

Bally HIGH FLYER



GAME 1131



Bally MANUFACTURING CORPORATION

2640 Belmont Avenue • Chicago, Illinois, 60618, U.S.A.

TELEPHONE (312) 267-6060/TELEX NO. 253076/CABLE ADDRESS: BALFAN

MACHINE MAINTENANCE & SERVICE HINTS

To help maintain your game in good working order, the game should be kept as CLEAN as possible.

One of the prime areas that dirt and other foreign matter can collect is the COIN CHUTE. Dirt, metallic coin dust and sticky beverages can cause malfunctions of the coin mechanism. An aerosol type de-greaser or contact cleaner may be used. But these cleaners MUST BE WIPED OFF WITH A CLEAN CLOTH. This is to remove any residue or dissolved scum.

Keep the BOTTOM AND BACK CABINETS clear of any extra loose parts, screws, nuts, switch blades, etc. This helps in trouble shooting, for broken or loose parts often turn up at the bottom of these cabinets, thereby making the trouble area easier to identify and repair.

Proper adjustment of SWITCH BLADES and WIPERS should be maintained for good electrical conduction and machine timing. When SWITCH BLADES are OVERLY BENT they can break off at the base. WIPER BLADES under TOO MUCH PRESSURE will cut through printed circuit discs. WIPER ASSEMBLIES especially those assembled with multiple fibre discs, are very susceptible to ELECTRICAL ARCING. This is exceptionally true when they are covered with even a thin coat of dirt and oil. Arcing will cause carbon traces to build up which will burn a hole through the fibre plates. Arcing shorts are hard to trace and play havoc with a circuit. To help prevent arcing look for carbon build up on discs and wipers. Clean any build up spotted with an aerosol type de-greaser or contact cleaner. But these cleaners MUST BE WIPED OFF WITH A CLEAN CLOTH. Also check fibre cams for worn lobes or worn locking notches.

IN CONCLUSION, A CLEAN MACHINE IS EASIER TO MAINTAIN AND KEEP IN SERVICE.

