ADMIRAL CORPORATION MODELS RC180, RC181

IMPORTANT: Only difference between RC 180 & RC 181 is shape of pan.

OPERATING INSTRUCTIONS

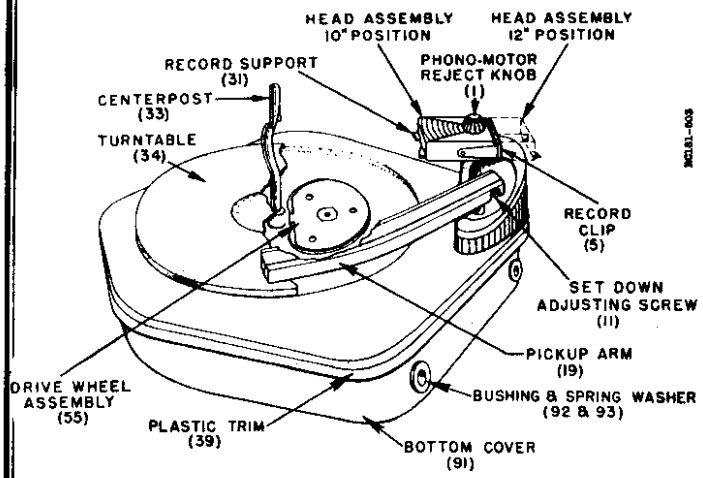


Figure 1A - Record Changer RC181, Top View.

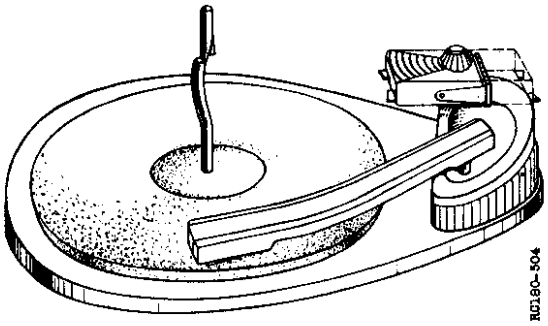


Figure 1B - Record Changer RC180, Top View Showing Pear-Shaped Pan.

1. SETTING FOR SIZE OF RECORD

The size of record for which the record changer is set to play is determined by the position of the head assembly (See Figure 1). With the embossed design toward the centerpost, the changer is set for 10-inch records. With the embossed design away from the centerpost, the changer is set for 12-inch records.

To change the setting, rotate the head assembly in either direction, until it clicks and locks in the desired position.

A slight amount of pressure may be required to begin the rotation when the head assembly is locked in an operating position.

2. STARTING THE RECORD CHANGER

To load the record changer, move the record clip (5) away from the centerpost (33) and place the records on the centerpost. The bottom record is supported by the offset in the centerpost and the record support (31).

Move the record clip so that it rests on the top record.

Turn the Phono-Motor switch knob (1) to the ON position. Then press down on this knob momentarily. The bottom record will drop to the turntable and the Record Changer will play the entire stack of records automatically.

3. REJECTING A RECORD

To reject a record at any time, press down on the Phono-Motor switch momentarily.

4. STOPPING THE RECORD CHANGER

This Record Changer cannot be turned off by means of Phono-Motor switch during its change cycle. If the On-Off switch on the radio is used to turn off the changer, it is advisable to stop it when the changer mechanism is out of cycle.

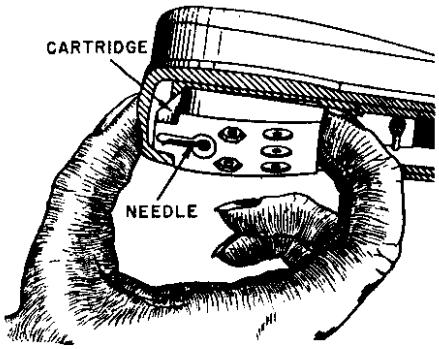


Figure 2 - Removing Cartridge by Pulling Down on Back Edge.

5. REPLACING CARTRIDGE AND NEEDLE

Before replacing, see cartridge service data in paragraph 14.

Remove the old cartridge (25) by getting your finger nails or a small screwdriver under it as shown in Figure 2 and pull down on the back edge. Press new cartridge into place again, making sure to push near its back edge where its pins go into the socket.

THE CHANGE CYCLE

6. DESCRIPTION OF CHANGE CYCLE
(See Figures 1, 3 and 4)

If at all possible, we recommend that you carefully observe the operation of a changer that is in normal operating condition. It is a good idea to rotate the turntable by hand and repeat the changing cycle until you understand the function of each part. It is important to note that this changer employs the oscillating type trip, which depends upon the in and out movement of the pickup arm caused by the eccentric groove in the record. This is different than previous Admiral Changers which tripped when the pickup arm reached a given position.

The changer operates as follows: The changer mechanism is driven during its change cycle by the knurled hub of the turntable rotating the rubber-tired drive wheel (55). During normal playing, the drive wheel is held in a neutral position as illustrated in Fig. 1 & 3A, so that the indentation prevents the tire from contacting the knurled hub. The drive wheel (55) is held in this position by the trip stop wire (81A) and the cam stop stud (58A) on the control cam (58).

During the record play and as the needle enters the eccentric groove, the pickup arm is moving in toward the centerpost. The pawl (87A) is moving across the trip serrations (83). When the eccentric groove in the record causes the pickup arm to move away from the centerpost, the pawl tends to reverse its direction but its sharp point catches in one of the trip serrations (83) and moves the trip lever (81). As the eccentric groove moves the pickup arm back in toward the centerpost, and then away from the centerpost again, the pawl (87A), again locks in one of the trip serrations, moves the trip lever (81) far enough so that the trip stop wire (81A) is no longer engaged with the cam stop stud (58A). This oscillating trip action is dependent upon the adjustment of the trip set screw (85). If it is adjusted properly, the pickup arm will move away from the centerpost, toward the centerpost, and as it comes away the second time the changer will trip and start its change cycle. (See paragraph 8.) The position of the drive wheel (55) at this moment is shown in Figure 3B.

