



# MULTIPLE PLAY MANUAL TURNTABLES

## SERVICE BULLETIN

TO: ALL B·I·C TURNTABLE DEALERS AND  
AUTHORIZED SERVICE STATIONS

FROM: B·I·C TURNTABLE SERVICE DEPT.

SUBJECT: NEW CARTRIDGE MOUNTING SCREWS-ALL MODELS

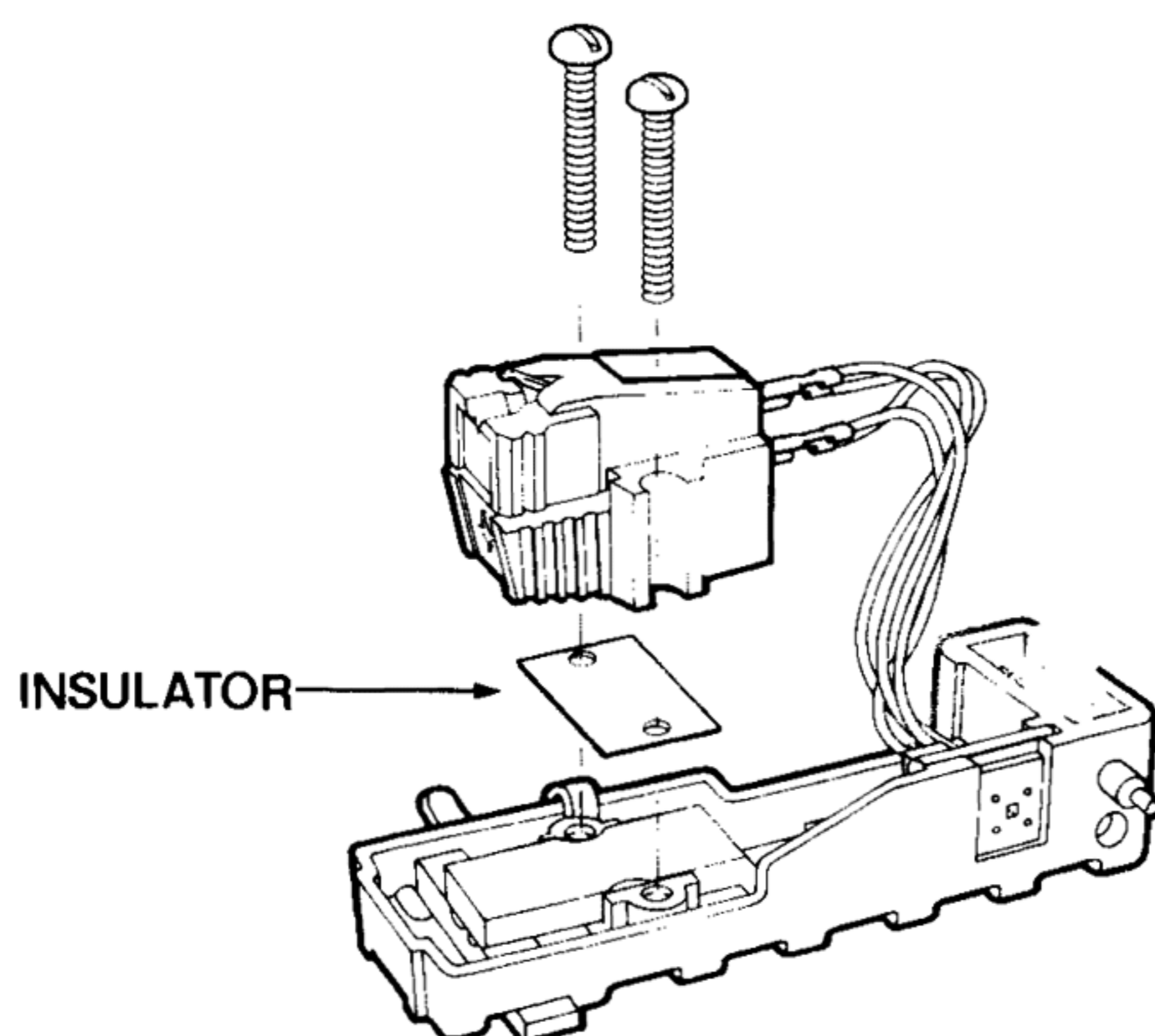
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In a previous mailing, you were advised that all B·I·C units are supplied with shielded pickup heads and you were also advised that when a cartridge with metal mounting feet was installed, the ground strap supplied on the cartridge would have to be removed.

