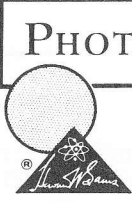


**BSR MODELS AA50 SERIES
(AA50/5, AA50/6, AA50/5D2)**

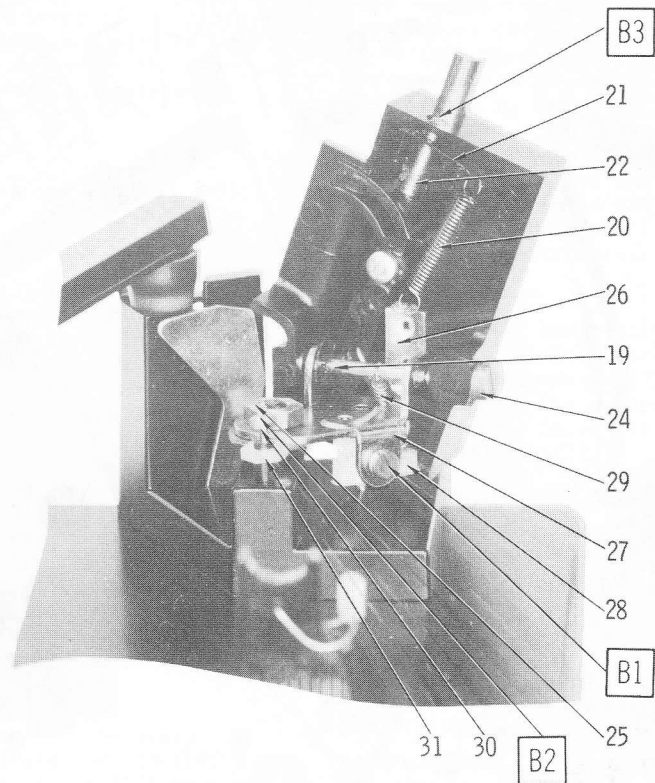
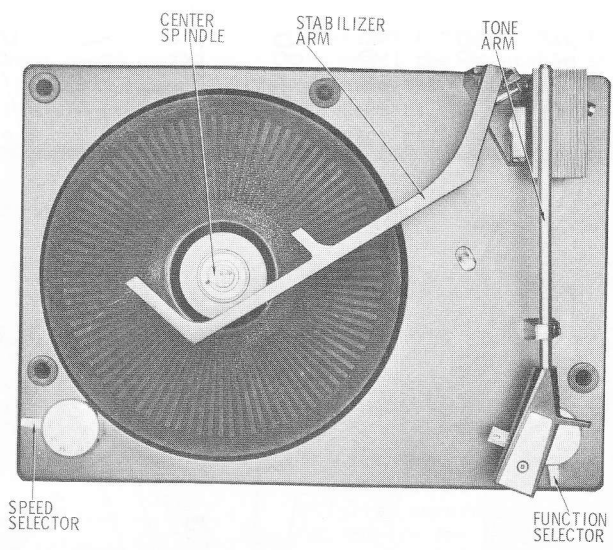


PHOTOFACT® Folder

with **CIRCUITRACE®**

**BSR MODELS AA50 SERIES
(AA50/5, AA50/6, AA50/5D2)**

For Supplier Address See PHOTOFACT Index



**BSR MODELS AA50 SERIES
(AA50/5, AA50/6, AA50/5D2)**

REMEMBER TO ASK— “What else needs fixing?”