WIRE COLOR CODE

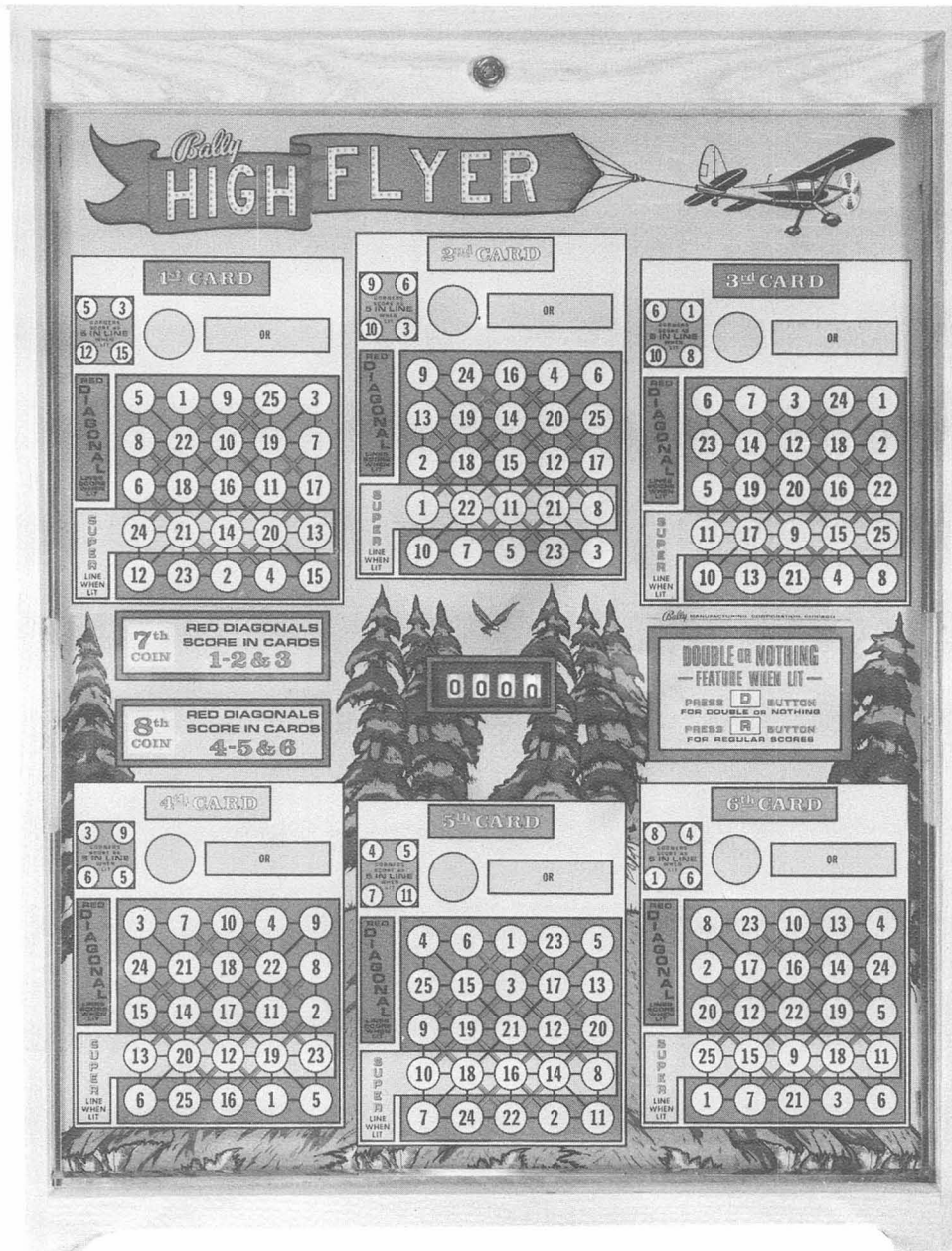
1.... RED	A. FIRST NUMBER IS
2.... BLUE	WIRE BODY COLOR
3.... YELLOW	
4.... GREEN	B. SECOND NUMBER IS
5.... WHITE	TRACER COLOR
6.... BROWN	STRIPE
7.... ORANGE	
8.... BLACK	C. NUMBER AFTER DASH
9.... GRAY	INDICATES RE-USE OF
0.... NO TRACER	SAME COLOR WIRE IN
	A DIFFERENT CIRCUIT

SWITCH CODE

N.C.... NORMALLY CLOSED
N.O.... NORMALLY OPEN
N.B.B... MAKE BEFORE BREAK
S.P.D.T. SINGLE POLE DOUBLE
THROW OR TRANSFER SW. "T"

NOTE: ALL SWITCHES ON BALLY
DIAGRAMS WORK CLOCKWISE.