This allows the cycle spring (82) to pull the control cam clockwise (bottom view). Since the control cam (58) and the drive wheel (55) are on the same shaft, the drive wheel is turned so its rubber tire is against the knurled hub of the turntable (see Figure 3B). The turntable now rotates the drive wheel (55) which in turn rotates the control cam (58). As soon as changer has been tripped, the trip cocking spring (80) causes the trip lever (81) to return the trip stop wire (81A) to the normal playing position.

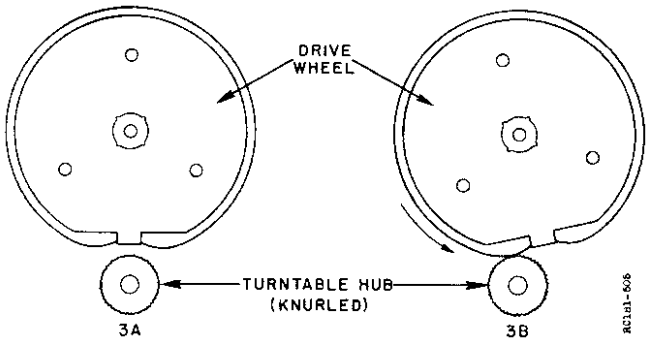


Figure 3 - Drive Wheel Positions.

Roller (72) riding on the control cam moves the pivot link (70) which in turn rotates the control plate (69). The rotation of the control plate (69) causes its inclined tab (69A) to ride against the lift rod (16) which lifts the pickup arm from the record. The arm control lever roller and stud (87B) then engages the safety arm (76). Further rotation of the control cam (58) moves the pivot link (70) causing further rotation of the control plate (69) causing the pickup arm to move to the right, clearing the record. This much has taken place in approximately one-third of the total rotation of the control cam.

As the control cam rotates further, its push-off stud (58B) engages with the end of the slot in the pushoff link assembly (62), moving it. This movement is transmitted through the push-off arm (62A) and as a result, the push-off shaft (8) is rotated. This rotates the push-off cam (8A) which in turn slides the push-off plate (30) forward and drops the next record to be played. (Note that the record stack rests on the record support shelf (31) and not on the push-off plate as on the RC170 and RC170A. The small slide at the top end of the centerpost holds back all records other than the bottom one when the push-off plate (30) moves forward.

As the control cam continues its rotation, the pivot link (70) moves back following the cam, since the roller (72) is kept in contact with the cam by the control plate spring (71). This moves the control plate (69) back, the arm control lever (87) moves the pickup arm to the set-down point for the record to be played. The pickup arm is held above the record because the lift rod (16) is still resting at the top of the inclined tab (69A) on the control plate (69). The set-down point is governed by the set-down adjusting screw (11). (See figure 1 & 5.) The shoulder on the set-down arm (88A) holds the pickup arm at the set-down point until it is pushed back by the

