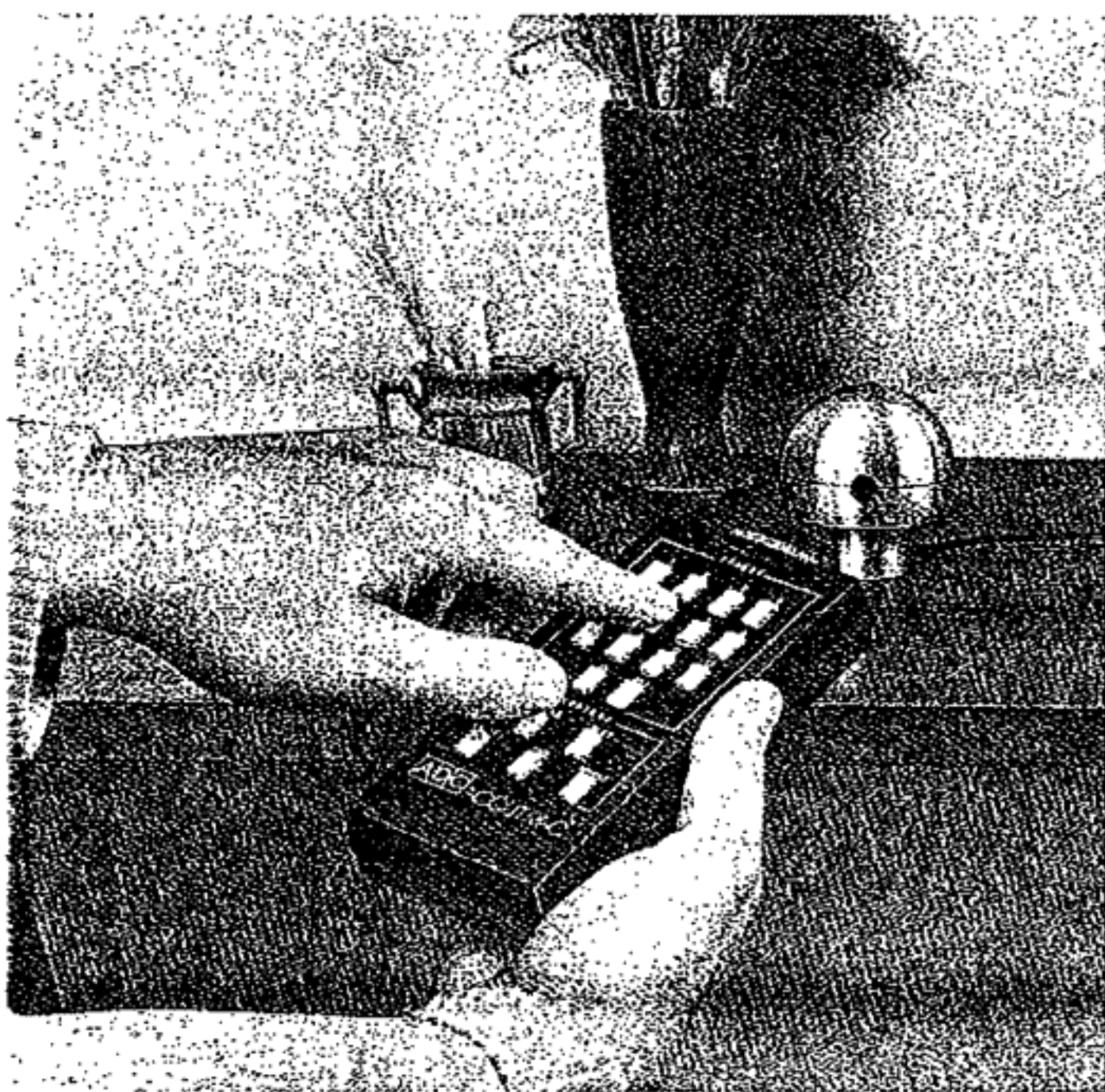
Stay away from speakers: Any turntable exposed directly to a loudspeaker's output can pick up vibrations from the speaker, adding undesired feedback to the sound you hear. To avoid this, do not mount your Accutrac directly on or directly in front of a speaker, or in any other position where the speaker's vibrations can affect it.

Avoid hum sources: Some amplifiers or other components can radiate hum fields which adjacent turntables can pick up. If you hear hum when listening to phono only, and you have checked all connections (see page 10 for trouble-shooting hints), try moving the Accutrac a little farther from the amplifier or receiver. Sometimes, it's enough to move the turntable a few inches, or to interchange its position with the amplifier's. Poor grounding (see page 5) can also cause hum.

Avoid heat: Never mount a turntable directly above a radiator or a high-powered amplifier or receiver; heat can warp records.

Remote control placement: For your convenience, all of the ADC Accutrac 4000's operating control functions are du-

plicated on the cordless remote control which you can operate from anywhere in your listening room up to about 50 feet (15 meters) from the remote-control receiver.