We have been receiving complaints from consumers and dealers about hum and in almost all instances, this has been attributed to the ground strap not being removed, as specified in our instructions. To further compound this problem, certain cartridges now have internal grounding and the ground strap is impossible to remove.

To eliminate this problem, and at the same time, retain the advantages of a shielded pickup head, we have changed our cartridge mounting hardware. Instead of metal screws, B·I·C units will shortly be supplied with nylon screws (non-conductive). Nylon screws are also lower in mass, thus further reducing the tonearm mass of B·I·C units.

We will also supply a non-conductive spacer which must be used between the cartridge and the cartridge mounting plate in order to isolate the cartridge from the mounting bracket (see diagram). If the cartridge is mounted, using the isolation strip and nylon screws, the possibility of ground loops will be completely eliminated.



**IMPORTANT:** This change will only be possible as nylon screws and insulators become available from our vendor. We do not, as yet, have these in stock and, therefore, if you request these items, they will be placed on back order and shipped when available.



# BELT DRIVE PROGRAMMED TURNTABLES

## SERVICE BULLETIN

IMPORTANT -- URGENT

TO: ALL B·I·C TURNTABLE DEALERS

FROM: B·I·C TURNTABLE SERVICE DEPT.

SUBJECT: PROGRAMMER SKIPPING FROM ONE TO OFF POSITION

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To further improve the reliability and feel of the programmer, the programmer cam plate shown on the attached diagram was changed to a Lexan material commencing on Date Code 7603 (third week of January). It was determined on Date Code 7605 (fifth week of 1976) that the properties of Lexan could contribute to the programmer skipping from One to "Off" position. This is due primarily to the difference in co-efficient of friction between the old part and the Lexan part.

This condition was not picked up on the production line due to the fact that there is an aging process with the new programmer plate and the co-efficient friction did not change until after the units left the Factory.

Commencing Date Code 7606, the Lexan programmer plate was modified to insure total reliability. If you encounter a unit that skips from One to "Off" position, please follow the detailed instructions on the attached sheet and the problem will be totally eliminated.

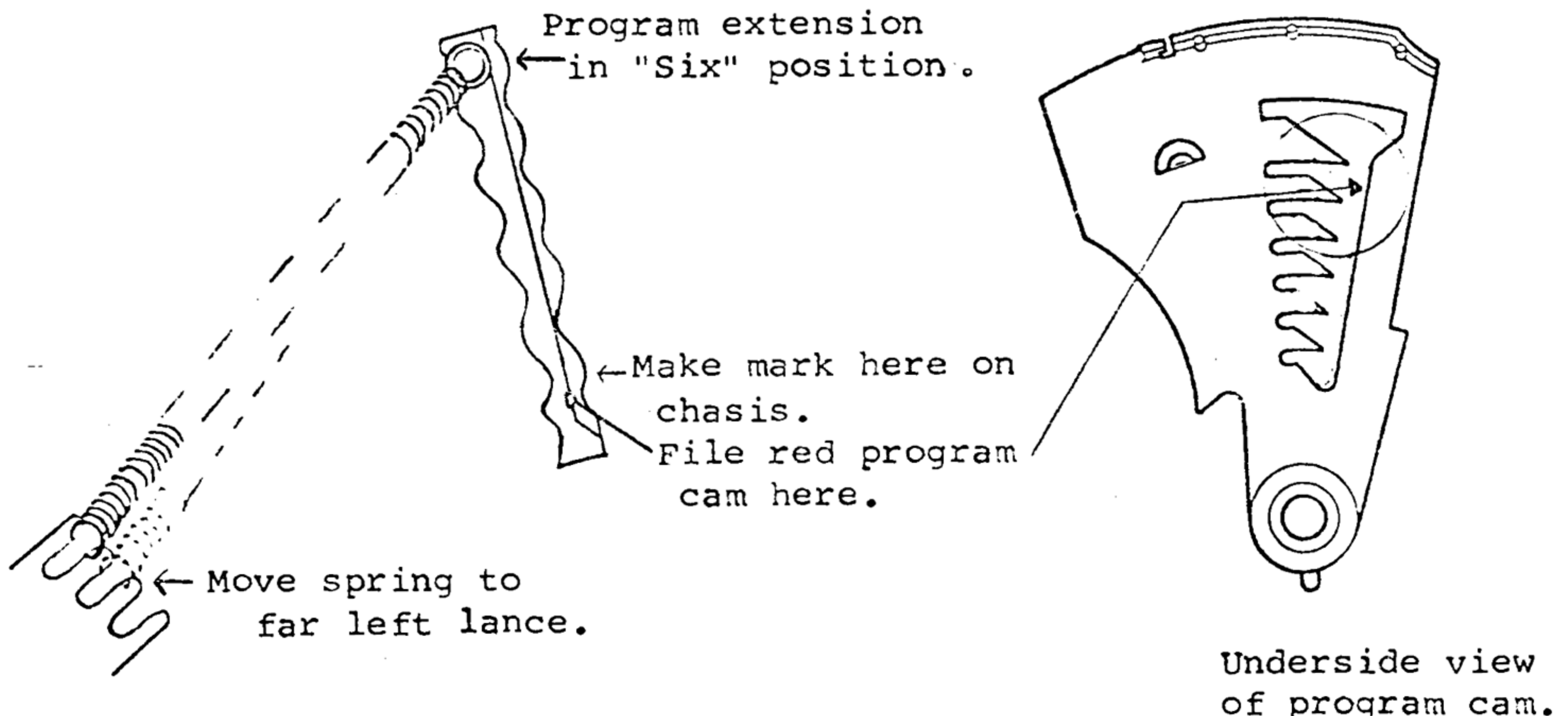
We regret the inconvenience this matter will cause but we assure you that the field cure described on the attached will totally eliminate this problem and there will be no need for you to return units to the Factory. If necessary, contact your local sales representative who will direct you to an authorized service station in your area.