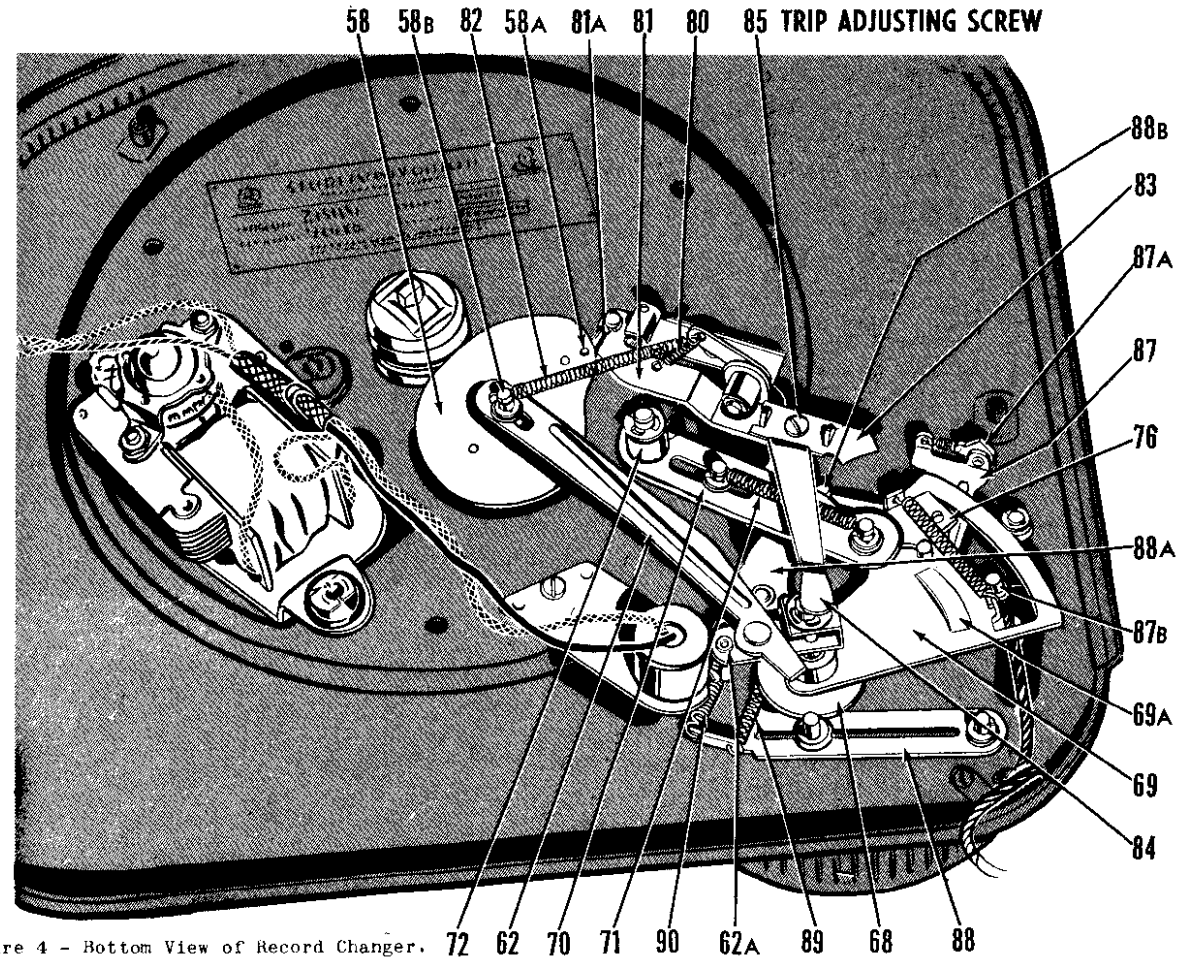


Figure 4 - Bottom View of Record Changer.

THE CHANGE CYCLE - Continued

edge of the control plate engaging the set-down arm stud (88B). The arm is then free and starts moving down toward the record starting groove.

When the record changer is set to play 10-inch records, the set-down arm (88A) through the tension of the set-down spring (89) moves the arm in to-the centerpost until the arm return roller and stud (87C) reaches the shoulder of the set-down arm (88A). The pickup arm is held in this position until the control plate (69) engages the set-down arm stud (88B), pushing the set-down arm back, releasing or freeing the pickup arm.

When the changer is set for 12-inch records the size change eccentric (68) moves the set-down and size change assembly (88) so that the arm return roller and stud (87C) does not travel as great a distance along the set-down arm (88A) before it reaches the shoulder. Therefore the pickup arm cannot move in toward the centerpost as far as for 10-inch records, during change cycle.

When the On-Off reject knob (1) is pressed down, the push-off cam and shaft (8) moves the reject link (84) down. This movement causes the trip lever (81) to move which prevents the trip stop wire (81A) from engaging the push-off pin (58A). The change cycle then proceeds in the manner described above.

ADJUSTMENTS

7. ADJUSTMENT OF SET-DOWN POINT

Adjustment of the set-down point, for either 10-inch or 12-inch records, is made by adjustment of the set-down adjusting screw (11), see Figures 1 & 5. Turning this screw in moves the set-down point of the pickup arm farther away from the centerpost and turning the screw out moves it closer to the centerpost. The proper set-down point for 10-inch records is between 4-5/8" and 4-11/16" from the needle to the near side of the centerpost. The proper set-down point for 12-inch records is between 5-5/8" and 5-11/16" from the needle to the near side of the centerpost.

To make the set-down point adjustment, proceed as follows:

1. Set the record changer for 10-inch records.
2. Press down on the Phono-Motor switch knob (1) momentarily and rotate the turntable by hand through the change cycle until the pick-up arm moves down toward the turntable.

ADJUSTMENTS - Continued

3. Check the distance between the needle and centerpost.
4. Adjust set-down screw (11) and repeat steps 2 and 3 until the proper distance between needle and centerpost is obtained.
5. Set Record Changer for 12-inch records, rotate the turntable by hand through the change cycle and check the 12-inch set-down point. This should be very close to being correct without further adjustment.
6. If any fine adjustment for 12-inch records is necessary, make the adjustment and repeat steps 5 and 6 for the 10-inch position.

8. ADJUSTMENT OF TRIP ADJUSTING SCREW

This Record Changer uses the oscillating trip principle to begin the change cycle. Therefore it is very important that the trip adjusting screw (85) is properly adjusted for correct operation of the changer. (See Figure 4 and 6.)

The trip adjusting screw (85) is properly adjusted when the changer trips into change cycle after the eccentric groove in the record has caused the arm to move away from the centerpost once or twice, that is, one or two backswings of the arm, before it trips into cycle. Some eccentric grooves cause greater movement of the arm than others.

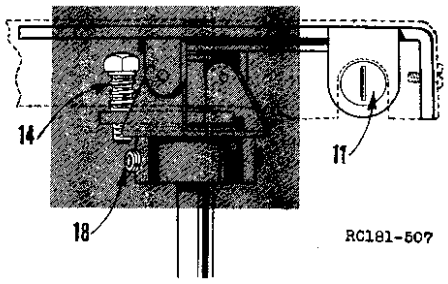


Figure 5 - Arm Detail Showing Adjustments.

Consequently the changer might trip with only one backswing on some records and with two backswings on others.

The ideal adjustment of screw (85) for best operation, is when the smooth side of the trip serrations (83) and the point of the pawl (87A) are horizontally even, as shown in Figure 6.

When adjusting the trip adjusting screw (85) proceed as follows:

1. Connect changer motor to power source and turn Phono-Motor switch on and off as needed to check adjustments.
2. Adjust screw (85) until the point of the pawl and the smooth side of the trip serrations are horizontally even or at the same level.
3. Place record on the turntable and check to make certain that the changer trips into change cycle with one or two backswings.