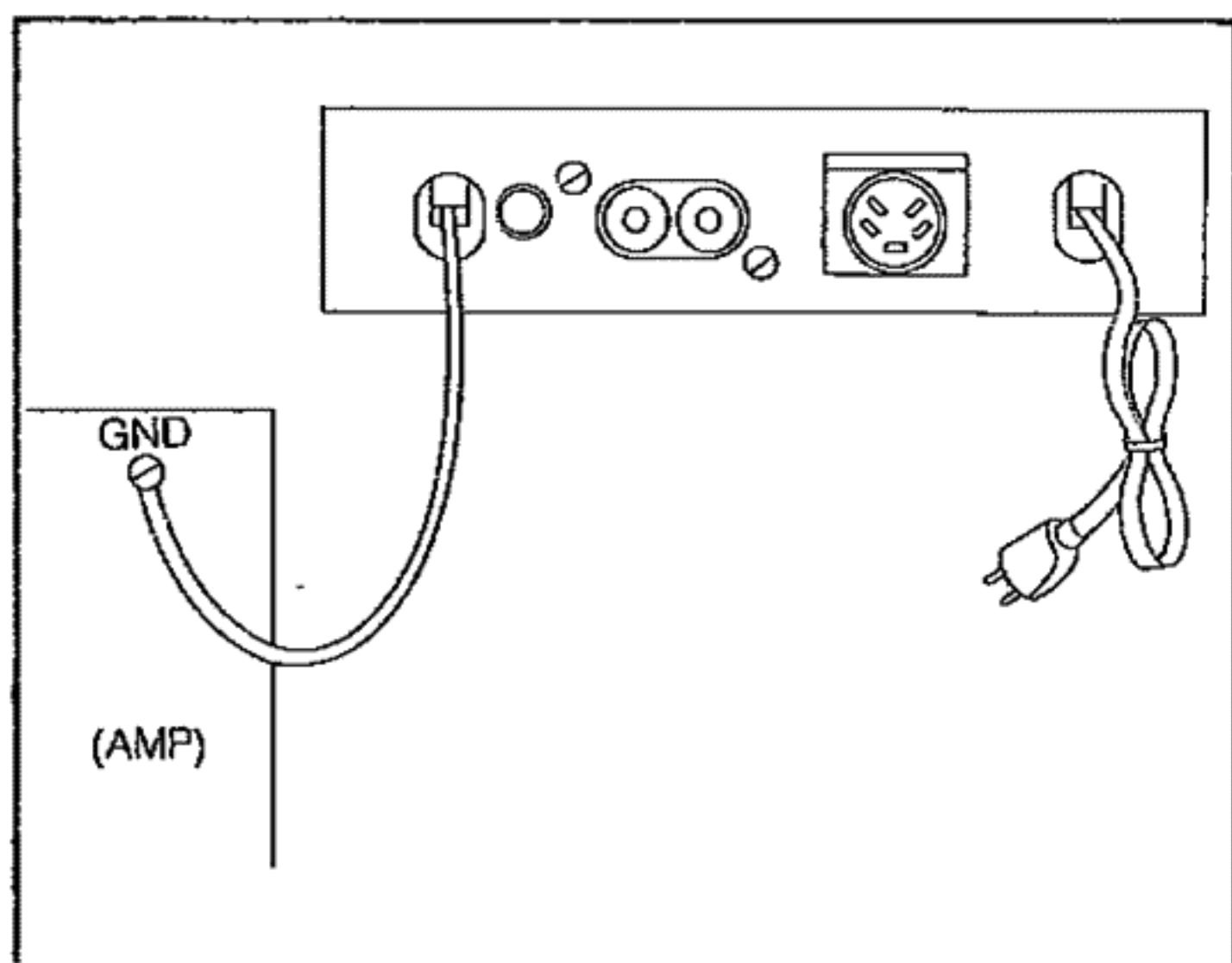
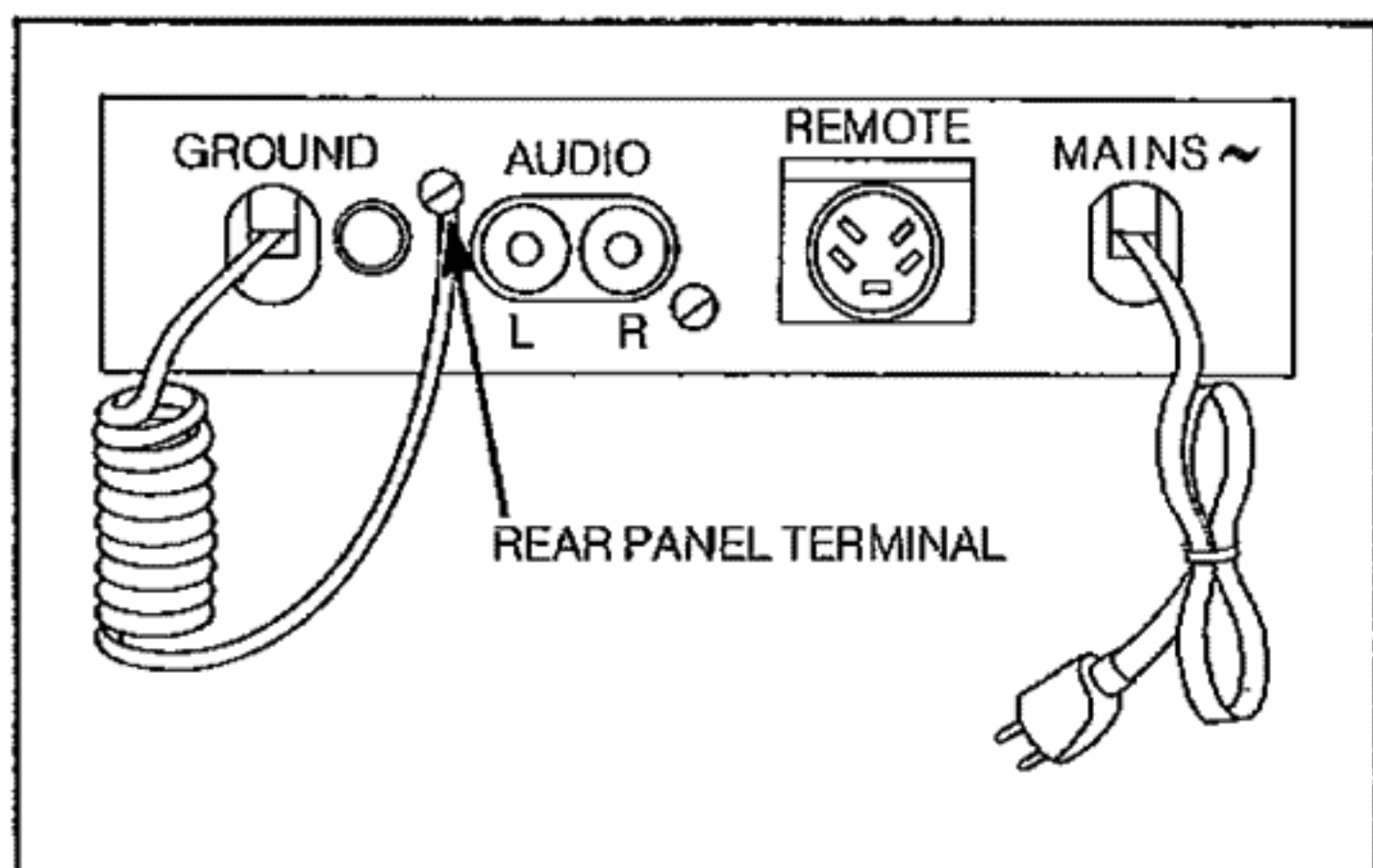
This receiver is connected to the turntable with a 12-foot (3.5 meter) cord, and should be placed where its round microphone grill can be seen from the places where you are most likely to operate the hand-held remote-control transmitter. The red light on the face of the receiver will flash to acknowledge receipt of commands from either the remote transmitter or the Accutrac's built-in control panel.

An accessory 10-foot (3 meter) extension cord is available for use between the remote receiver and the turntable. No more than one of these extensions should be used however.

Connections:

1) Plug the power cord into an AC outlet of appropriate voltage. (The voltage for which your turntable is manufactured is on a label at the rear of the turntable base. Should you move to an area where the voltage is different you will need an accessory or replacement transformer before you can use your turntable. No adjustment is required for differences in power line frequency. [50 Hz or 60 Hz.]

2) IMPORTANT: For best results the green ground wire should be unscrewed from its rear-panel terminal and connected to the "Ground" terminal or screw in the amplifier preamplifier or receiver to which your turntable will be connected. If no screw is marked "Ground" (earth), GND, or with the symbol " \perp ", attach the wire to any screw that is attached directly to the amplifier or receiver's metal chassis. Do not attach to the speaker or antenna terminal screws.



If your system's ground connection is of the push-in type, you may cut off the spade lug on the end of the ground lead, strip about 1/4" (5mm) of insulation off the end of the wire, and insert it into the ground terminal.

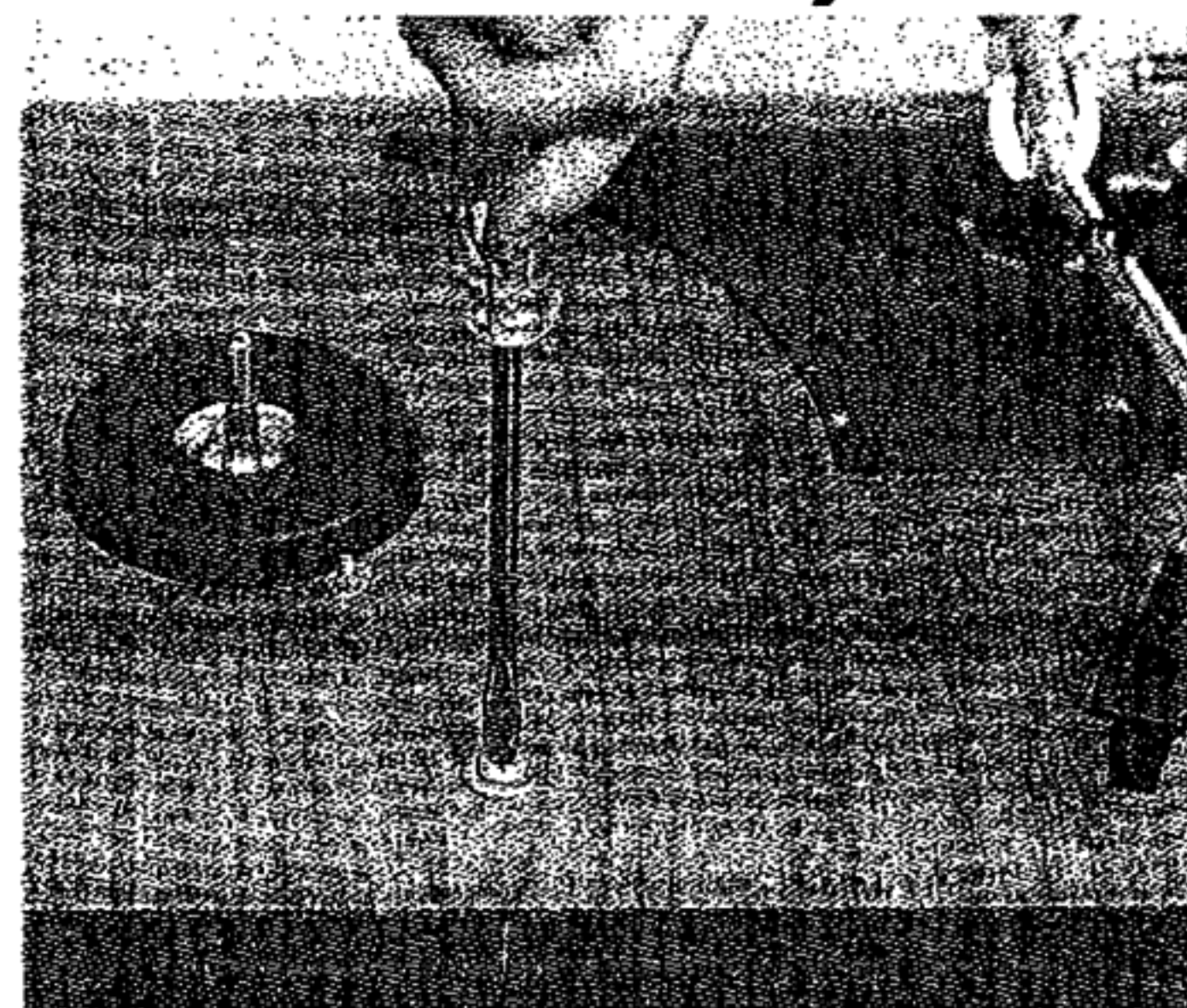
NOTE: If these instructions are not followed, both erratic control functioning and hum may result. It is especially important not to disconnect the ground wire from the Accutrac's rear panel unless you connect it to your amplifying system's ground as described above.