# BELT DRIVE PROGRAMMED TURNTABLES

## SERVICE BULLETIN

1. Remove platter.
2. Place program selector in the "One" position.
3. The white program extension extends up through the unit plate. Mark the area where this extension is resting against the red program cam.
4. Move the program selector up to the "Six" position.
5. Using a small file or emery board, rough up the red program cam on the inside edge in the area of the mark. You should be filing straight up and down through the unit plate. See diagram.
6. Move the program spring to the far left tooth notched into the unit plate. See diagram.
7. Replace platter.





# MULTIPLE PLAY MANUAL TURNTABLES

## SERVICE BULLETIN

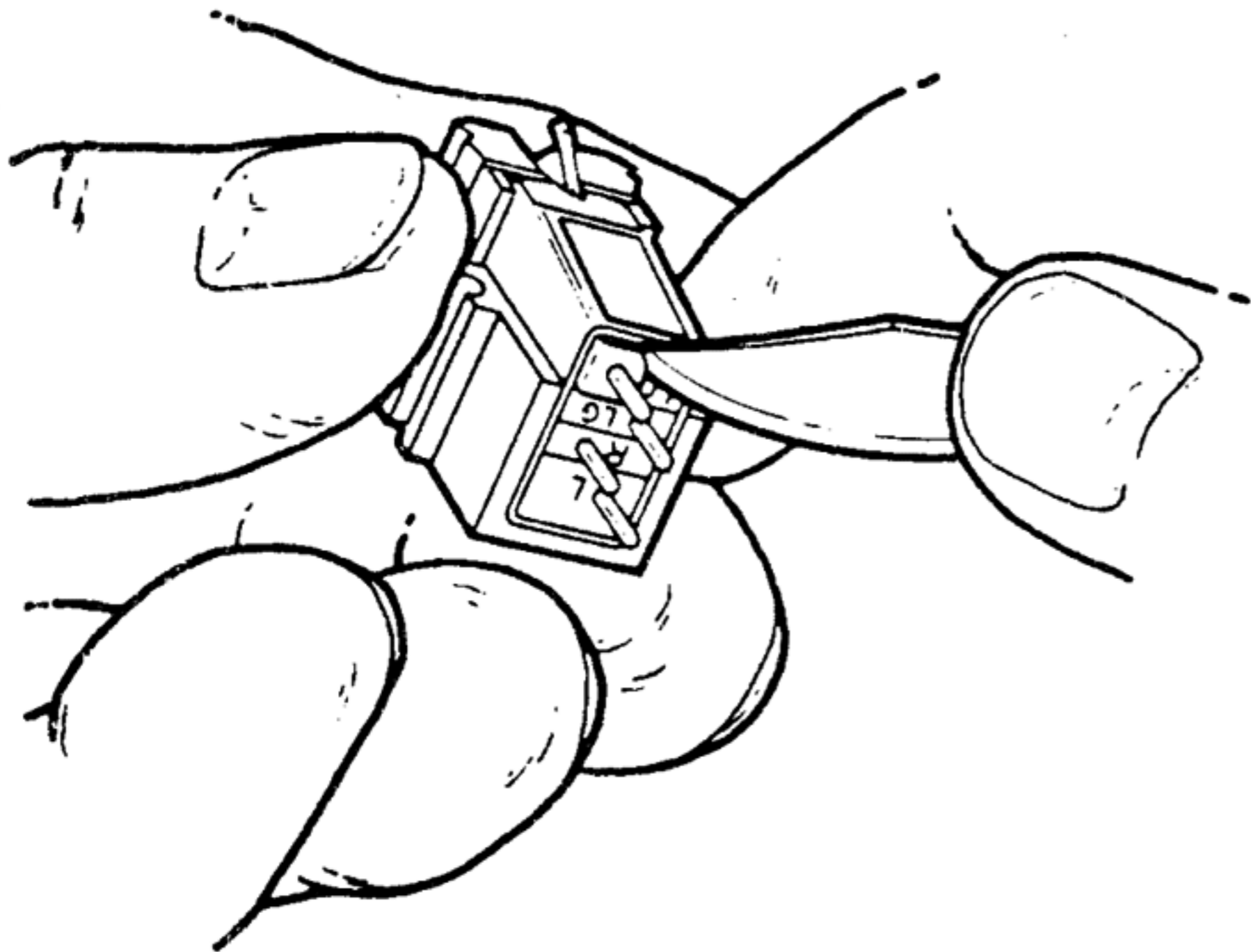
To: All B·I·C Turntable Dealers

Subject: Cartridge Ground Straps

In the interest of continued product development B·I·C 960's and 980's manufactured after EIA code 43 have been equipped with grounded, shielded head shells. The B·I·C 940 has always been fitted with a shielded head shell.

This "shielded shell" eliminates the possibility of inducing hum in the system when moving the arm by the fingerlift, or bringing a hand near the front of the tonearm.

When units with grounded, shielded head shells are used with cartridges that have metal bodies and mounting feet, the small metal "grounding" strap must be removed to eliminate the formation of ground loops which can cause hum through the system.



Remove the ground strap on:

All Pickering's except snap-in mounts

All Stantons

Empire 2000 series D-1 thru D-3

Empire 4000 series E-1 thru E-3

Empire/Atlantis models

On cartridges with plastic bodies and mounting feet this strap can remain for best hum shielding.

These are:

All Shure models except snap-in type

All ADC models

Some Audio Technica models (no ground strap)

Some cartridges have metal bodies and mounting feet; but no ground strap -

Audio Technica AT15 SA

AT20 SLA

All Ortofon models