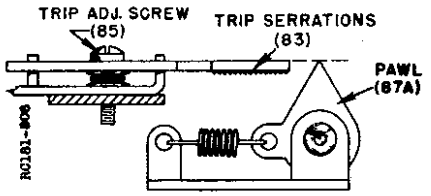


Figure 6 - Positioning Pawl Trip Serrations.

NOTE: The eccentric groove of a record should be used when checking the trip adjustment. Do not lift the pickup arm and move it, in toward the centerpost and out, by hand.

If the trip adjusting screw is turned out too far it will take more than two backswings of the arm to trip into cycle. If the screw is almost all the way out the changer will not trip.

If the screw is too far in, there will be excessive drag and wear on the trip serrations, pawl point and the record eccentric groove. Consequently this adjustment should be made carefully.

SERVICE AND REPAIR

9. ADJUSTING THE PICKUP ARM HEIGHT (See Figure 5.)

Before adjusting the pickup arm height, make sure that the cartridge (25) is all the way in its holder (23), and that the needle projects 1/16" from the cartridge (see paragraph 14).

This changer is designed so that if the pickup arm rests 1/4" above the changer pan, the arm will automatically lift high enough, during change cycle, to clear the top record of a stack twelve 10-inch records or ten 12-inch records on the turntable, and will not lift enough to touch the bottom record of a stack to be played.

With the Record Changer out of cycle and the pickup arm clear of the turntable, adjust screw (14) so that the needle is approximately 1/4" above the top of the changer pan. Turning the screw in lowers the arm and turning it out raises the arm.

After this adjustment has been made, the changer should be run through the change cycle to make certain that the pickup arm does not touch bottom of record stack. If, for some reason, the arm lifts too high, a compromise adjustment should be made. That is, turn screw in and lower arm slightly. If the pickup arm is held slightly above the record by riding on the edge of the base housing (28), the Allen set screw (18) should be loosened and the pi-

SERVICE AND REPAIR - Continued

vot spring and hub assembly (17) moved up on the shaft just enough so that the arm will rest 1/4" above the top of the pan. Generally there should be no clearnace between the pivot spring and hub (17) and retaining ring (26).

10. REMOVING THE PLASTIC BASE HOUSING (28) (See Figures 4 and 8)

Should it be necessary to remove the plastic base housing, proceed as follows:

1. Remove retaining rings (73 and 74).
2. Release one end of the index spring (90).
3. Lift the entire head assembly up from the top of the changer.
4. Loosen Allen set screw (18) and lift complete pickup arm assembly off.
5. Remove retaining ring (26) and spring washer (27).
6. Remove three screws (29) holding base.
7. Lift off the plastic base housing (28).
8. When reassembly has been completed, the pickup arm height should be carefully checked and adjusted, if necessary, by means of the lift adjusting screw (14).

11. REMOVING TURNTABLE AND BEARING ASSEMBLY

To remove the turntable it is only necessary to grasp the table by its edges and lift up. Before replacing the turntable, make sure that the recessed part of the drive wheel (55) is towards the centerpost. If necessary, turn drive wheel counter clockwise about a turn so it locks in this position. The pickup arm should be positioned away from the turntable. In replacing the turntable, force is not needed to seat it. Make sure, however, that the idler wheel of the motor has been pushed in towards the centerpost and that the wheel is making contact with the inner side of the turntable flange. In some cases it may be found that the two cork washers, after considerable use, are compressed so the turntable will rub. To build the stack up, an extra cork washer should be used. This third cork washer may be placed at the top or bottom of the stack.

The washers (35) and thrust bearing assembly (36) are removed by sliding them off of the centerpost. In replacing, have them in the order shown in Figure 8.

12. REMOVING BOTTOM COVER (91)

To remove the bottom cover (91) from the record changer, remove the two rear screws (44) through the bottom. Then press on the front edge of the bottom cover; this frees the changer from the slotted mounting brackets at the front of the bottom cover. To replace bottom cover, reverse above operations.

The changer must float on the springs (43) to prevent microphonic feedback, thus these springs must be re-installed properly. The wider end fits around and hugs the extrusion in the mounting brackets in the bottom cover. The narrow end of the spring fits over the threaded bushing on the changer pan (45). In some changers it has been necessary to add spacer washers beneath the narrow portion of the spring (43) to assure "free floating" of the changer.

13. MOUNTING 407B1 MOTOR TO CHANGER

The model 407B1 motor may be used with this record changer but it is necessary that a fibre or felt washer be used as a spacer between the motor mounting grommet and the changer pan. The No. 401A106 shakeproof motor fastener can be used to then mount the motor.

14. CARTRIDGE (See Figure 7)

The new Admiral pick-up cartridge uses an entirely new principle since it is not a crystal, magnetic, or capacitive device. The pick-up element is made of special rubber which is a high resistance electrical conductor (R-1 & R-2). The resistance varies as the length of the rubber is changed. A Monel metal needle, osmium tipped, is clamped to the center of the resistive rubber as shown at B. As the needle moves back and forth in the record groove, it alternately lengthens the rubber on one side and shortens the rubber on the other side.

A DC voltage is applied at A. The voltage drop from B to C varies as the resistance changes due to the "back and forth" movement of the needle. The varying voltage drop is in reality an alternating voltage of audio frequency. This voltage is applied through the coupling condenser (Cc) to the grid (G) of the audio amplifier tube.