3) Connect the audio cables between the output jacks at the rear of the turntable base and the magnetic "PHONO" input jacks of your amplifying system. Make sure you use the same color plug for the right channel of each end of cable assembly. (Special cable assemblies for CD-4 discrete 4-channel records may be obtained from your dealer. All cable capacitances within the Accutrac 4000 are correct for CD-4.)

4) Plug the cable from the remote-control receiver into the socket next to the audio output jacks. (For more about remote-control placement and operation, see pages 4 and 9.)

Assembly:

Turntable assembly:



1) Turn the transit screws clockwise until their heads are fully down into the motor board, and the motor board floats freely on its springs.

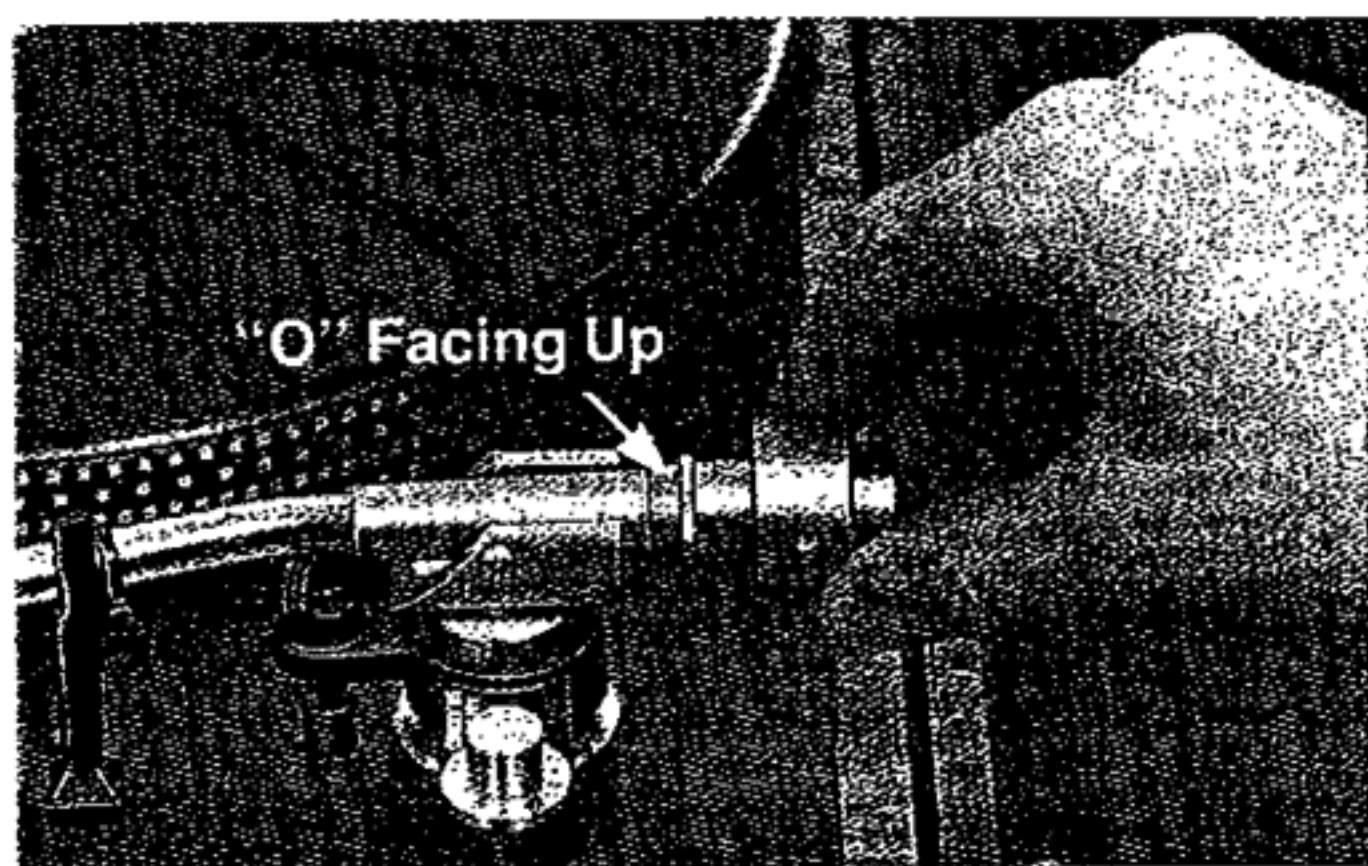
2) Place the metal turntable platter on the motor shaft.

3) Place the rubber mat on top of the turntable platter, ribbed side up, and drop the small center trim disc onto its center.

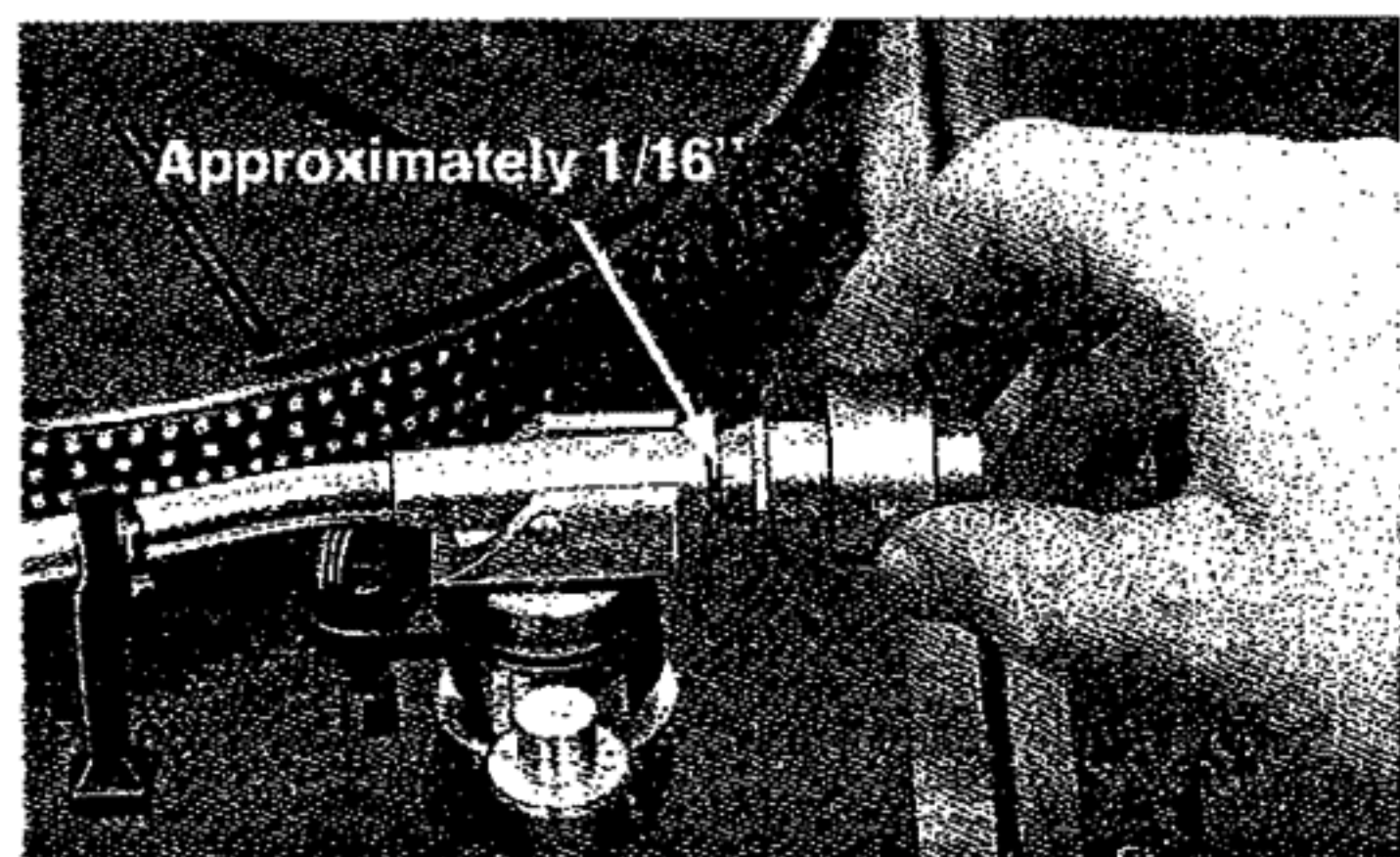
Arm assembly:

1) Remove the plastic stylus guard.