BACK GLASS LAYOUT



INTRODUCTION

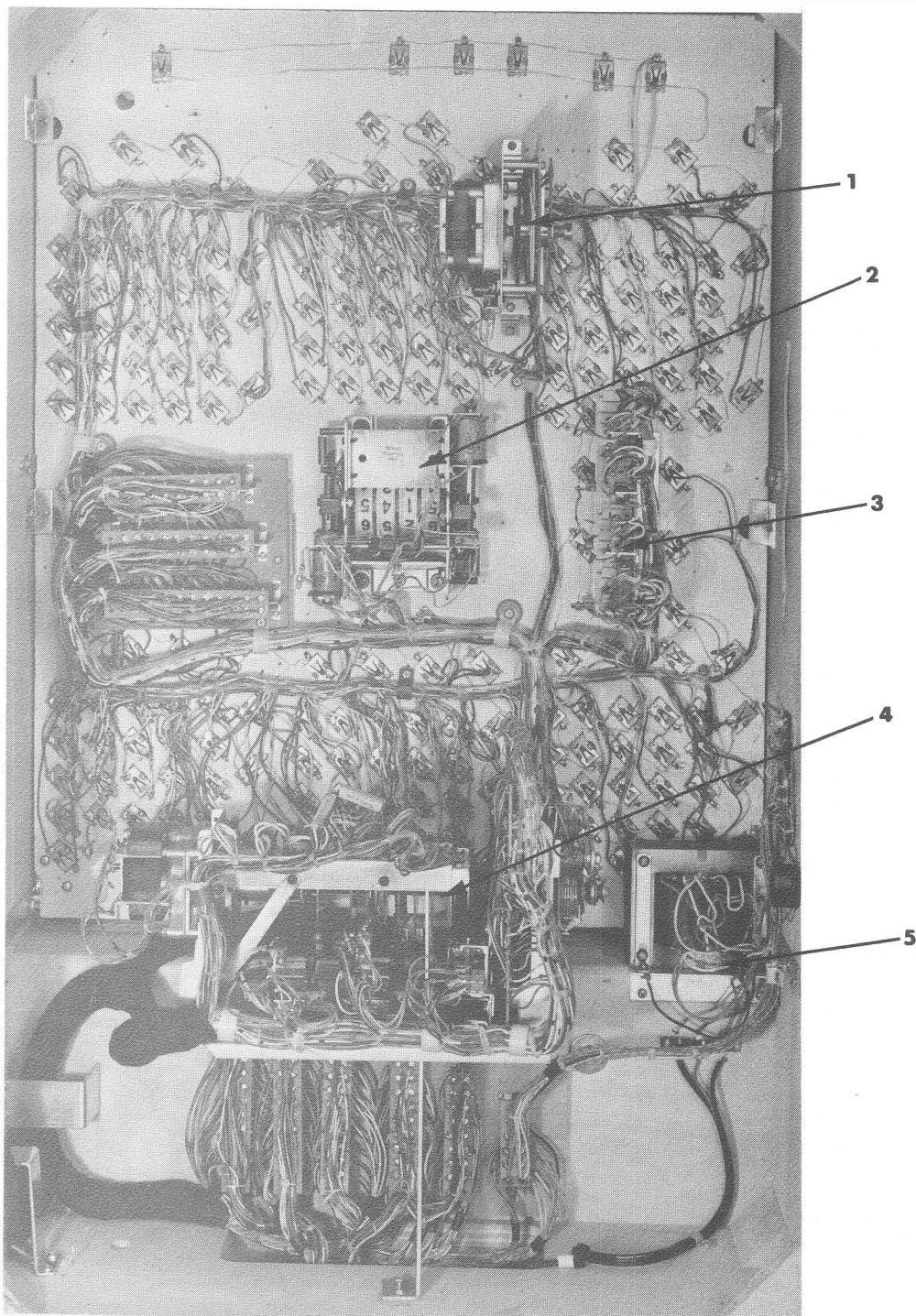
Player plays 1 to 8 coins. The first six coins select 1 to 6 cards. Cards guaranteed in numerical order 1 to 6 for each coin played -- with progressive scores as card selection advances.

The seventh coin allows Red Diagonal line winners in cards 1, 2 & 3.

The eighth coin allows Red Diagonal line winners in cards 4, 5 & 6.