Trouble Shooting: If you suspect the cartridge or needle and have a replacement cartridge available, the quickest test is to try the other cartridge. This is very simple since the Admiral cartridge plugs in. Remove the old cartridge as described on page 1 and plug in the replacement cartridge. If replacing cartridge does not correct the trouble or if no replacement is available, proceed as follows:

1. Make sure radio operates satisfactorily on radio stations.
2. Turn switch to Phono and turn volume control up high. Touch the needle with finger... If a loud hum is heard, circuit from B to G is not open or shorted. If hum is not heard, check circuit from B to G.
3. If hum is heard, check voltage across outer terminals on bottom of cartridge. Generally it should measure from 80 to 100 volts DC. See circuit diagram for individual chassis. If voltage is correct, cartridge should be replaced.
4. If voltage is not correct, check circuit for fault. In case of distortion, check coupling condensers.
5. If the needle is bent, it can be straightened by bending it down so that it projects 1/16" from cartridge. If should then be pressed back several times with a flat object.

SERVICE AND REPAIR - Continued

Do not attempt to repair cartridge or remove the cap on the cartridge assembly as this will void the warranty.

15. LUBRICATION

Under normal operating conditions, the motor should never require oiling. The rest of the changer, however, should be lubricated with grease whenever it comes into the shop for repairs or adjustment. All pivot and friction points should be greased adequately but not excessively. A good grade automobile chassis grease may be used for this purpose.

The push-off shaft (8), powdered iron roller (72), oilite bearings, used in the turntable hub and base housing, may be lubricated with SAE No. 20 motor oil.

Care should be taken to prevent any of the lubricant from coming into contact with the drive or idler wheel tires. Also be careful, when using oil, that an excess does not seep into the felt of the turntable.

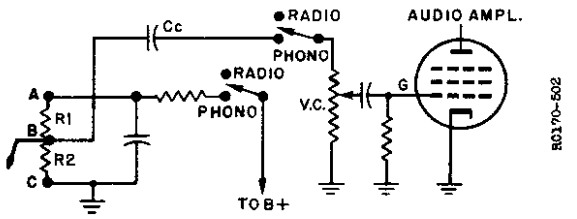
16. REPLACEMENT PARTS

In some cases replacement parts from the factory may be a different type than those being replaced. These parts will be of a later production but may be used as replacement parts. In cases where rivets or adapting parts are needed, they will be included with the replacement part.

17. CAUTIONS!

1. See that the rubber tires on both the drive wheel and the idler wheel are kept clean and free from oil, grease, dirt or any foreign material. Carbona or carbon tetrachloride may be used for cleaning these parts.
2. The drive wheel assembly (55) appears to be almost identical with that used on the RC170 and RC170A. These parts are not interchangeable.
3. When replacing the rubber tire (54) do not bend the tab on the drive wheel over too far as this may result in the tire catching or rubbing on the drive wheel pressure spring (57).
4. If the On-Off reject knob (1) cannot be pulled off with the fingers, pry very carefully.
5. When removing or replacing the pawl spring (86) care should be taken not to stretch it.
6. When removing or replacing the pickup arm (19), always loosen the Allen set screw (18) and lift off the complete assembly. The pivot spring, hub and pin assembly (17) can be removed from the pivot plate assembly (13) and replaced much more readily with the complete pickup arm assembly off of the changer.
7. Washers (75) and (63) have the same dimensions except that (75) is thicker. Do not replace washers (63) with (75) or vice versa.

ADMIRAL CARTRIDGE
BASIC CIRCUIT



SEE SCHEMATIC FOR EXACT CONNECTIONS ON INDIVIDUAL MODELS

Figure 7 - Basic Circuit for Admiral Cartridge.

8. When replacing the switch mounting bracket (65) or the trip bracket (79) be sure to locate the half punches in the holes in the pan before tightening their mounting screws (66).
9. When replacing the on-off switch assembly (67) care should be used in bending the tab fasteners so that the switch is mounted firmly to the bracket.
10. The powdered iron roller (72) is similar to the roller used on the RC170 and RC170A except that the ends are chamfered. The new roller (chamfered) can be used on both the RC170 and RC180 models. The old style roller should not be used on the RC180 or RC181.

18. RECORD CHANGER TROUBLE SHOOTING

1. Records Do Not Drop To Turntable Or More Than One Record Drops.
   (a) Check the distance between the inside edge of the centerpost (33) and the edge of the record support (31). This distance should be 4-61/64" ± 1/32", in the 10-inch position. This dimension is very critical.

   If distance does not meet specifications, bend the centerpost slightly toward or away from the head assembly as needed.

2. Changer Repeatedly Trips Into Change Cycle.
   (a) Check for broken or loose trip cocking spring (80), or
   (b) Check for broken or missing reject spring (2), or
   (c) Check for bent reject link (84).

3. Changer Will Not Trip.
   (a) Check for broken or loose cycle spring (82), or
   (b) Check On-Off switch cover (67). If cover is not assembled to switch properly, it may bind push-off link and arm (62) preventing cycle spring (82) from pulling the main cam (58) around.

4. Changer Will Not Reject.
   (a) Check for bent reject link (84).

5. Cannot Get Proper Set Down.
   (a) Check for broken or loose set-down spring (89), or
   (b) Check for broken or loose set-down adjusting spring (11).