Refer to the cartridge manufacturer's instructions concerning these units, or any cartridge models not covered above.



# BELT DRIVE PROGRAMMED TURNTABLES

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\* AMENDMENT TO SERVICE MANUAL \*

### SYMPTOM:

1. Tonearm moves to the right when cueing or just before landing on record in automatic.
2. Stylus pops two or three times when landing on record.

### CAUSE:

1. Initial 15 degree tracking angle adjustment not properly set.
2. Brake pin releasing too soon or too late.

### CORRECTION:

1. Using the setting gauge supplied with each unit, recalibrate the tracking angle adjustment. (Listed under "Cartridge Angle Adjustment" in the Owner's Manual.)
2. Adjust brake pin.

All B·I·C units contain a brake pin, which eliminates drift when cueing or during automatic play. To insure maximum performance, this pin is factory set. In certain cases, however, depending upon the type cartridge installed, it may be necessary to re-adjust the brake pin. We are enclosing a special wrench (Tool #101) which is used for adjusting the cueing brake pin. The adjustment should be performed as follows:

1. Set the anti-skating control to two (2) grams and the stylus pressure to one (1) gram. This will exert additional anti-skating force to the right and allow for a closer observation of when the brake pin releases.
2. Lift the tonearm, using the cueing device, and move the tonearm so that it is 1/2" to the right edge of the platter. Lower the tonearm and observe the point at which the stylus moves to the right. It should move to the right when the stylus has descended below the top surface of the turntable mat, but not later than the bottom surface of the turntable mat.

If the tonearm moves to the right too soon, place either end of the wrench on the two flats at the top of the lift pin (ref. #132 on the 980 Blownup Diagram). The lift pin is the silver colored pin that lifts the tonearm gimbal during automatic play and when cueing.