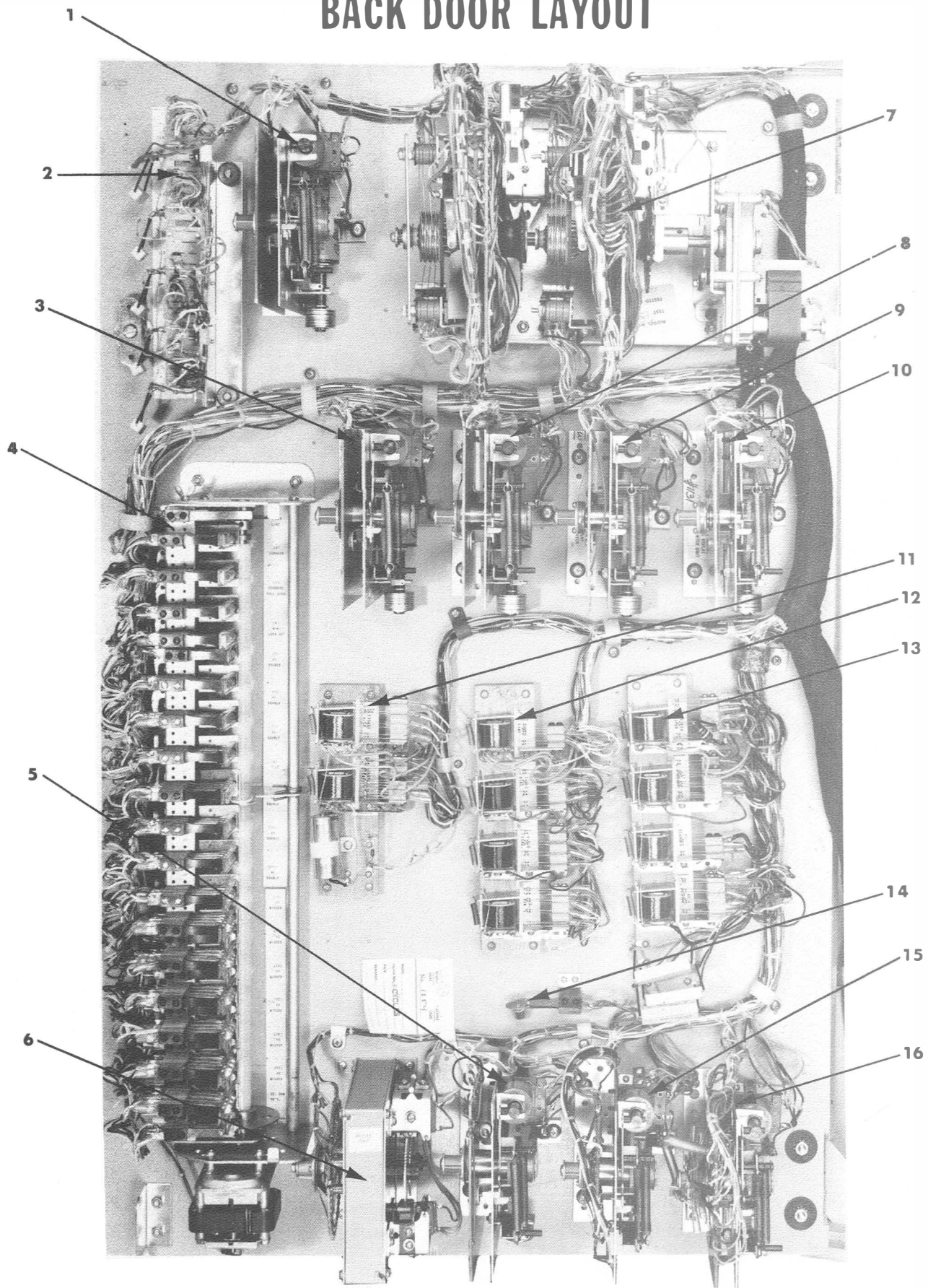
In addition to the above features, the following scoring advantages may light on a mystery basis: Corner and Super Line rollovers, Corner Panels in all selected cards (4 corner numbers lit during ball play, score as 5-in-line), Super Line Panels in all selected cards (3-in-line scores as 5-in-line, or 4-in-line scores as 5-in-line).

CABINET BACK LAYOUT



Item No.	Part Number	Description	Page
1	AS-2611-11	Random Motor Unit	44
2	AS-473-54	Replay Register Unit	41
3	E-300-913	4 Relay Bank	24
4	AS-798-127	Control Unit	12
5	E-122-103	Transformer	