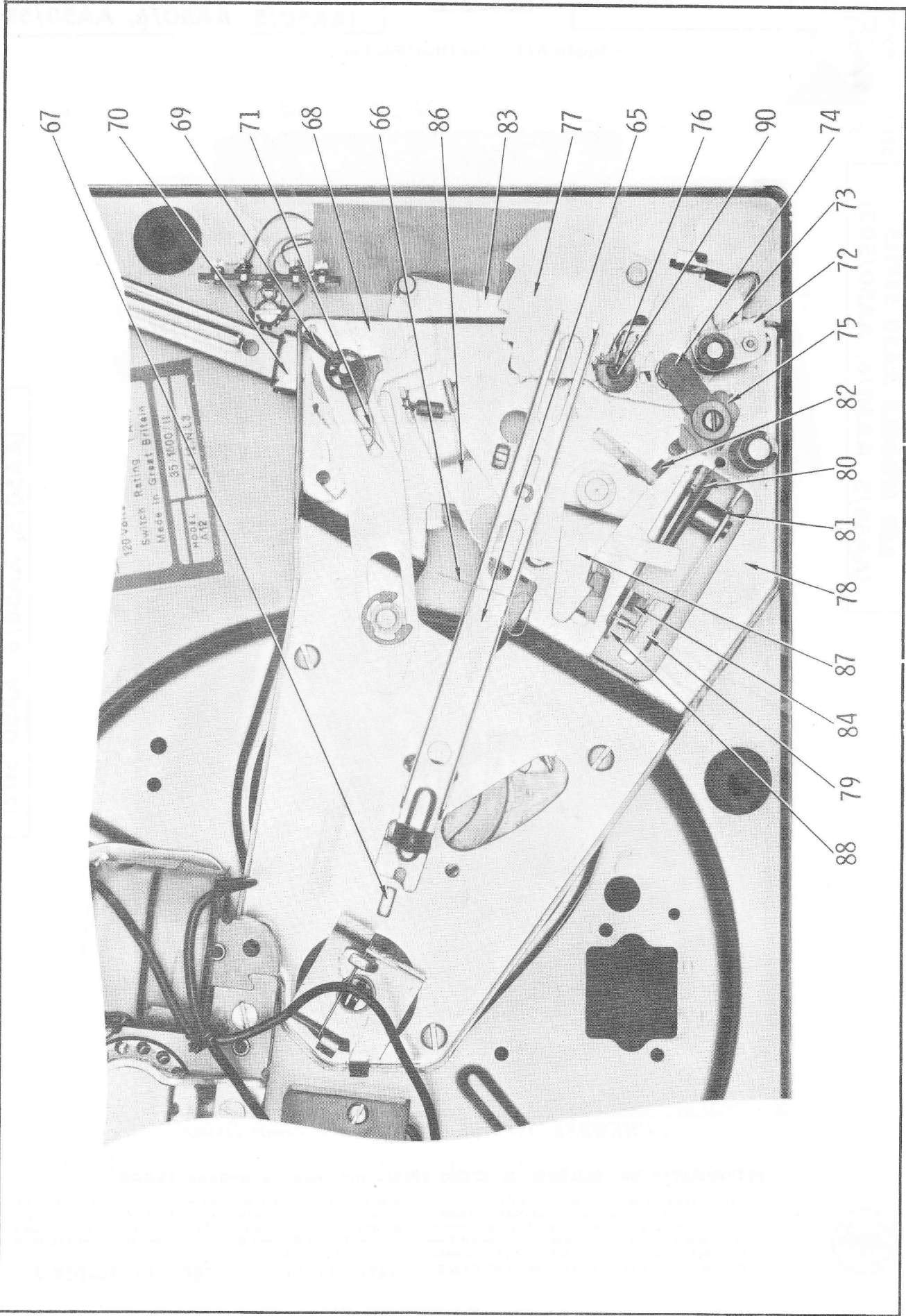
HOWARD W. SAMS & CO., INC. Indianapolis, Indiana 46206

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DATE 11-70 SET 1135 FOLDER 3





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OPERATING INSTRUCTIONS

Loading

Lift the Stabilizer Arm straight up and swing it fully to the right.

Place up to six records of the same speed and with the same type of grooves on the Center Spindle and lower them onto the spindle shelf. 10-inch and 12-inch records may be intermixed.

Hold the records level, swing the Stabilizer Arm inward, and lower it onto the record stack.

Starting

Unlatch the Tone Arm from the rest post. Set the

Speed Selector to the desired position.

Move the Function Selector knob to Rej. and hold it until the turntable starts to revolve, then release the knob. The Tone Arm will automatically setdown at the proper point on the record, and the changer will play and change each record and shut off after the last record has been played.

Rejecting

To reject a record, move the Function Selector knob to Rej and release.

CHANGE CYCLE

Turn-On Sequence

Moving Function Selector Knob (2) to On pivots Control Plate (40) to move Reject Link (42) and Switch Link (43).

Switch Link (43) pivots Switch Lever (44) to turn On/Off Switch (46) on and to release Speed Change Arm (50). Idler Spring (53) moves Idler Arm (52) to engage Idler Wheel (1) with the drive-motor shaft and the inside rim of Turntable (4).