3. Turn the lift pin in a clockwise direction if the cueing brake pin releases too soon and counter-clockwise if it releases too late. After performing this adjustment, it may be necessary to re-adjust the pickup height as shown in the Owner's Manual under the heading of "Tonearm Height". Also, re-adjust stylus pressure and anti-skating to conform to the cartridge manufacturer's specifications.

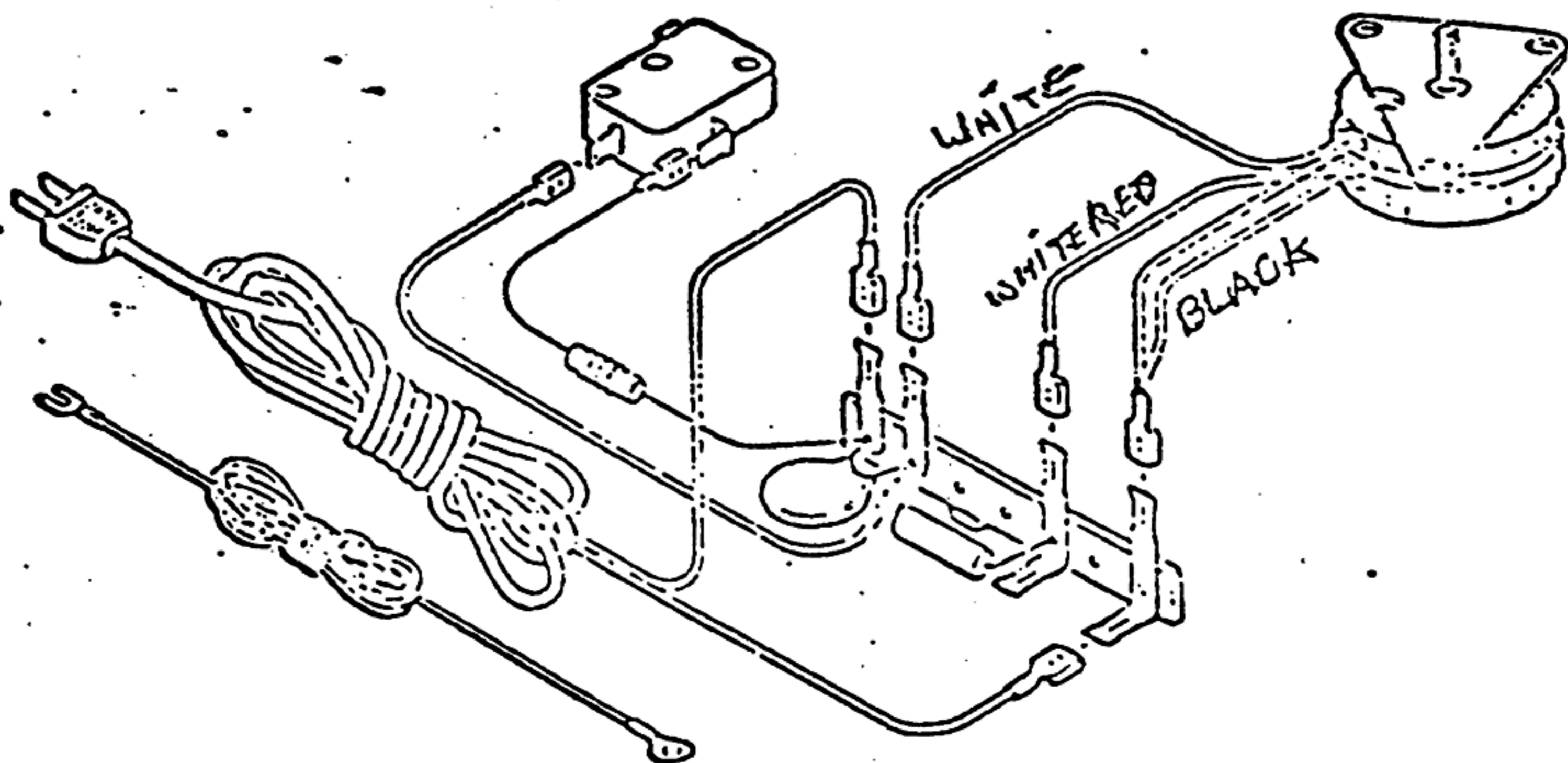
IMPORTANT: CAUSE AND CORRECTION NO. 1 DOES NOT APPLY TO MODEL 940.

## REPLACEMENT OF 960/940 MOTOR

The enclosed motor will replace both the isolation mount motor on the 960 and the solid mount motor on the 960 and 940.