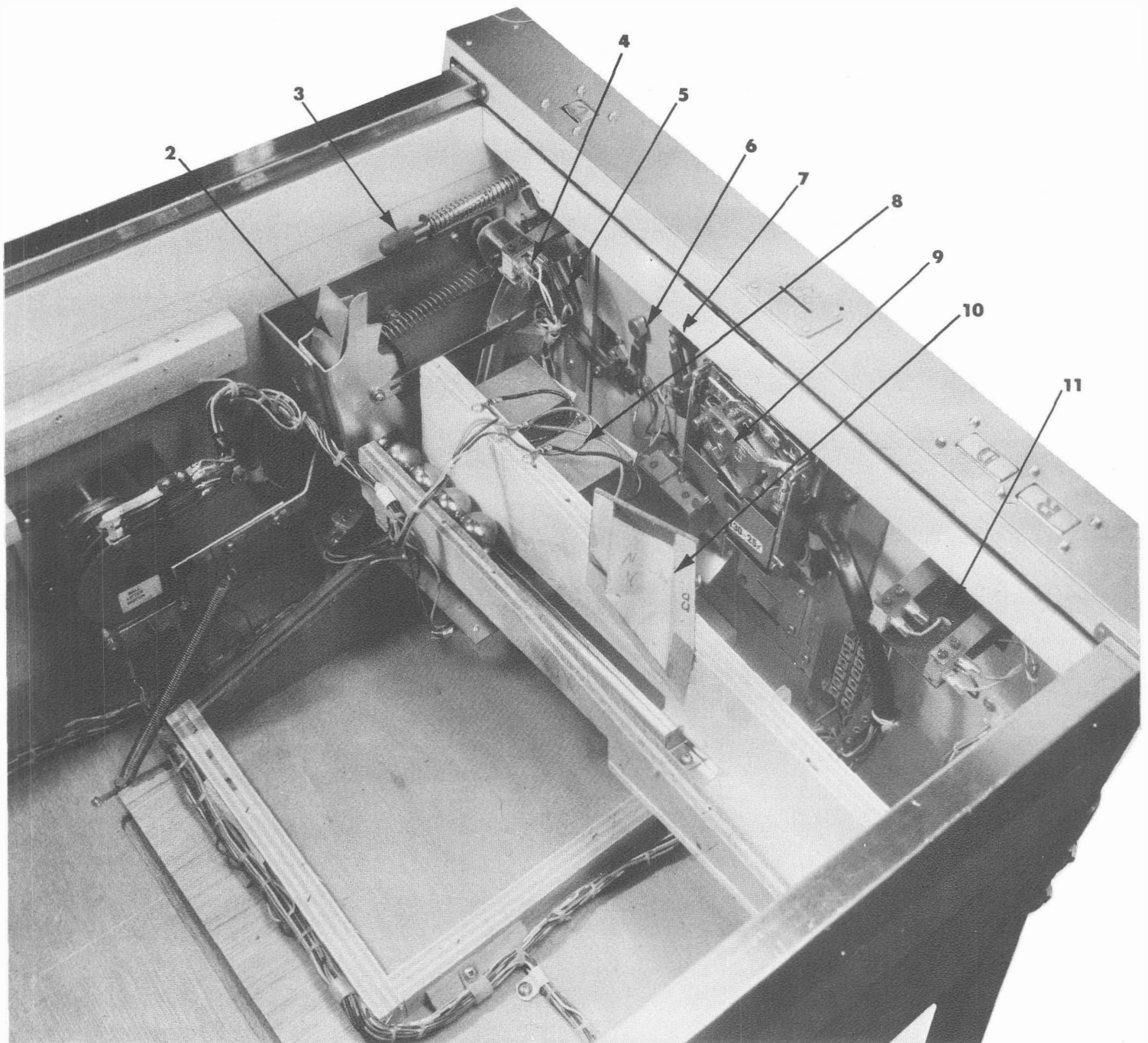
BACK DOOR LAYOUT



Item No.	Part Number	Description	Page	Item No.	Part Number	Description	Page
1	AS-1022-162	No. 1 Replay Counter	32	9	AS-1022-165	No. 4 Replay Counter	35
2	E-300-597	5 Relay Bank	22	10	AS-1022-166	No. 5 Replay Counter	36
3	AS-1022-163	No. 2 Replay Counter	33	11	E-300-916	2 Relay Bank	31
4	AS-2409-42	17 Relay Bank	16	12	E-300-914	4 Relay Bank	26
5	AS-1022-167	No. 6 Replay Counter	37	13	E-300-915	4 Relay Bank	28
6	AS-873-56	Reflex Unit		14	AS-982-61	Tilt Switch	
7	AS-798-128	Search Unit		15	AS-1110-58	Timer Unit	39
8	AS-1022-164	No. 3 Replay Counter	34	16	AS-1022-161	Selection Unit	38