RC 180 & RC 181 PARTS LIST (TOP)

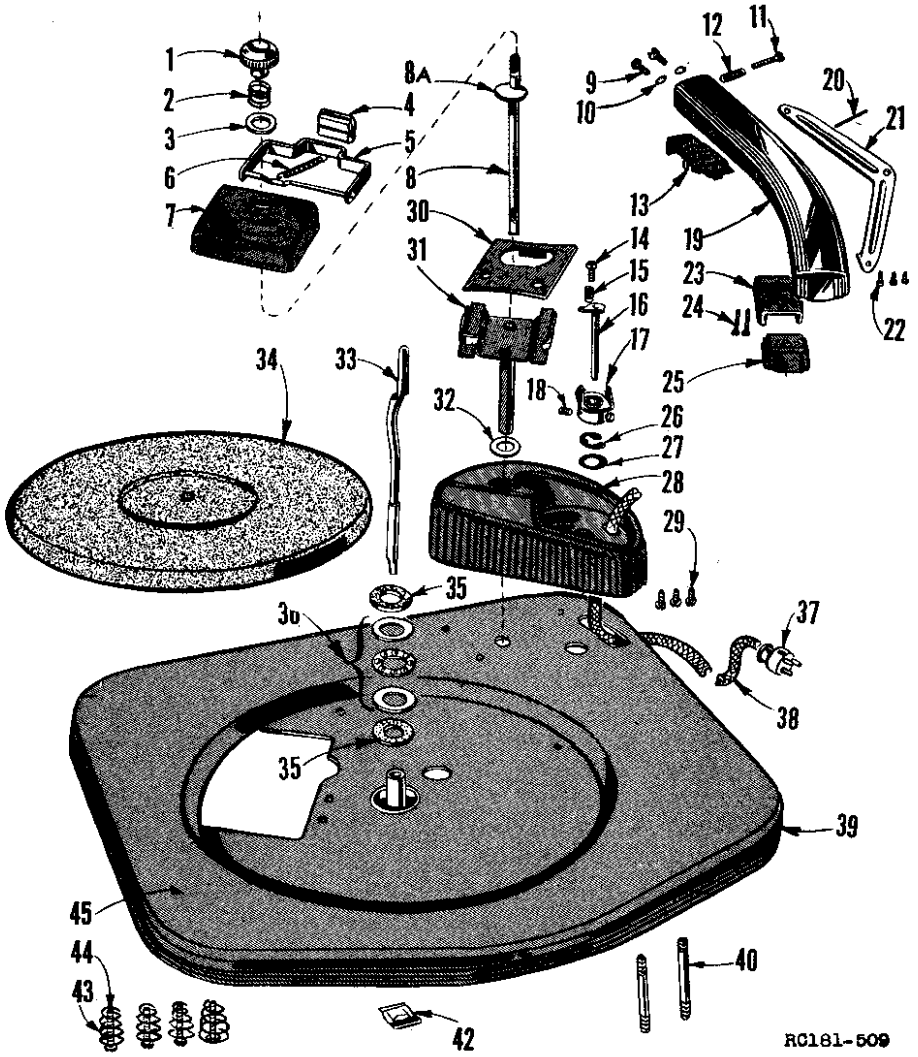


Figure 8 - Top View of Record Changer, Exploded.

Ref. No.	Part No.	Description
1	†403A27	Reject Off-On Knob
2	405A97	Reject Spring
3	4B1-166-47	Washer .390 X 5/8 X 1/16
4	406A18	Rubber Bumper for Record Clip
5	G400A253	Record Clip
6	405A94	Record Clip Spring
7	G400A258	Head Cover
8	G400A248	Push-Off Cam & Shaft
9	45-250-C2-47	Screw, 4-40 X 1/4"
10	3B1-23-21	#4 Lockwasher
11	45-500-C2-47	Set-down Adjusting Screw, 4-40 X 1/2 BH MS
12	405A95	Set-down Adjusting Spring
13	G400A240	Pickup Arm Pivot & Mtg. Plate
14	402A141	Lift Adjusting Screw
15	405A81	Lift Adjusting Lock Spring
16	G400A239	Lift Plate & Rod
17	G400A242	Pivot Spring, Hub & Pin
18	1A43-14	Allen Set Screw 8-32 X 3/16
19	†403829	Pickup Arm, Plastic
20	414A26	Pickup Arm Wire Clip
21	401A234	Pickup Arm Stiffener
22	402A139	#2 Type 25 Plastiscrew 1/4" long, 3 required
23	G400A198	Cartridge Holder (socket with contacts)
24	402A129	Screw, Shakeproof #2 Type 25, Thread Cutting Plastic
25	A1372	Cartridge and Needle
26	401A229	Retaining Ring
27	405A27	Support Spring Washer
28	403C28	Base Housing
29	402A115	Screw, Base Housing Mtg.
30	401A166	Push-Off Plate
31	G400A249	Support Tube & Shelf
32	4B1-166-47	Washer, .390 X 5/8 X 1/16
33	G400B137-1	Centerpost Ass'y. (includes 405A62 Speed Nut)
34	G400B167	Turntable
35	412A1	Cork Washer (2 required)
36	415A11	Thrust Bearing
37	98A19	Plug (3 contact)
	88A8-5	Plug (4 contact)
38		See radio service manual for proper cable & part no.
39	403A24	Plastic Trim
40	1A80-5	Mounting Screws
42	405A62	Speed Nut
43	19A10-3	Conical Mounting Spring
44	G400A197	Mtg. Screw & Washer Assy. 4 required
45	G400D257	Changer Pan (RC 181)
	G400D263	Changer Pan (RC 180)

†Before replacing parts marked †, see appropriate caution in paragraph 17.