1. Disconnect unit from electrical supply.
2. Remove platter and pulley.
3. Disconnect choke and red wire to AC switch. Remove entire motor, line cord and terminal strip assembly.
4. Using the three screws provided, mount replacement motor to chassis from the under side.
5. Attach replacement terminal strip to chassis using the original screw.
6. Connect wires according to the diagram shown below.
7. Replace platter and pulley. (Top of pulley should be flush with top of speed cam.)

NOTE: Some units will have the ground lead attached to the line cord, in which case the ground lead must be cut off and attached to one of the screws holding the spindle housing in place.





SERVICE BULLETIN

SUBJECT: BENT PICKUP LEVER

FROM: B.I.C TURNTABLE SERVICE DEPARTMENT

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As the tonearm tracks inward, the pickup lever (mounted on the tonearm shaft) moves with the tonearm. When the arm reaches the lead out groove, the pickup lever contacts and impulses the trip pawl plate.

The pickup lever is made of aluminum, which is low mass, and can easily be bent when unpacking or setting up the unit.

If bent towards the unit plate, the pickup lever can rub on the cam gear causing failure to track (skip grooves).

If bent in the opposite direction, it could entirely miss the trip pawl plate, creating a failure to trip at the end of a record.

Refer to the attached diagram and locate the trip pawl plate, cam gear and pickup lever.

Note the circled area on the assembled view. The pickup lever should contact the trip pawl plate exactly as shown. Reform the lever as needed.

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# MULTIPLE PLAY MANUAL TURNTABLES

## SERVICE BULLETIN

SUBJECT: FAILS TO TRIP

FROM: B·I·C TURNTABLE SERVICE DEPARTMENT

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The attached diagram is the trip mechanism for the B·I·C 940, 960 and 980.

### A. CONTAMINATED "O" RING

As the tonearm reaches the lead out grooves, the pickup lever begins to impulse the trip pawl plate. The trip pawl "O" ring assembly will move in the same manner. The friction between the trip pawl plate and "O" ring is critical. If the "O" ring is contaminated, a loss of friction between the trip pawl plate and "O" ring may occur.

#### TO CORRECT

The area of contact between the "O" ring and trip pawl plate should be thoroughly cleaned with alcohol.

### B. INSUFFICIENT TRIP PAWL RESET (ALL MODELS)

After a trip is activated, the half moon area on the trip pawl plate (shown near the "O" ring) should extend past the teeth on the main cam gear. Should this not occur, the trip pawl and plate will not reset sufficiently. This will cause a failure to trip condition after the next record has played.