Reject Link (42) moves Reject Lever (70). A pin projecting from Lever (70) through a slot in Sub Main Plate (78) drops into a detent in the slot in Plate (78) to hold Lever (70) in position

Change Sequence

Note: Lift Stabilizer Arm (6) and swing it fully to the right. While manually rotating Turntable (4), observe the change cycle.

When Function Selector Knob (2) is moved to Rej, a tab on Reject Lever (70) engages Spring (66), moving Slide (65) to pivot Trip Pawl (39) toward the turntable hub. A projection on the turntable hub engages Trip Pawl (39) to rotate Cam Gear (38) enough to engage the gear teeth of Cam Gear (38) with the turntable hub.

A roller on Operating Plate (60) follows the eccentric groove of Cam Gear (38) to pivot Plate (60). As Plate (60) pivots to the rear, a cam on Plate (60) engages a pin on Reset Link (83) to pivot Link (83). A tab on Link (83) engages Spring (89), on Trip Lever (84), to pivot Lever (84) upward. A stud on Lever (84) projects through a slot in the motorboard. Spring (85) holds Lever (84) in position.

As Plate (60) continues to move to the rear, Lift Pin (76) rides up a ramp on Plate (60) to lift the Tone Arm. Lever (63) engages Toggle (72) to pivot Quadrant (77), moving the Tone Arm to a point directly above Rest Post (8).

At this time, a pin projecting from Plate (60) through a slot in Feed Lever Link (57) engages Spring (58) to move Link (57). Link (57) pivots the feed lever in Center Spindle (5) to drop the bottom record off the spindle shelf.

Simultaneously, Plate (60) pivots Latch (87) to release Selector Lever (86). Spring (62) then pivots Lever (86) to a point where a tab on

Trip Lever (84) engages and holds Selector Lever (86).

The setdown point of the Tone Arm is determined by the size of the record being changed. When a 7-inch record is being changed, the record does not engage the stud on Trip Lever (84). Consequently, Selector Lever (86) remains latched in the 7-inch position.

When a 10-inch record is being changed, the record engages the stud on Trip Lever (84) to pivot Lever (84), releasing Selector Lever (86). Lever (86) then pivots and engages the first of two steps on Selector Arm (88) to position Lever (86) in the 10-inch position.

When a 12-inch record is being changed, the edge of the record engages and pivots Selector Arm (88). Selector Lever (86) then pivots and engages the second of the two steps on Selector Arm (88) to position Lever (86) in the 12-inch position.

When Plate (60) has pivoted fully to the rear and starts forward, Lever (63) engages Toggle (72) to pivot Quadrant (77), moving the Tone Arm in and over the record to a point where a tab on Selector Lever (86) engages the proper step on Quadrant (77).

As Plate (60) continues forward, the Tone Arm sets down on the record. At this time, Plate (60) engages a tab on Selector Lever (86) to move Lever (86) clear of Quadrant (77), permitting the Tone Arm to move freely to follow the grooves of the record.

Trip Pawl (39) is reset when the teeth of the turntable hub move Trip Pawl (39) clear of the projection on the turntable hub.

When Cam Gear (38) has completed a full rotation, the roller on Plate (60) rides into a detent in the eccentric groove of Cam Gear (38) to hold Gear (38) in the neutral position.

As the Tone Arm tracks the grooves of the record, a pin on Quadrant (77) engages and moves Slide (65), pivoting Trip Pawl (39) slightly toward the turntable hub. This movement is insufficient to trip the changer into a change cycle since the projection on the turntable hub pushes Trip Pawl (39) back with each revolution of Turntable (4). However, when the record has been played and the needle enters the run-out groove, the velocity of

the Tone Arm increases sufficiently to move Trip Pawl (39) in and ahead of the projection on the turntable hub. The projection on the turntable hub then engages Trip Pawl (39) to trip the changer into a change cycle.

Shut-Off Sequence

When the last record drops, Stabilizer Arm (6) and Shaft (33) move downward. Shut-off Pin (91), on Shaft (33), engages Spring (81). By this time, Selector Lever (86) is in position for proper tone-arm setdown. A tab on Stop Latch (79) engages Lever (86) to prevent Latch (79) from pivoting upward.

At the end of the change cycle, Lever (86) is pivoted forward to release Quadrant (77) and Stop Latch (79) is also released. Latch (79) pivots upward to move Selector Arm (88) from the path of Lever (86).