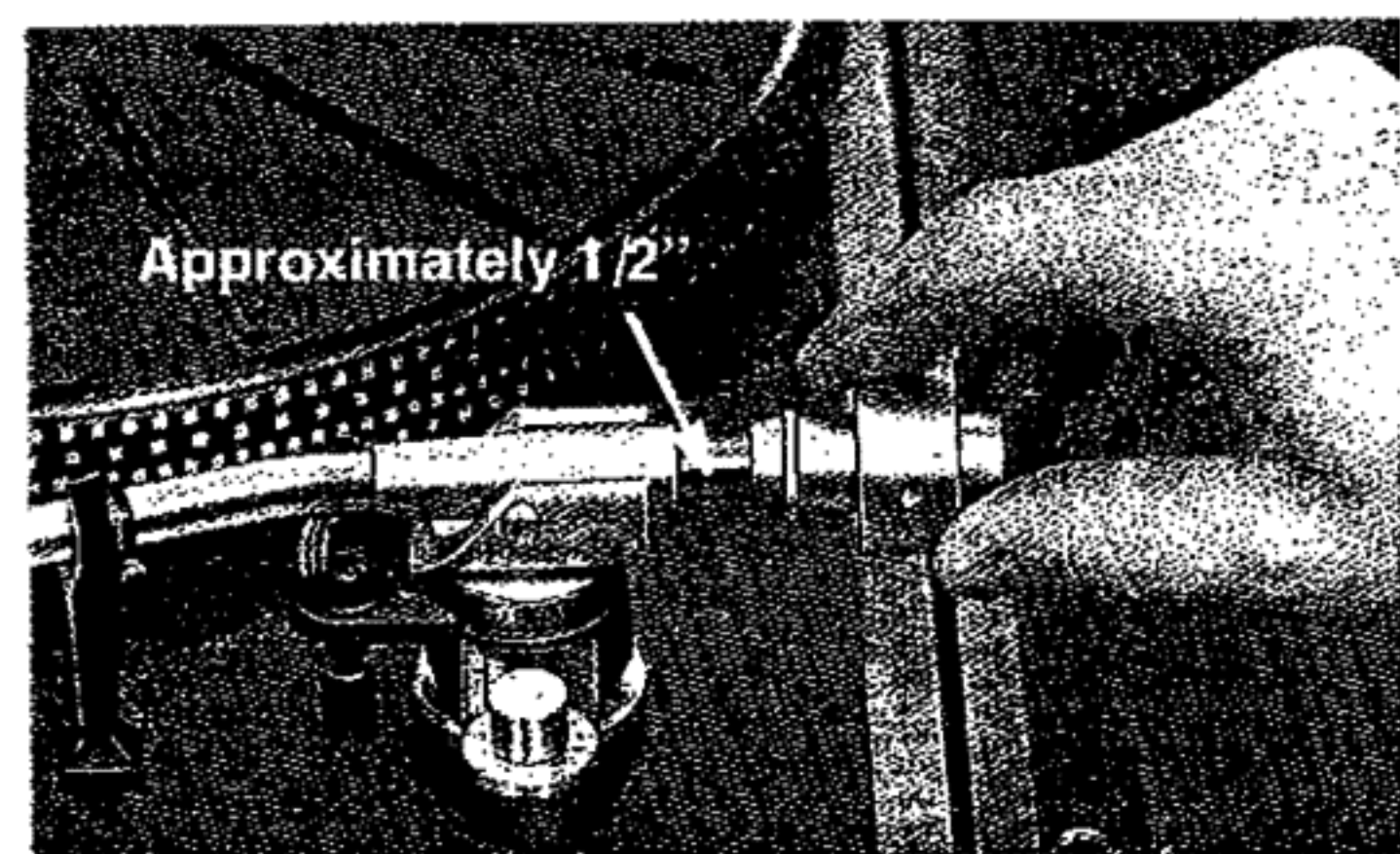
2) Turn the anti-skate knob to "0" position.



3) Holding the counterweight assembly behind the tonearm, with its calibrated scale towards the pivot housing and the "0" marking uppermost, push the assembly all the way forward onto the arm until it touches the tonearm barrel.



4) Pull the assembly back slowly until you feel a gentle click.

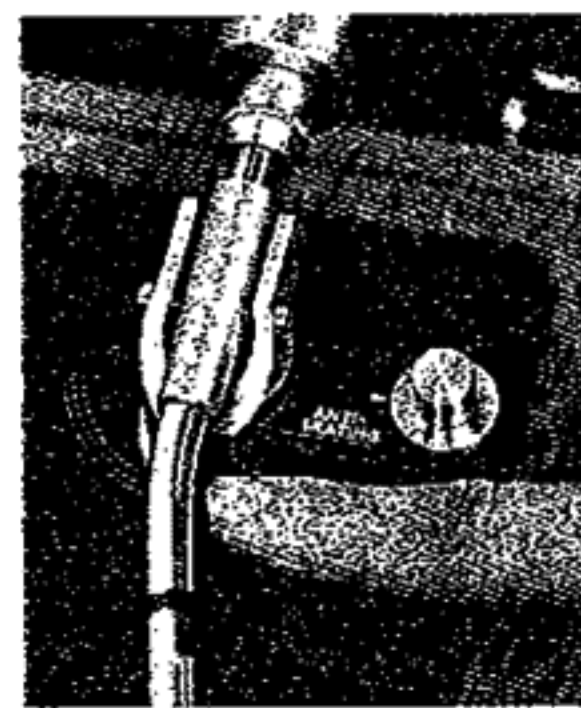


5) With the "0" still facing up, continue to pull the assembly back gently until you hear a second click.

6) Release the tonearm lock on the arm rest post.