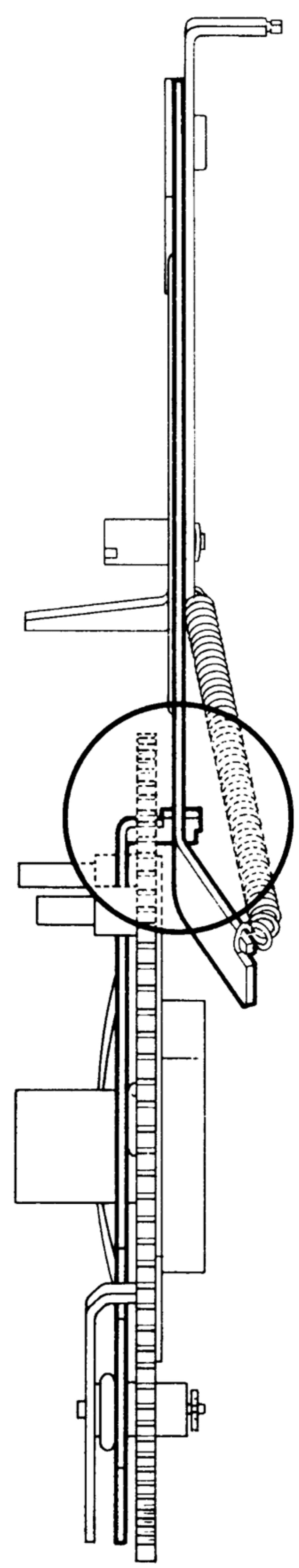
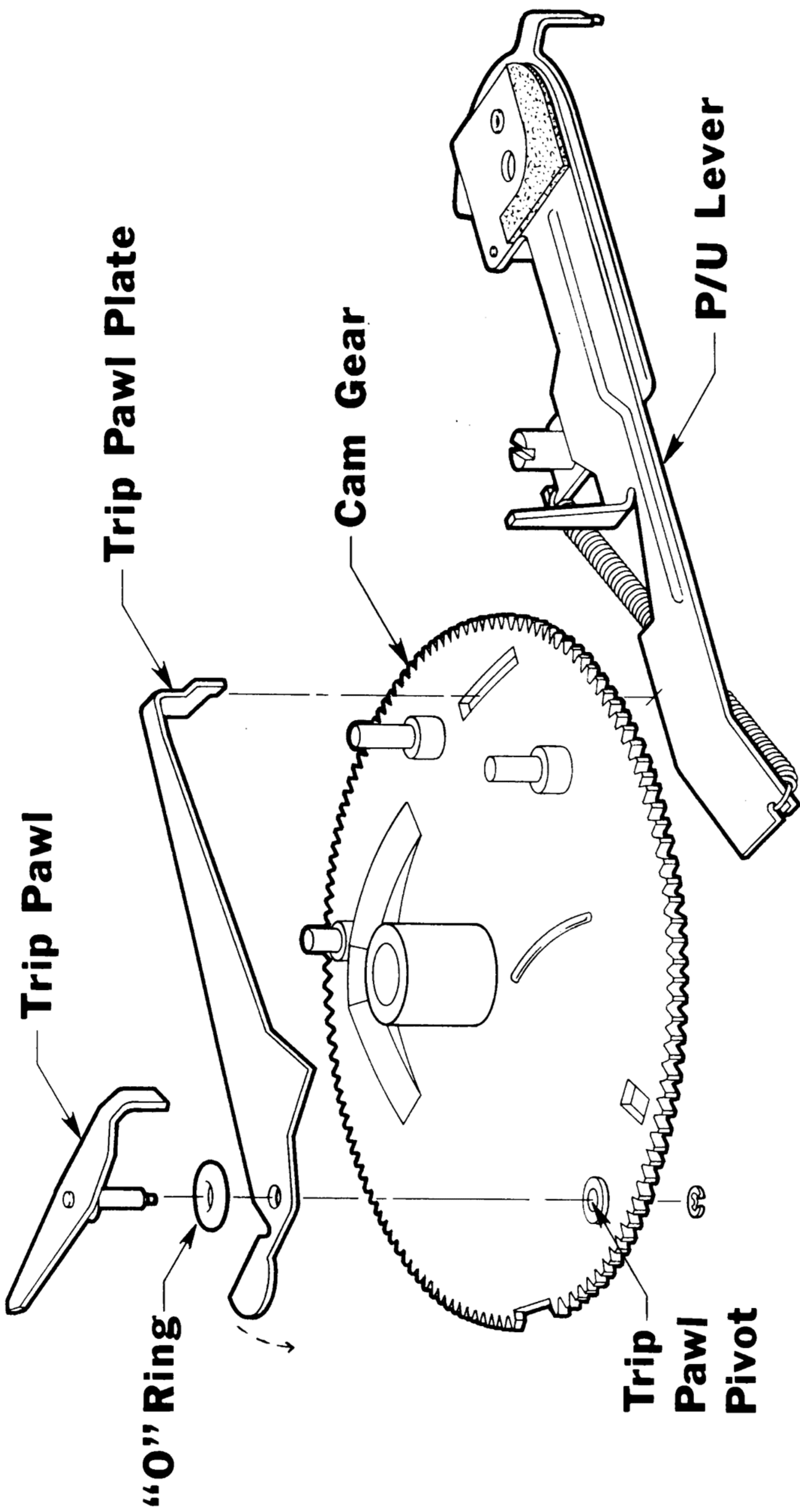
#### TO CORRECT

The half moon extension can be realigned. Carefully, with a small pair of needle nose pliers, grasp the half moon and pull straight out so that it extends slightly past the cam gear teeth. When examining the trip pawl plate, be certain that it is not pulled too far or bent vertically, as this can cause continuous cycle. Install the platter and cycle the unit. The trip pawl plate will "set" automatically.

Attached

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## SERVICE BULLETIN

SUBJECT: MODEL 980, 1000 WEIN BRIDGE ADJUSTMENT INSTRUCTION

FROM: B·I·C TURNTABLE SERVICE DEPARTMENT

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The following is the adjustment procedure for the Wein Bridge motor control electronics on the Model 980 and 1000. Refer to the diagram for location of adjustment and test points.

1. The nominal "warm up" characteristic for this circuitry is ten minutes.
2. Approximately center the "pitch" control knob on the top left corner of the base plate (do not be concerned if the strobe image moves at this time).
3. Adjust the oscillator output voltage potentiometer per motor spec (see diagram). Motors with black and white leads should be adjusted for 5 volts AC; motors with red and black leads for 4 volts AC. Besides lead color, most motors also have the required voltage stamped either on the side or on the top.