When the last record has been played, the changer trips into a change cycle. As Plate (60) pivots to the rear, the Tone Arm is lifted. Quadrant

(77) pivots to move the Tone Arm to a point directly above Rest Post (8). However, when Plate (60) pivots Latch (87) to release Lever (86), Lever (86) pivots fully clockwise to block Quadrant (77), holding the Tone Arm above Rest Post (8). Simultaneously, Lever (86) releases Shut-off Lever (68). Spring (69) then moves Lever (68) toward Center Spindle (5).

At the end of the change cycle, the Tone Arm is lowered onto Rest Post (8). Plate (60) then pivots Lever (86) to move Lever (68) forward, moving the pin projecting from Reject Lever (70) out of the detent in the slot in Sub Main Plate (78) to release Lever (70).

Spring (45) then pivots Lever (44) to move Arm (50), to move Switch Link (43), and to turn On/Off Switch (46) off. Arm (50) moves Idler Wheel (1) from the drive-motor shaft and the inside rim of Turntable (4). Switch Link (43) pivots Control Plate (40) to move Function Selector knob (2) to Off.

CLEANING

Use a cloth dampened with isopropyl alcohol to clean the driving surfaces of the idler wheel, motor shaft, and the inside rim of the turntable.

LUBRICATING

Apply light, nonhardening grease to sliding cam surfaces and pivot points, and apply light machine oil on the tone-arm lift rod, idler-wheel bearings,

and motor bearings.

DO NOT lubricate turntable driving surface, the teeth on the cycling gear, or the turntable hub.

ADJUSTMENTS

Tone Arm Setdown

Adjust B1 so that the needle sets down in the center of the lead-in groove on a 12-inch record. Turning B1 clockwise moves the set-down point outward.

Tone Arm Height

Adjust B2 so that the top of the Tone Arm clears a 12-inch record on the center spindle shelf during the change cycle. Turning B2 clockwise decreases the lift-up height.

Needle Pressure (Tubular Tone Arms)

Nominal pressure 6 grams. Adjust B3 to obtain

correct needle pressure. Turning B3 clockwise decreases needle pressure.

Needle Pressure (Flat Tone Arms)

Nominal pressure 6 grams. Adjust the tension of the tone-arm tension spring by moving the spring in anchor, B3, to obtain the correct needle pressure. Increasing the tension of the spring decreases the needle pressure.

Drive Idler Height

Select 33 rpm and adjust the screw in the idler-support arm until the idler wheel is in the center of the 33 rpm section of the motor shaft.

TROUBLE CHART

SYMPTOM	REMARKS
Turntable does not revolve when Function Selector is moved to On.	Spring (53) broken or missing. Arm (52) binding. Idler (1) binding on shaft. Motor (54) defective.
Turntable speed varies.	Spring (53) weak. Idler (1) binding on shaft. Idler drive surface dirty. Turntable drive surface dirty.
Turntable speed too slow.	Bearing (55) binding. Hub (36) binding on shaft. Idler height adjustment incorrect. Motor (54) defective.
Turntable stalls during change cycle.	Plate (60) binding. Pin (76) binding. Spring (53) weak. Idler drive surface dirty. Turntable drive surface dirty. Motor (54) defective.
Changer does not cycle when Function Selector is moved to Rej.	Spring (66) broken or missing. Slide (65) binding. Trip Pawl (39) bent or binding.
Changer cycles and shuts off when Function Selector is moved to Rej.	Latch (79) binding. Arm (88) binding.
Changer continues to cycle with normal tone-arm movement.	Trip Pawl (39) bent or binding. Spring (61) broken or missing.
Changer continues to cycle with Tone Arm moving to center of turntable with each cycle.	Spring (62) broken or missing. Lever (86) binding.
Changer does not shut off after last record has been played.	Spring (45) broken or missing. Spring (61) broken or missing. Spring (69) broken or missing. Spring (81) broken or missing.
Tone Arm does not set down at proper point on record.	Spindle (90) binding. Lever (84) binding. Arm (88) binding. Spring (89) broken or missing. Spring (85) broken or missing. Tone-arm setdown improperly-adjusted. Pick-up lead length insufficient.
Tone Arm does not track record properly.	Spindle (90) binding. Slide (65) binding. Trip Pawl (39) binding. Needle pressure incorrect. Pick-up lead length insufficient.
Tone Arm lifts and returns to rest post when changer cycles.	Spring (73) broken or missing. Spring (64) broken or missing.