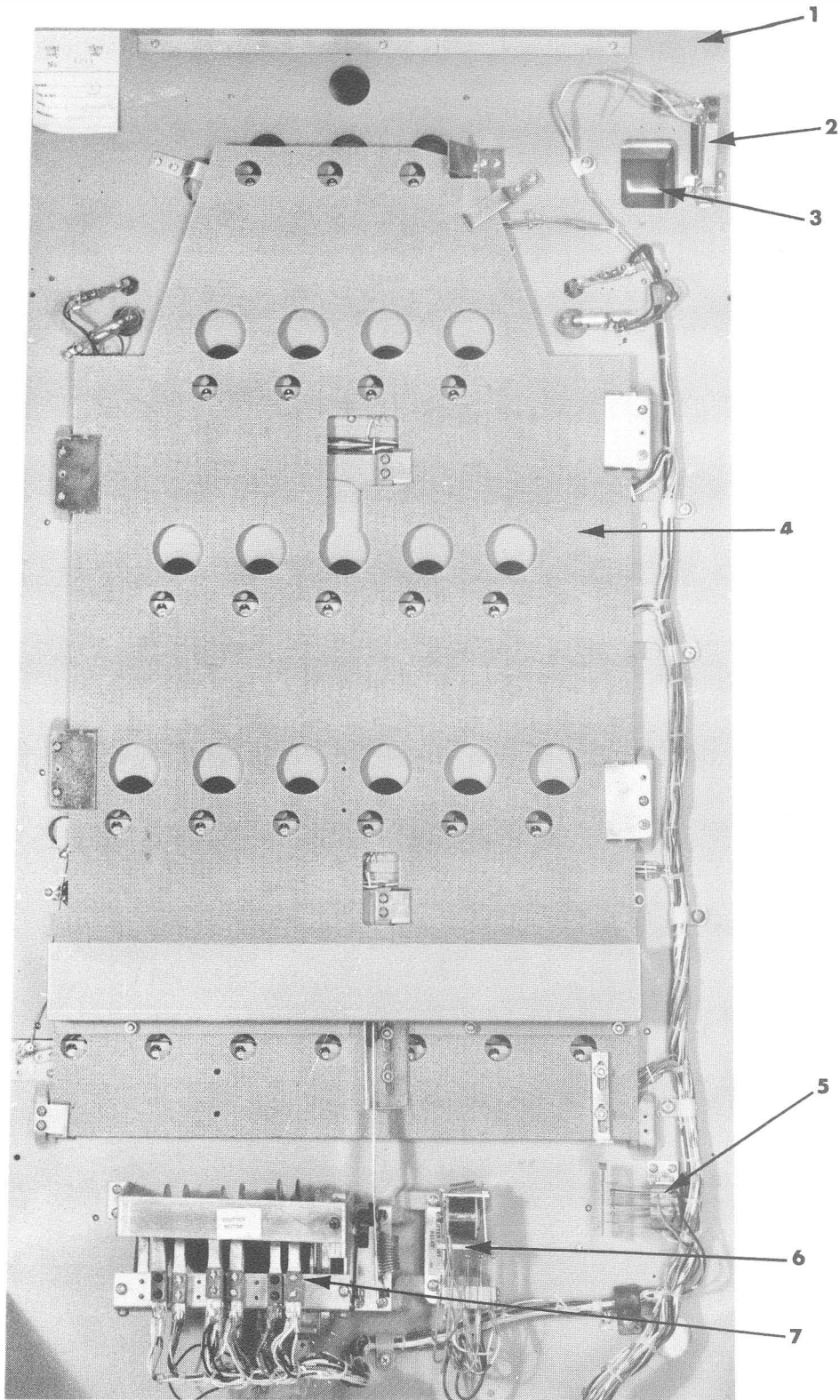
ALWAYS GIVE MODEL AND PART NUMBERS WHEN ORDERING SERVICE PARTS

LOWER FRONT CABINET LAYOUT



Item No.	Part Number	Description	Page
1	AS-1139-36	Ball Lifter Motor Assembly	44
2	AS-186-11	Ball Lifter Assembly	
3	AS-187-20	Ball Shooter Assembly	
4	A-1272-25	"C" Button Switch and Bracket Assembly	42
5	ASW-A2-9	Manual Lift Button Switch	41
6	ASW-A1-25	Tilt Switch	41
7	A-1729-16	Replay Switch (Red Button)	
8	E-130-29	Counters	
9	AS-277-105	Coin Switch and Reject Mechanism	
10	AS-1145-52	Ball Trough and Switch Assembly	41
11	AS-982-948	"Selector", "R" & "D" Button Switches	42