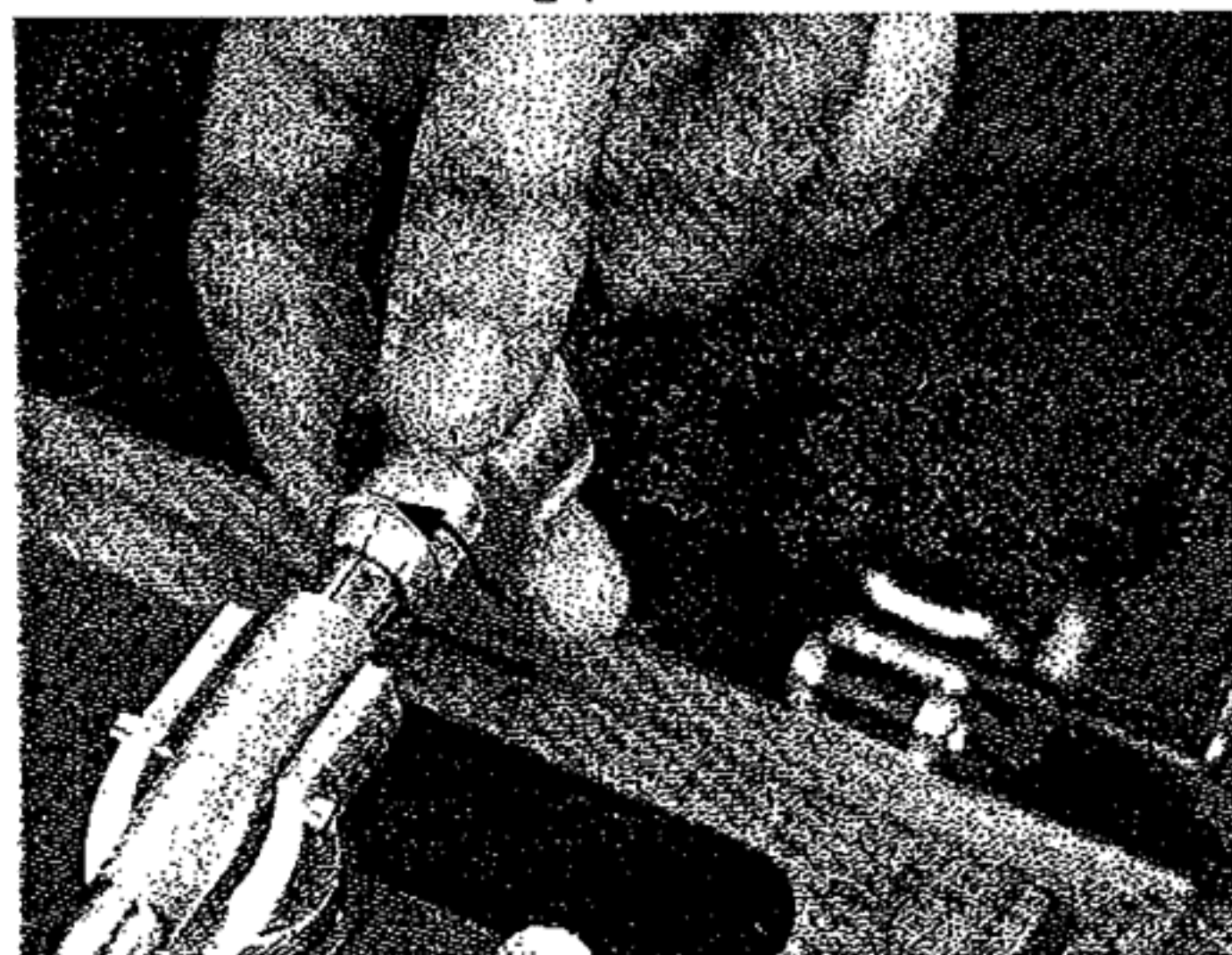
7) Move the arm from the rest post to a position approximately half way between the rest post and the turntable edge. You will feel a slight resistance during the tonearm movement. This is a normal condition, and shouldn't cause concern.

8) Fully depress and hold down the cueing platform permitting the arm to float freely. If the arm now floats level (parallel to the motor board) it is properly balanced.



NOTE: If this is not the case, proceed to step 9 and go to the trouble shooting section on page 11.

9) While holding the cueing platform in the downward position, return the tonearm to the rest post and lock. You may now release the cueing platform.



10) Rotate the counterweight until the numeral "1" matches up with the line on the tonearm. The arm is now set for a tracking force of one gram.

A note on tracking force: The recommended range of tracking forces for the ADC LMA-1 cartridge supplied with this turntable is from $\frac{3}{4}$ gram to $1\frac{1}{2}$ grams, with 1 gram recommended under most circumstances.

If you hear distortion on loud or complex record passages, you may increase tracking force, up to $1\frac{1}{2}$ grams, using the minimum tracking force that will eliminate the distortion. If distortion persists, try a fresh copy of the same recording—the original may have been damaged by a previous cartridge's mistracking, or by having been played at the wrong tracking force.

Tracking forces of less than 1 gram should be used only with great caution (this applies to all cartridges), for a stylus that

mis-tracks because too little stylus force has been applied will cause more record wear than one which is tracking accurately at a slightly higher (though still quite low) force. If distortion is heard when tracking at less than 1 gram, the tracking force should be raised at once.

11) Set the number on the anti-skating dial to "1". Should you change to another tracking force setting at any time (see "Note" above), reset the anti-skating dial to match the new tracking force setting.

12) DO NOT TOUCH the small lever emerging from the front of the cartridge shell. This controls the point at which the arm sets down at the beginning of each track, and is adjusted for you at the factory. In case of mis-adjustment, see page 11 of the "Common-Sense Trouble-Shooting" section.

Operation

Your ADC Accutrac 4000 turntable offers three modes of operation.

You may play an entire record automatically, with the arm setting itself down at the record's beginning and returning to rest at the record's end.

Or you may play it manually, setting the arm down at the beginning of the record or at any other section that interests you.

Or, you may automatically select any single track within the record, or any series of tracks, in any order, without ever touching the tonearm.

All operating functions are duplicated on the remote-control transmitter.

For automatic operation:

1) Turn the POWER switch on. The strobe-light speed indicator will light, but the turntable will not rotate.

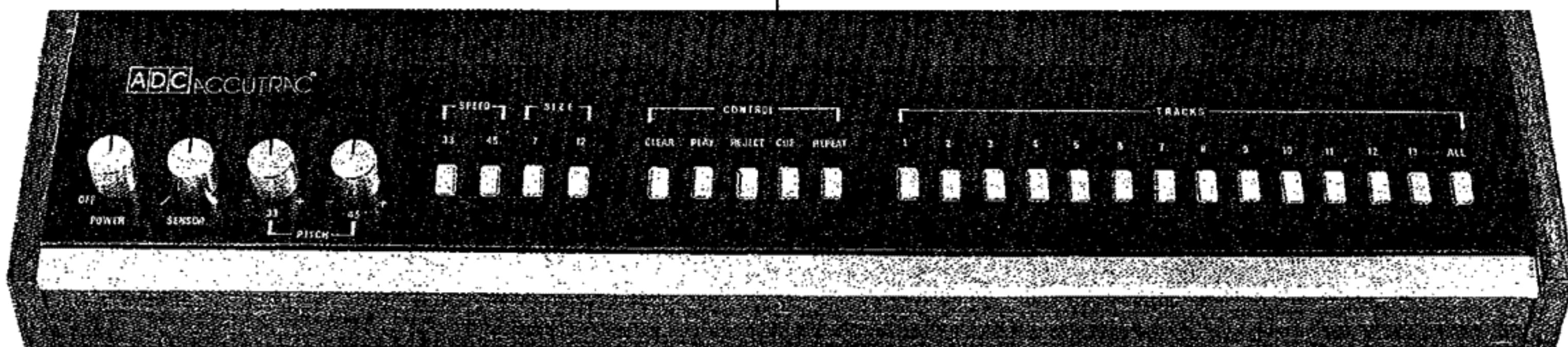
2) Put the record on the turntable and unlock the tonearm from the rest post. You may now close the dust-cover, as all controls are conveniently placed outside it.

IMPORTANT: Due to the extremely light tracking force and minute bearing frictions of your Accutrac tonearm, a dust cover which becomes highly charged with static electricity due to low humidity, cleaning or brisk rubbing may occasionally cause the tonearm to lift and touch the underside of the cover. If this condition exists please refer to the Common-Sense Trouble-Shooting section on page 11.

3) Turning the POWER switch on automatically sets the Accutrac 4000 for 12-inch (30-cm), 33-1/3 rpm. long-playing records. To play 45-rpm records of any size, push the "45" button; to play 7-inch (180-cm) records of either speed, press the "7" record-SIZE button. (For 10" records, see instructions below for manual play.)

4) To start play you must push both a TRACK-selector button and the PLAY button.

- To play the entire record, press ALL and PLAY.
- To play selected tracks of the record, press the TRACK-selector buttons corresponding to the tracks you want to hear in the order in which you want to hear them and then "PLAY". For example, if you want to hear the fourth and first tracks of a disc, in that order, push 4 and 1 and PLAY.



5) To cue or interrupt play

- **For momentary interruptions**—to answer the phone for instance—press CUE, release the button, and the arm will lift and hold above its original position. When you're ready to resume play, press CUE again, release the button, and the arm will lower to its former position on the record.

- **To prematurely terminate the selection currently playing** and move to the next program selection, press REJECT.

SPEED CALIBRATION AND CONTROL:

The ADC Accutrac 4000 has electronic speed control that keeps its speed extremely stable at precisely 33-1/3 or 45 rpm. There is also a pitch control that allows each speed to be varied individually over a 5% range, if desired.

6) To adjust pitch: Separate pitch-adjust knobs are provided for the 33-1/3 and 45-rpm speeds. Turning each knob clockwise will increase turntable speed; turning counterclockwise will decrease it.