MODELS RC180, RC181 ADMIRAL CORPORATION

RC 180 & RC 181 PARTS LIST (BOTTOM)

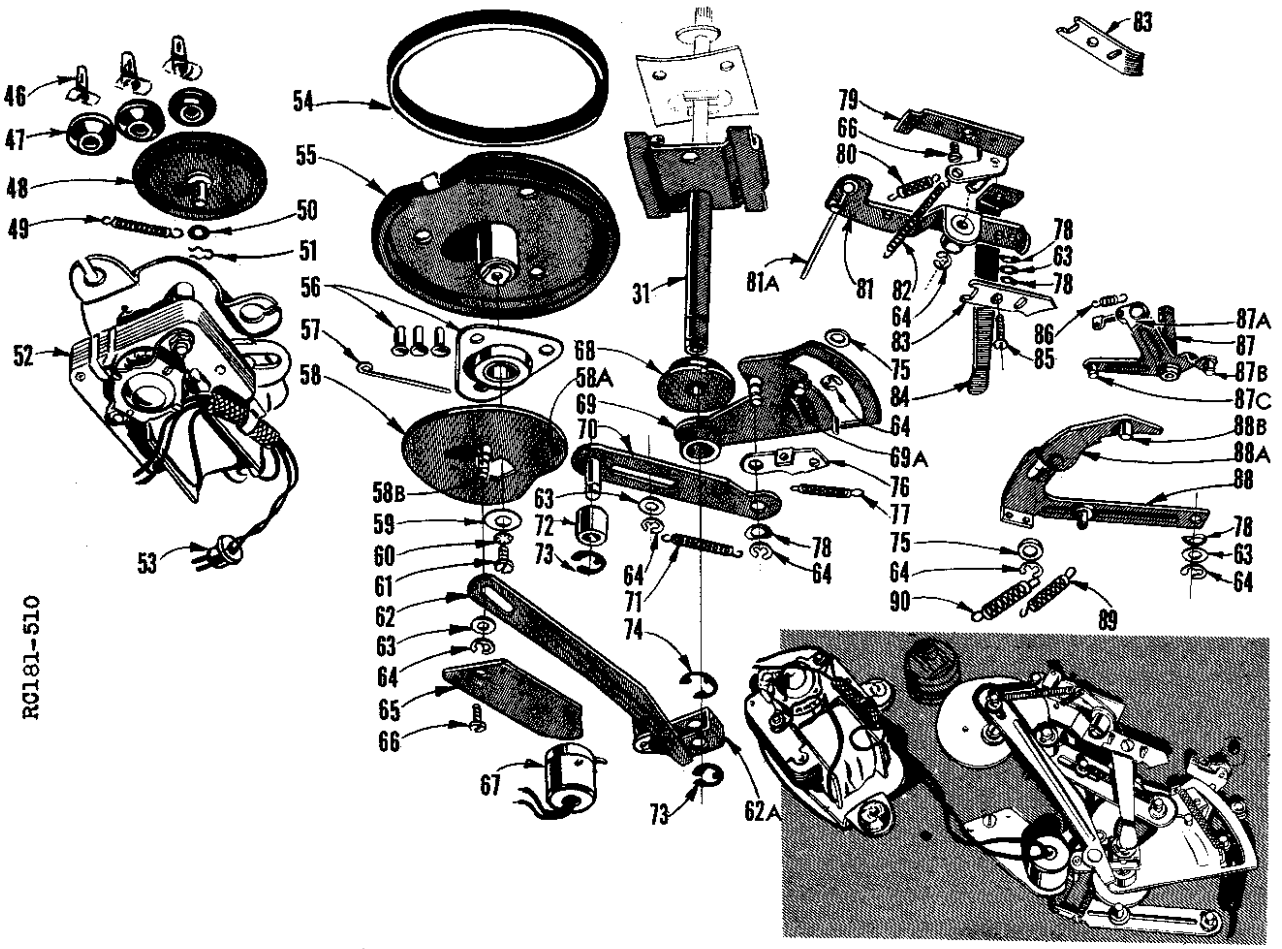


Figure 9 - Bottom View of Record Changer, Exploded.

Ref. No.	Part No.	Description
46	401A106	Shakeproof Motor Fastener
47	G400A196	Rubber Mounting Grommet and 401A106 fastener (for 407B3-2 and 407B4-2 motor)
	G400A203	Rubber Mounting Grommet, spacer, and fastener (for 407B1 Motor)
48	G400A23	Idler Wheel Ass'y. (407B3, 407B4 Motor)
	G400A57	Idler Wheel Assembly (for 407B1 Motor)
49	405A14	Spring, Idler Wheel (407B3, 407B4 Motor)
	405A67	Spring, Idler Wheel (for 407B1 Motor)
50	412A3-2	Hard Fibre Washer under Hairpin Clip
51	405A15	Hairpin Clip for Idler Wheel
52	*407B3-2	Motor with Idler Wheel and fasteners; 105-125V 60 Cycle
	*407B4-2	Motor with Idler Wheel and fasteners; 105-125V 50 Cycle
	401A48	Drive Pulley (Part of 52. For Motors 407B3, 407B4. In addition, Motor 407B4 includes a coil spring part no. 405A32
	405A32	50 Cycle Conversion Spring (Used to convert 407B3 Motor)
53	88A8-1	Motor Plug (Male)
54	406A13	†Drive Wheel Tire Only
55	G400A252	†Drive Wheel (Includes Tire)
56	404A18-1	Drive Wheel Support (Includes Rivets)
57	414A23	Drive Wheel Pressure Spring
58	G400A227	Control Cam
58A		Cam Stop Stud (Part of 58)
58B		Push-Off Stud (Part of 58)
59	401A145	Control Cam Washer
60	381-26-47	#8 I. T. Lockwasher
61	85-375-C2-39	Control Cam Screw 8-32 X 3/8 BH MS
62	G400A219	Push-Off Arm & Link

†Before replacing, see appropriate caution in paragraph 17.
*407B3-2 and 407B4-2 are the same as 407B3 and 407B4 respectively except that three 401A106 fasteners are included. Also note that some 407B1 motors were used in production.