MECHANICAL PARTS LIST

REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION
1	A101623	Idler Wheel	42	A106065	Reject Link
2	A105606	Function Selector Knob	43	B105828	Switch Link
3	B105604	Speed Selector Cam	44	A105585	Switch Lever
4	C104955 (1)	Turntable Assembly	45	A105826	Switch Lever Spring
	C106786 (2)	Turntable Assembly	46	B106016	Switch Assembly
5	A105964	Center Spindle Assembly	47	A105584	Speed Change Bracket
6	B106971	Stabilizer Arm Assembly	48	A105733	Speed Change Spindle
7	C105681	Stabilizer Housing	49	A105831	Speed Change Spindle Spring
8	B106976 (3)	Tone Arm Rest Post	50	A107503	Speed Change Arm Assembly
	A105608 (4)	Tone Arm Rest Post	51	A105619	Idler Height Adjusting Screw
9	A107185 (3)	Tone Arm Clip Assembly	52	A105965	Idler Arm Assembly
10	A105674	Function Selector Escutcheon	53	A105824	Idler Spring
11	A105730 (1)	Function Selector Insert	54	TP8/86 (1)	Motor, 120V, 60cps
12	A105675	Speed Selector Escutcheon	55	A101649	Turntable Bearing
13	A105731 (1)	Speed Selector Insert	56	A104882	Center Spindle Retainer
14	C106020 (5)	Tone Arm	57	B105597	Feed Lever Link
	C106785 (5)	Tone Arm	58	A106968	Feed Lever Link Spring
15	B106975 (3)	Tone Arm Tube	59	A105827	Link Return Spring
16	A107184 (3)	Tone Arm Sub Assembly	60	B107078	Operating Plate Assembly
17	B106977 (3)	Pick-up Housing	61	A106980	Operating Plate Spring
	B106035 (5)	Pick-up Housing	62	A105825	Selector Lever Spring
18	A106775 (2)	Pick-up Adapter Plate	63	A107009	Toggle Operating Lever
			64	A107007	Toggle Operating Lever Spring
	A105155 (5)	Pick-up Adapter Plate	65	B106962	Actuating Slide
19	A106651 (3)	Tone Arm Pivot Pin	66	A105901	Actuating Slide Spring
	A105622 (4)	Tone Arm Pivot Pin	67	A107419	Ball Bearing, 9/64" Dia.
20	A105669 (3)	Tone Arm Balance Spring	68	B105592	Shut-off Lever
	A105847 (4)	Tone Arm Balance Spring	69	A102623	Shut-off Lever Spring
21	A106657 (3)	Balance Adjusting Plate	70	A106067	Reject Lever Assembly
22	A106711 (3)	Balance Adjusting Screw	71	A106627	Detent Spring
23	A105142 (4)	Balance Spring Anchor	72	A107077	Toggle Assembly
24	A106652 (3)	Tone Arm Pivot Screw	73	A107648	Toggle Friction Spring
25	A105624	Tone Arm Spindle Nut	74	A104384	Quadrant Leaf Spring
26	A105975	Hinge Bracket Assembly	75	A105609	Leaf Spring Support
	A106084	Hinge Bracket with Restrictor	76	A105976	Tone Arm Lift Pin Assembly
27	A105598	Tone Arm Setdown Adjust	77	B107104	Quadrant Assembly
28	A106047	Locking Sleeve	78	C107105	Main Sub Plate Assembly
29	A105853	Hinge Retainer Spring	79	B106963	Stop Latch
30	A105712	Height Adjusting Screw	80	A200510	Selector Arm Spring
31	A105907	Height Adjusting Nut	81	A107347	Stop Latch Spring
32	A102090	Stabilizer Arm Pin	82	A105849	Selector Lever Latch Spring
33		Stabilizer Arm Shaft	83	A105969	Reset Link Assembly
34	A105985	Stabilizer Arm Spring	84	A106128	Trip Lever Assembly
35	A104861	Spacer	85	A106007	Trip Lever Toggle Spring
36	B106489 (2)	Turntable Hub	86		(7) Selector Lever
37	A106490 (2)	Turntable Hub Nut	87		(7) Selector Lever Latch
38	A102133	Cam Gear Assembly	88		(7) Selector Arm
39	A102132	Trip Pawl Assembly	89		(8) Trip Spring
40	A105978	Control Plate Assembly	90		(9) Tone Arm Pivot Spindle
41	A105732	Function Selector Pivot Pin	91		(10) Shut-off Pin

(1) Models AA50/5, AA50/5D2.