7) To bring speed back to normal: When the turntable is revolving at precisely 33-1/3 rpm, a row of closely-spaced metal squares on the edge of the platter will appear to stand still where they pass the stroboscope illuminator. For 45 rpm, the more widely-spaced dots will stand still.

In areas where the power line frequency is 50 Hz., read the upper pair of dot lines; where the line frequency is 60 Hz., read the lower pair.

8) To add selections to a program already entered or in progress, just press the TRACKS buttons for the selections you want to hear. These selections will be added to the program memory to follow the selections you made initially. The program will hold a total of 24 commands, which allows for repeated plays of any or all tracks, if desired.

9) To repeat selections, just press the appropriate TRACKS buttons as desired up to 24 times. If you press a button twice in succession, that selection will repeat twice; press it at several different times while programming it, and the selection will occur and re-occur as the program is played.

To repeat the entire record, press ALL as many times as required.

To repeat the selection currently playing, press REPEAT. The turntable will finish the selection, repeat it, then go on to the next selection in the program.

To go back to the beginning of the selection in progress and start it over, press REPEAT, then REJECT, in that order. (Pressing REJECT first would advance the Accutrac to the next selection in the program.)

10) To stop play, return the arm to rest and clear the memory bank of any remaining programming, press CLEAR.

11) To totally shut off the turntable, press CLEAR, then turn the POWER switch off after the arm has returned to rest.

12) CONTROL button functions:

CLEAR: Returns the arm to rest, shuts off the turntable motor and erases the old program for the entry of a new one. The turntable will take about 15 seconds to coast to a stop.

PLAY: Starts the motor and prepares the turntable to begin play on receipt of TRACK command, or to play at once if commands have already been programmed.

REJECT: Interrupts play and advances the tonearm to the next programmed command. If no further commands have been programmed, the arm will return to rest and the turntable motor will shut off.

CUE: Raises and lowers the arm under direct electronic control. The same button both raises and lowers the arm, according to its position when you press the button.

Allow time for the cueing cycle to complete itself before pressing the CUE button again. When the arm is up, it is gently restricted to prevent accidental motion; pressing CUE will both lower and free it. (It can also be moved safely by hand when cued up.)

Whenever the arm is automatically returned to rest, it will be in the "up" cueing position.

REPEAT: Programs the turntable to repeat the present selection before going on to the next one in the program. REPEAT will operate even when the program memory already holds its maximum of 24 commands.

13) SENSOR: This control affects the sensitivity of the scanning system that counts the record tracks. It will rarely need resetting, and then only for records with unusual characteristics. But if the tonearm skips tracks it has been programmed for, turn the SENSOR control slowly in small increments towards the narrow (left) line; if the arm sets down in the middle of a track, turn the control toward the thick (right) line. For normal records, leave the control at the center (vertical) line.

14) NOTES:

- All CONTROL buttons except CLEAR and REJECT will start the turntable rotating; however, it is still necessary to press both PLAY and at least one TRACKS button to begin automatic play.
- In automatic operation, the arm will pause before descending, in order to gauge the record's eccentricity and determine exactly the right point at which to enter the groove.
- If programmed to skip tracks, or to play them in any sequence other than the one in which they appear on the record, the arm will return to rest before going on to the next selection.
- If you program in a non-existent track (for example, track 6 on a 5-track record), the arm will search for the track, then go on to the next programmed track. If no program remains, the arm will return to rest and the turntable will shut off.

Manual Operation:

There are two ways to operate the ADC Accutrac 4000 as a manual turntable. Both start with your turning the POWER switch on and setting the record's size and speed.

Method 1: Using the finger lift, move the arm (the mild resistance you feel is normal) till it's over the point where you wish to begin play. You may now close the dust cover, and push CUE to lower the arm onto the record.

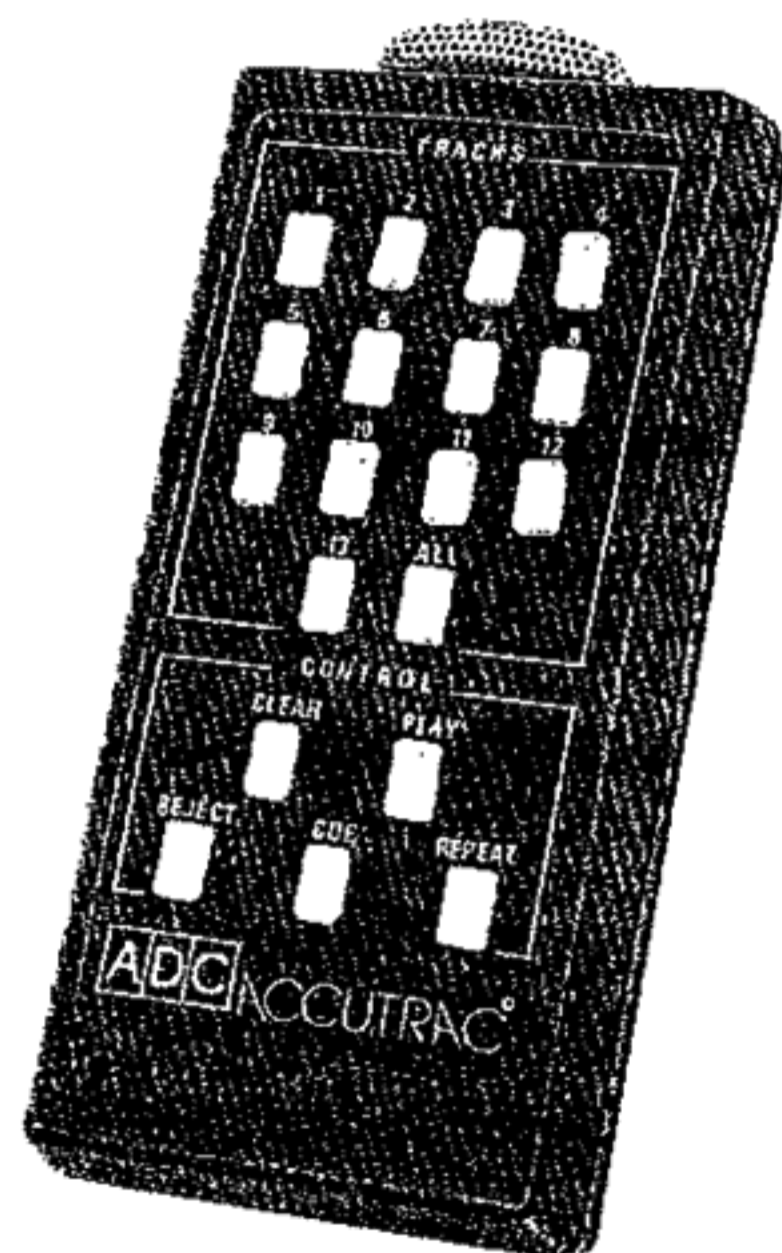
Method 2: Press CUE to free the arm and start the turntable, then move the arm by the finger lift and set it down directly on the moving record.

To shut off the turntable motor: push CLEAR or REJECT. (If you wait until the record ends, the turntable motor will also shut off automatically, and the arm will return to rest.)

If further play is not desired, do not forget to turn off the POWER switch after the arm has returned to rest.

Remote-Control Operation

All front-panel CONTROL and TRACKS buttons are duplicated on the remote transmitter. To operate your Accutrac 4000 by remote control, simply aim your hand-held transmitter at the remote-control receiver, and press the appropriate control keys on the transmitter. The receiver will acknowledge all control impulses reaching it, by flashing the small red light just below its microphone window. At this point, you may release the button. (The light will also flash when commands are directly entered at the Accutrac keyboard).



Common-Sense Trouble-Shooting:

Most problems with most devices, the Accutrac included, are due to either loss of power (the plug accidentally pulled out of the socket, or plugged into a socket to which power has been shut off) or operating with the wrong control settings. So before trying any of the specific hints below, re-check:

- **POWER:** Is the plug in, the outlet live and the switch on? (If the strobe illuminator lights, power is reaching the unit.)

- **CONNECTIONS:** Are ground and the audio cables connected to the hi-fi system properly, is the system switched to its PHONO input and is its Tape Monitor switch in SOURCE position?

- **CONTROLS:** From left to right, is POWER on, SENSOR control centered, correct SPEED and SIZE buttons pressed? then press CLEAR, PLAY and TRACKS buttons.