PLAYFIELD PANEL LAYOUT



Item No.	Part Number	Description	Page
1	CA-529-13	Panel	
2	ASW-A1-7	Ball Runway Switch	41
3	C-153	Ball Lift Cover	
4	AS-1433-20	Shutter Assembly	
5	AS-2930-1	Lift Start Relay	
6	AS-232-98	Shutter Motor Assembly	44

CONTROL UNIT WINNER SEARCH POSITIONS CHART

Cards 1 & 2

WIPER AT DISC LOCATION NO.	WIPER NO. 5 SEARCH RELAY NO. 1	WIPER NO. 6 SEARCH RELAY NO. 2	WIPER NO. 7 SEARCH RELAY NO. 3	WIPER NO. 4 SEARCH RELAY NO. 4	WIPER NO. 3 SEARCH RELAY NO. 5
1					
2					
3	BINGO CARD NUMBERS READ ACROSS				
4					
5					
6	9	6	-	10	3
7	16	20	17	-	-
8	24	14	12	8	-
9	13	18	11	23	-
10	2	22	5	-	-
11	5	21	17	-	-
12	7	11	12	25	-
13	1	18	14	4	-
14	2	19	16	-	-
15	6	20	15	22	10
16	9	19	15	21	3
17	6	25	17	8	3
18	4	20	12	21	23
19	16	14	15	11	5
20	24	19	18	22	7
21	9	13	2	1	10
22	10	7	5	23	3
23	1	22	11	21	8
24	2	18	15	12	17
25	13	19	14	20	25
26	9	24	16	4	6
27					
28	5	3	-	12	15
29	9	19	17	-	-
30	1	10	11	13	-
31	8	18	14	4	-
32	6	21	2	-	-
33	2	20	17	-	-
34	23	14	11	7	-
35	24	18	10	25	-
36	6	22	9	-	-
37	3	19	16	21	12
38	5	22	16	20	15
39	3	7	17	13	15
40	25	19	11	20	4
41	9	10	16	14	2
42	1	22	18	21	23
43	5	8	6	24	12
44	12	23	2	4	15
45	24	21	14	20	13
46	6	18	16	11	17
47	8	22	10	19	7
48	5	1	9	25	3
49					
50					