(2) Model AA50/6.

(3) Model AA50/5D2.

(4) Models AA50/5, AA50/6.

(5) Model AA50/5

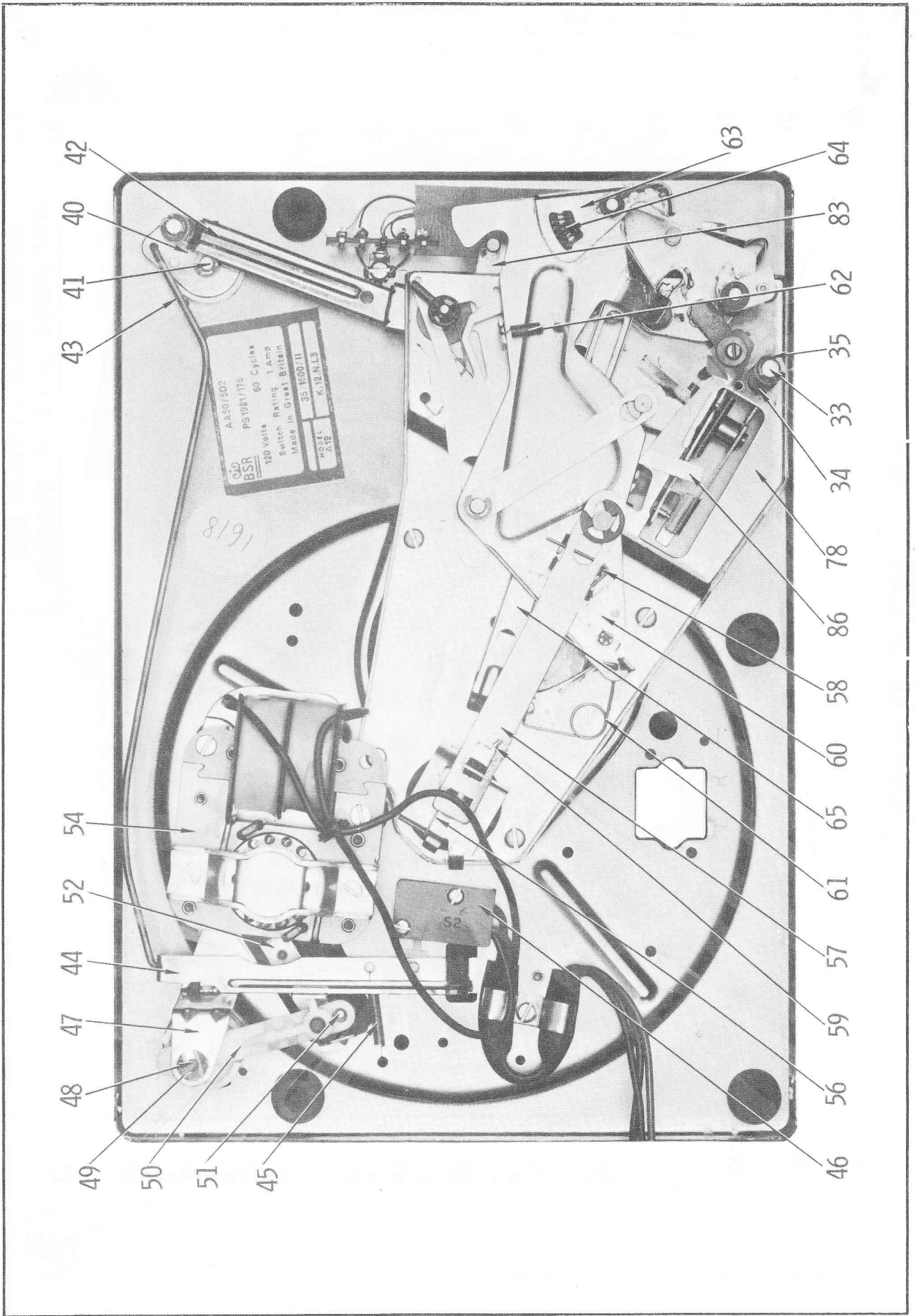
(6) Part of Ref. No. 33.

(7) Part of Ref. No. 78.

(8) Part of Ref. No. 84.

(9) Part of Ref. No. 77.

(10) Part of Ref. No. 33.



BSR MODELS AA50 SERIES
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