If after the above, you still have a problem, try the following:

Problems/Causes & Cures

1) ARM SETS DOWN IN WRONG PLACE.

Major errors: Press appropriate record-size button ("12" for 12-inch records, "7" for 7-inch; 10-inch records must be played manually.)

Minor errors:

a. Errors occurring on *some records only* due to non-standard disc characteristics can be compensated for with the SENSOR control: If the arm skips some programmed tracks, turn the SENSOR control counterclockwise, towards the thin line.

If the arm sets down in the middle of some tracks (usually in heavily-modulated areas, where the grooves look rough and gray), turn the control clockwise, towards the wide line.

b. Small errors occurring on all records are usually due to misadjustment of the stylus positioning lever on the front of the

tonearm. If the arm goes too far *in*, missing the first few notes of the track, move the lever carefully *out* (away from the turntable platter) and try again. If the arm goes too far *out*, catching the last few notes of the preceding track, carefully move the lever *in*, towards the turntable.

The arm set-down position will usually change less than the amount you move the lever.

c. A build-up of dust or lint on the Accutrac's stylus can impair the vision of the electro-optical sensing system. If this occurs, gently clean the stylus by blowing on it or brushing it lightly with a fine-hair brush.

2) REMOTE CONTROL DOES NOT OPERATE.

If the receiver acknowledgement light does not go on when commands are entered at the keyboard, check connections between the receiver and the Accutrac turntable. If the light goes on for keyboard commands, but not for remote commands, be sure you're aiming at the receiver, check the battery connections or replace the 9-volt battery in the transmitter.

3) ERRATIC TRACK SELECTION.

Check the ground wire connection between the Accutrac and your amplifier or receiver. (For grounding instructions, see page 5.)

4) HUM

If hum only occurs when your amplifier is set to the PHONO input to which the Accutrac is connected, then check:

The ground wire: is it connected between turntable and amplifier?

The audio cables: Are they pushed fully into their jacks at both the amplifier and turntable ends? Are their shields broken? (If the hum appears and disappears as you wiggle the cable, this is probably the cause; replace such cables.)

Acoustic feedback: If the hum only occurs when the arm is actually on the record, or disappears when you shut your

speakers off and listen through headphones, this may be the case. If so, relocate the turntable or the nearest speaker.

Rare causes: Look behind the cartridge to see that all its connections are intact. If all else fails, try disconnecting the green ground wire from the amplifier. Hum will probably increase, but may decrease if there is a ground loop in your system. If so, re-connect the ground lead to the back of the Accutrac.

5) PROBLEM RECORDS

The vast majority of records present no problem to the Accutrac. However, a small minority of non-standard discs will cause the following problems:

Arm sets down only on first track, but not on others.

Transparent or light-colored discs cannot always be accurately read by the Accutrac sensor, causing this problem. It can also happen with some discs which appear a normal black, which are actually somewhat transparent. If this rare problem occurs with a disc which appears black, hold it in front of a bright incandescent (not fluorescent) light. If you can see light through the disc, even dimly, this is the cause of the problems. Such records can still be played, by depressing the All button or manually.

Arm sets down one track further in than desired.

Occasionally, records are pressed with a too long and tapered rim. On such records, the Accutrac sensor may "see" the first band as a continuation of the rim (which, in a sense, it is) and only start counting with the second track. (This may occur on one or both sides of the record). If you have any such records, simply add 1 to every track selection command when playing them (for example, press "3" when you want track 2). Or you may also press the All button and play the entire selection.

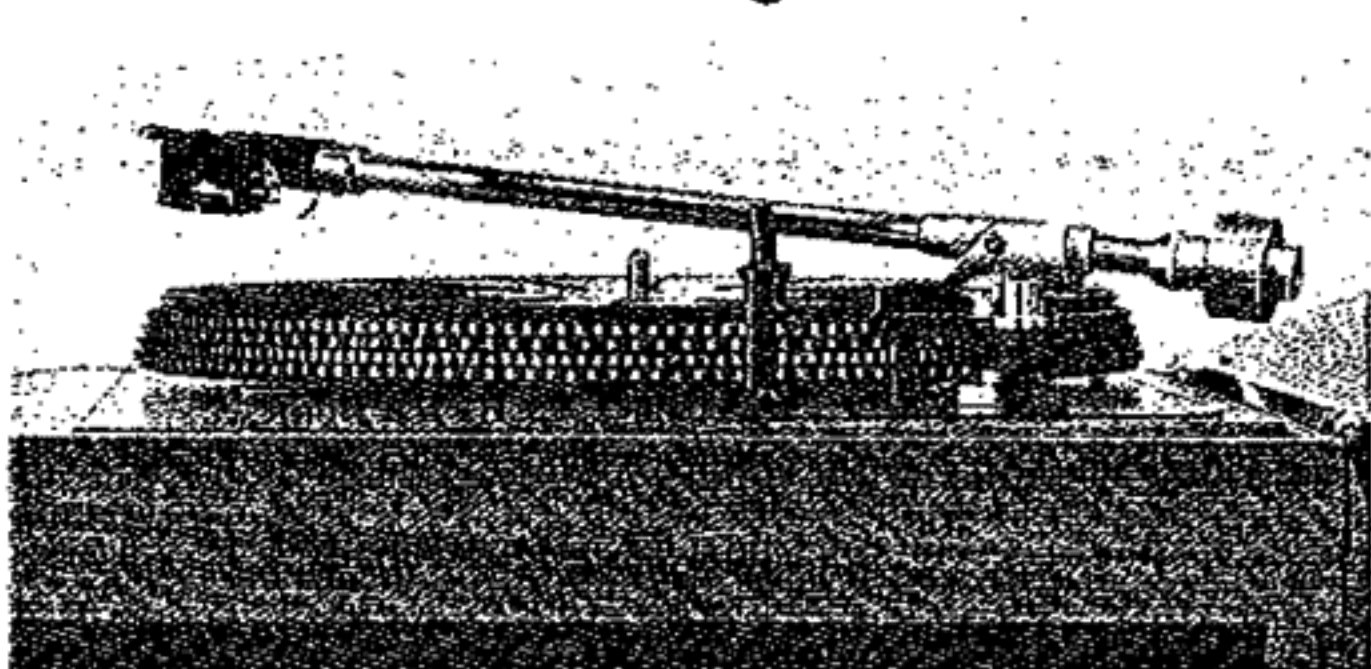
6) DUST COVER CHARGED WITH STATIC ELECTRICITY

To remove the static charge, simply wipe the entire dust cover lightly with a damp

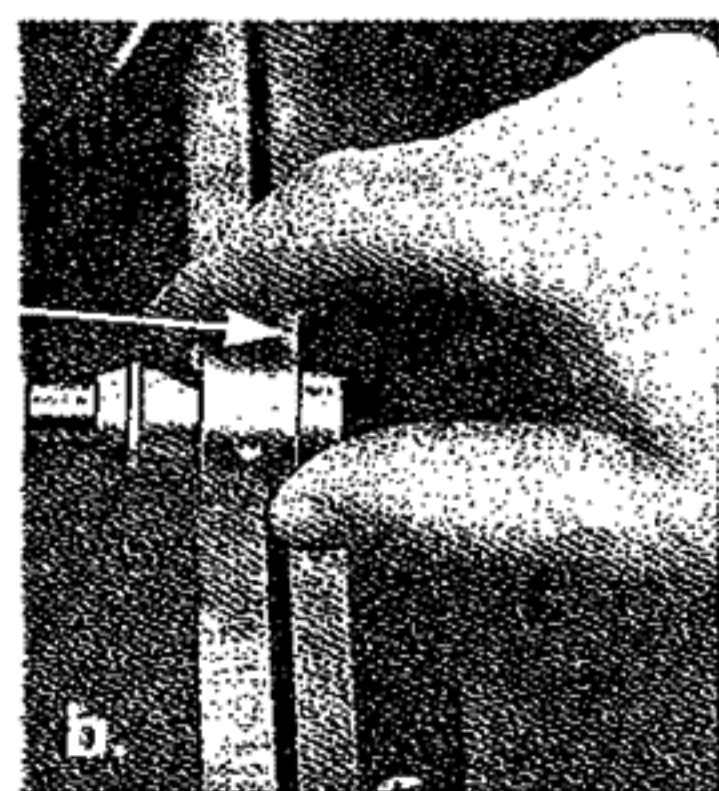
cloth. If the problem persists, remove the dust cover from the unit and wash it in a mild solution of ordinary automatic dishwasher detergent and water, e.g. Joy.