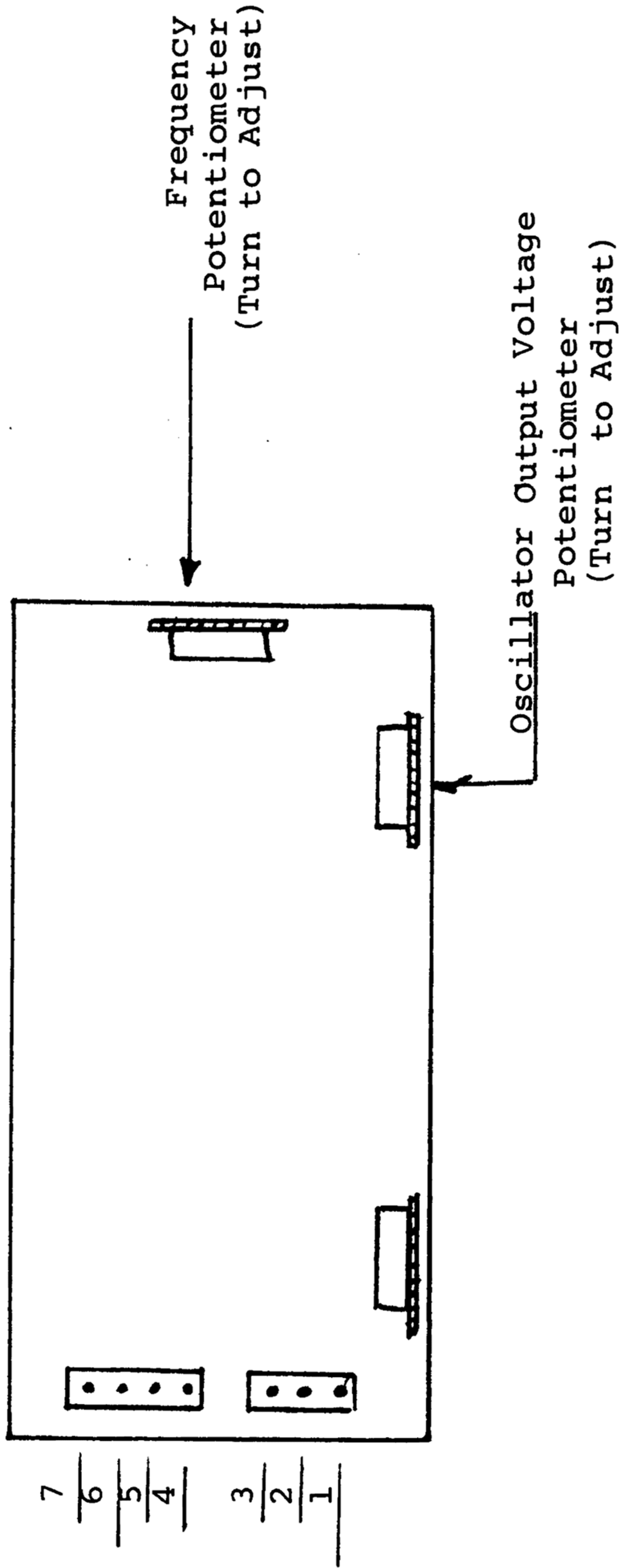
To measure voltage:

- a. Measure and adjust for required voltage between pins 4 and 6.
  - b. Repeat same procedure at pins 5 and 7 and note amount of any difference. If greater than .3 volts, replace P. C. board.
4. Adjust the frequency potentiometer to stabilize strobe image. (See diagram for location)
  5. Due to interaction with Step No. 4, repeat Step No. 3 until both are within spec.

Diagram Attached

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MOTOR CONTROL BOARD MODEL 980/1000





# MULTIPLE PLAY MANUAL TURNTABLES

## SERVICE BULLETIN

SUBJECT: MAIN CAM  
SYMPTOM: LOSS OF POSITIVE CAM DETENT

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The main cam employed in B·I·C Turntables, Models 940, 960, 980 and 981 are identical.

Until now all cams had three (3) pins on the top surface. The pins operate the size selector stop lever and program cam.

We have determined that the pin nearest the trip pawl plate could contribute to a loss of positive main cam detent. Therefore, we are now supplying main cams with this pin removed (see blowup) below.