Ref. No.	Part No.	Description
62A		Push-Off Arm (Part of 62)
63	†4B1-68-2	Washer
64	401A177	Retaining Ring
65	†401A223	Switch Bracket
66	1A53-10-47	Switch and Trip Bracket Mounting Screws
67	†408A1	On-Off Switch & Cover
68	404A17	Size Change Eccentric
69	G400A226	Control Plate, Hub & Stud
69A		Inclined Tab (Part of 69)
70	G400A224	Pivot Link & Stud
71	405A91	Control Plate Spring
72	†415A9	Powdered Iron Roller
73	401A229	Retaining Ring
74	401A230	Retaining Ring
75	†401A173	Washer
76	401A202	Safety Arm
77	405A90	Safety Spring
78	405A22	Spring Washer
79	†G400A228	Trip Bracket & Stud
80	405A88	Trip Cocking Spring
81	G400A230	Trip Lever Complete
81A		Trip Stop Wire (Part of 81)
82	405A87	Cycle Spring
83	401A224	Trip Serrations
84	401A222	Reject Link
85	65-500-C2	Screw, Trip Adjusting 6-32 X 1/2 BH. MS
86	†405A89	Pawl Spring
87	G400A233	Arm Control Lever, Studs & Pawl
87A		Pawl (Part of 87)
87B		Arm Control Lever Roller (Part of 87)
87C		Arm Return Roller (Part of 87)
88	G400A222	Set Down & Size Change Assembly
89	405A93	Set Down Spring
90	405A92	Index Spring
91	G400D260	Bottom Cover (Consoles only)
92	27A24	Bushings in Bottom Cover (Consoles only)
93	405A99	Spring Washer for bushing (Consoles only)

RC180 & RC181 PRODUCTION CHANGES

A few minor changes have been made in the late production of RC180 & RC181 Record Changers. These changes are included in the RC182 Two Speed Record Changer.

The most important change is the addition of an adjustable reject link (84) which assures more positive rejecting action. See Figure12. This new reject link consists of reject arm support (84A) spotwelded to trip lever (81), reject arm (84B), adjusting screw (84C), spring washers (84D), and flat washer (84E). The new and old links are interchangeable.

The record clip (5) and the head cover (7) are now made of plastic. The set-down adjusting screw (11) was 1/2" long; it is now 3/4" long.

Part numbers for these parts are listed below:

Ref. No.	Part No.	Description
5	403A 32	Record Clip (Plastic)
7	403A 31	Head Cover (Plastic)
11	45-750-C2-47	Screw, Set-down Adjusting 4-40x3/4 BH MS
84	G400A 266	Reject Link & Trip Lever Assembly
84A	G400A 230-1	Reject Arm Support & Trip Lever
84B	401A 237	Reject Arm
84C	65-375-C2-39	Screw (6-32x3/8 BH MS)
84D	405A 98	Spring Washer
84E	481 68-2	Flat Washer

FAULTY REJECT AND TRIP ACTION

Before making reject or trip adjustments on the RC180, RC181 or RC182 Record Changers, it is very important to see that the reject spring (2) is holding the push-off shaft (8) up as far as it will go. If it is not, erratic reject and trip action may result. Possible causes of the spring not holding the push-off shaft up are: the knob (1) may be loose; the spring (2) broken, missing or placed incorrectly; or push-off shaft binding.

When servicing an RC180, RC181 or the new RC182 Two Speed Record Changer which repeatedly rejects records, will not trip or trips erractically, proceed as follows:

Old Type Reject Link #401A222
(See Fig. 4 in RC180 & RC181 Service Manual.)

1. Make certain that the On-Off Reject knob (1) is tight and down as far as it will go on the push-off shaft (8).
2. Check to be sure that the reject spring (2) is pulling the push-off shaft (8) up as far as it will go. The reject spring (2) should rest on washer (3) and should not slip between it and the push-off shaft (8).
3. Bend the end of the reject link (84) enough so that when it is resting on the end of the push-off shaft (8) it causes the top of the trip stop wire (81A) to be level with the top of the main cam stop stud (58A). See Figure11.
4. Adjust the trip adjusting screw (85) until the point of the pawl (87A) is even with the smooth side of the trip serrations (83) as outlined in paragraph 8 of the RC180 & RC181 service manual.
5. It may be necessary to repeat steps 3 and 4, making slight re-adjustments until the changer will reject and trip properly.
6. If the changer will not trip properly after carefully making the above adjustments, replace the reject link with the new type.

New Type Reject Link #G400A266
(See Fig12)

1. Repeat steps 1 & 2 as outlined above.
2. Adjust the reject link adjusting screw (84C) until there is approximately 1/32 of an inch space between the round end of the reject arm (84B) and the rivot on the push-off arm and link assembly (62). If there is no space between these two parts, it will be possible for the changer to begin its change cycle when the On-Off Reject knob is turned to the "OFF" position.
3. Adjust the trip adjusting screw (85) until the point of the pawl (87A) is even with the smooth side of the trip serrations (83) as outlined in paragraph 8 of the RC180 & RC181 service manual.
4. If the top of the trip stop wire (81A) is not level with the top of the main cam stop stud (58A) as shown in Figure11, bend the wire enough to make it even with the top of the stud.
5. If necessary, repeat steps 3, 4 and 5 until the changer rejects and trips properly.

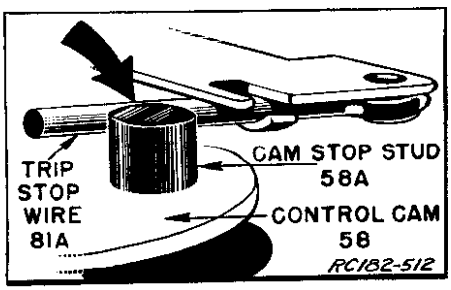


Figure11 - Positioning Trip Stop Wire.