7) TONEARM BALANCING PROBLEMS

Tonearm head too high:

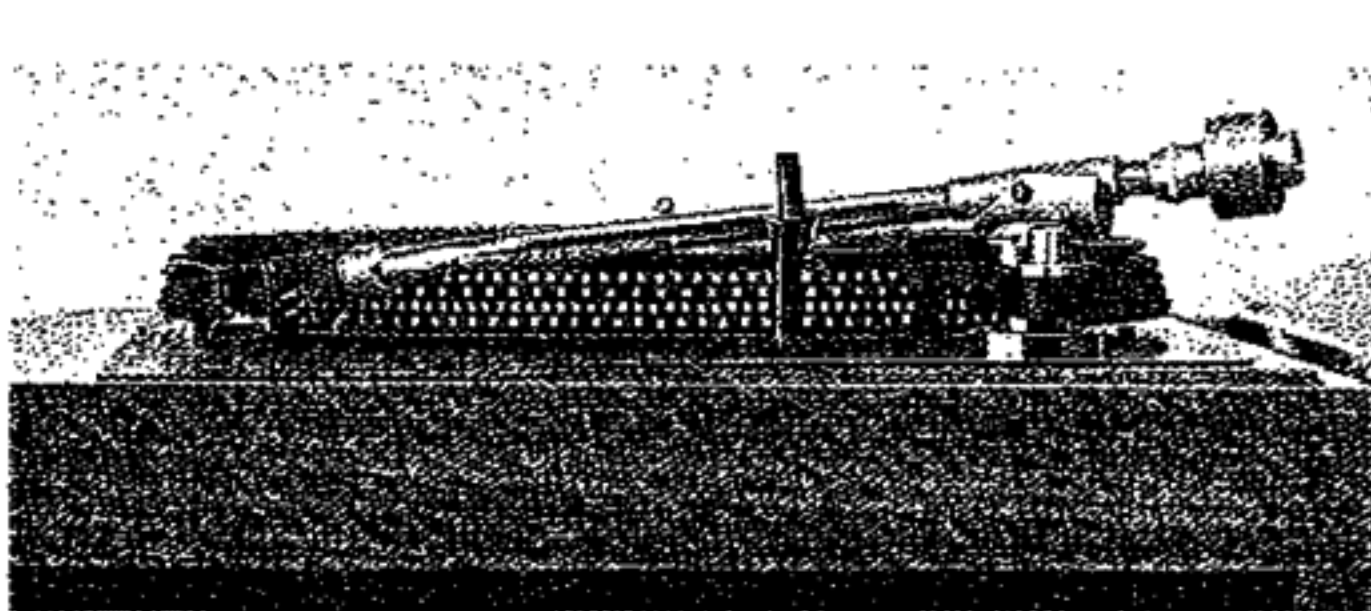


a. Be sure that you have moved the counterweight assembly to the proper detent position. Recheck steps 3,4 and 5 under Arm Assembly.



b. The counterweight is too far back on the counterweight sleeve. Loosen the small screw on the counterweight and move the counterweight very slowly a hairs breadth *toward* the pivot housing. Carefully tighten the counterweight screw and repeat steps 6,7, and 8 under Arm Assembly.

Tonearm head too low:



a. Be sure you have moved the counterweight assembly to the proper detent position. Recheck steps 3,4 and 5 under Arm Assembly.

b. The counterweight is too far forward on the counterweight sleeve. Loosen the small screw on the counterweight and move the counterweight very slowly a hairs breadth *away* from the pivot

housing. Carefully tighten the counterweight screw and repeat steps 6, 7 and 8 under Arm Assembly.

If all of the above steps fail, carefully repack the unit with all accessories and return it to your franchised Accutrac dealer where you purchased it, for servicing.

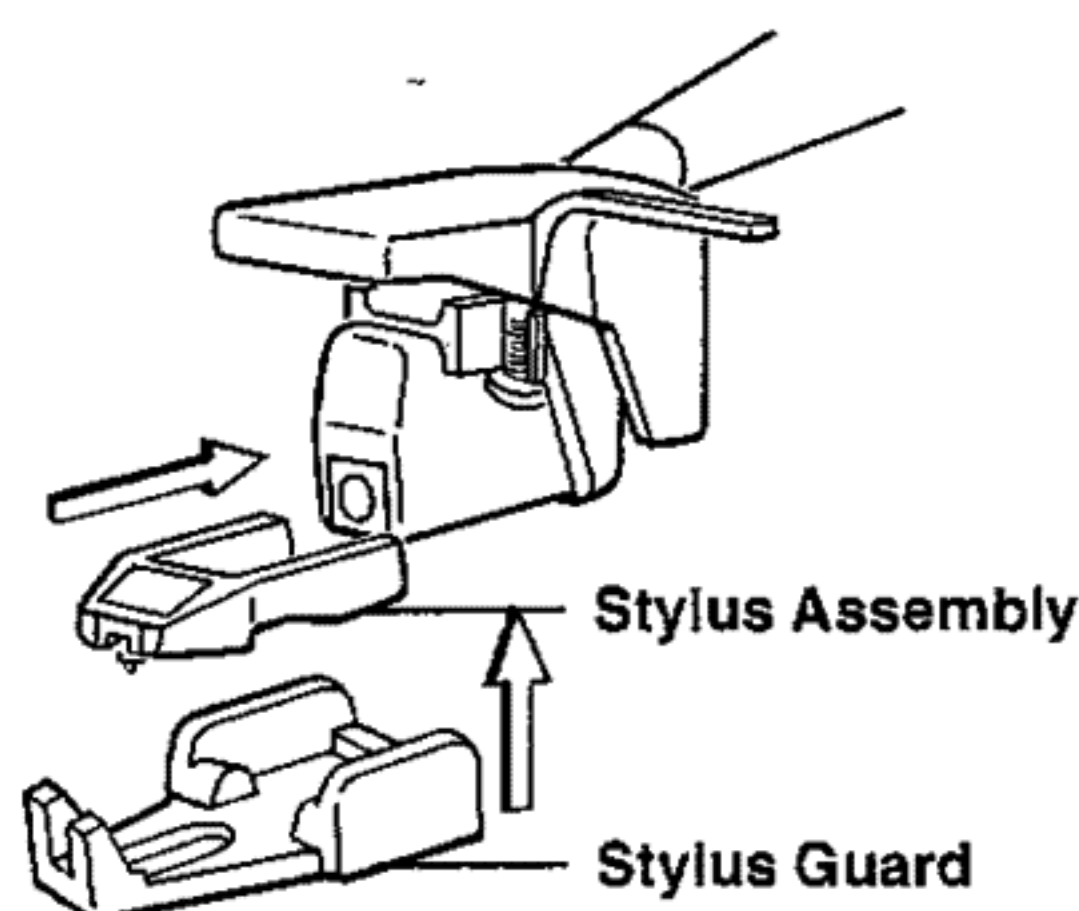
Repacking

When moving or shipping your Accutrac turntable, it is **IMPORTANT** that you do the following to prevent damage:

- Lock the arm in its rest, and tape or tie it in place.
- Put the plastic stylus guard back on the bottom of the cartridge.
- Remove the turntable platter and mat.
- Remove the counterweight assembly.
- Turn the transit screws (page 5) counterclockwise, until they are tight and the turntable motor board no longer floats freely.
- If you need to return your Accutrac turntable for service or any other reason, be sure to include *all* its parts and accessories, including both the remote-control receiver *and* transmitter.

Warning: To prevent fire or shock hazard, do not expose this appliance to rain or moisture.

Stylus Installation



The Stylus Assembly for this ADC Stereo Cartridge is designed to lock into proper position when slid onto cartridge body in the manner illustrated.

It is further suggested that careful installation and removal of the Stylus Assembly be accomplished while protected by the Stylus guard.

ADC Replacement Styli

ADC cartridges are quality constructed to last for the life of your record player under normal playing conditions.

The only part that may need replacement is the stylus which comes in contact with the record and in time will show signs of wear. This will affect the sound quality and could damage the record grooves and should be replaced promptly.

AccutracTM4000



AUDIO DYNAMICS CORPORATION
A BSR COMPANY
PICKETT DISTRICT ROAD
NEW MILFORD, CONN. 06776, U.S.A.

All specifications and features subject to change without notice.

Printed in U.S.A. MD 11853