Card No.2 Corners Winners

Card No.2 Winners

Super Line

Card No.1 Corners Winners

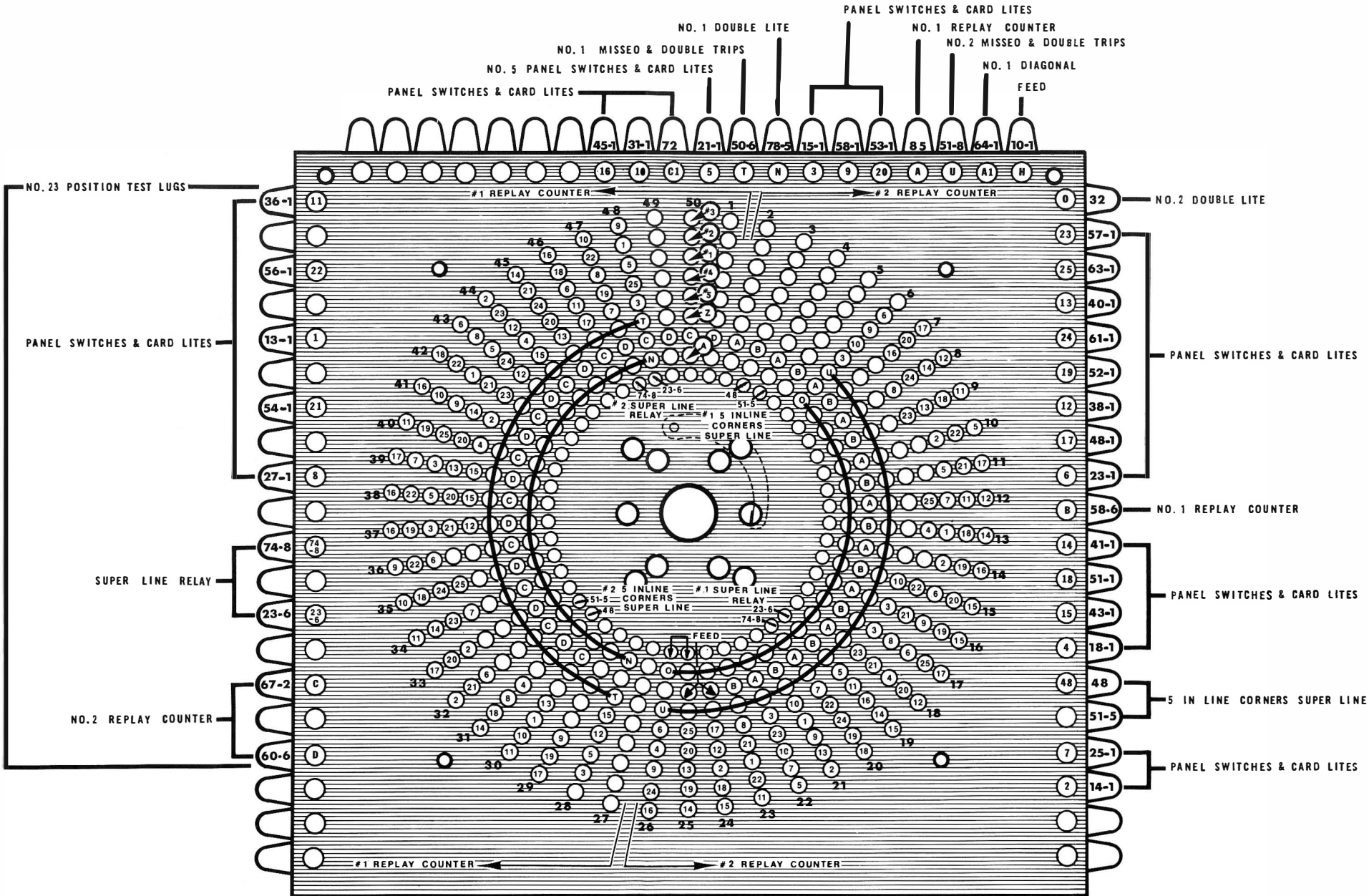
Card No.1 Winners

Super Line

1-2 CONTROL UNIT SEARCH DISC

WIPER AS-910-40

DISC W-850-47



CONTROL UNIT WINNER SEARCH POSITIONS CHART

Cards 3 & 4

WIPER AT DISC LOCATION NO.	WIPER NO. 5 SEARCH RELAY NO. 1	WIPER NO. 6 SEARCH RELAY NO. 2	WIPER NO. 7 SEARCH RELAY NO. 3	WIPER NO. 4 SEARCH RELAY NO. 4	WIPER NO. 3 SEARCH RELAY NO. 5
1					
2					
3	BINGO CARD NUMBERS READ ACROSS				
4					
5					
6	3	9	-	6	5
7	10	22	2	-	-
8	7	18	11	23	-
9	24	14	12	1	-
10	15	20	16	-	-
11	16	19	2	-	-
12	25	12	11	8	-
13	13	14	18	4	-
14	15	21	10	-	-
15	9	22	17	20	6
16	3	21	17	19	5
17	9	8	2	23	5
18	4	22	11	19	1
19	10	18	17	12	16
20	7	21	14	20	25
21	3	24	15	13	6
22	6	25	16	1	5
23	13	20	12	19	23
24	15	14	17	11	2
25	24	21	18	22	8
26	3	7	10	4	9
27					
28	6	1	-	10	8
29	3	18	22	-	-
30	7	12	16	25	-
31	23	19	9	4	-
32	5	17	21	-	-
33	21	15	22	-	-
34	13	9	16	2	-
35	11	19	12	24	-
36	5	14	3	-	-
37	1	18	20	17	10
38	6	14	20	15	8
39	1	2	22	25	8
40	24	18	16	15	4
41	3	12	20	9	21
42	7	14	19	17	13
43	6	23	5	11	10
44	10	13	21	4	8
45	11	17	9	15	25
46	5	19	20	16	22
47	23	14	12	18	2
48	6	7	3	24	1
49					
50					

Card No.4 Corners Winners

Card No.4 Winners

Super Line

Card No.3 Corners Winners

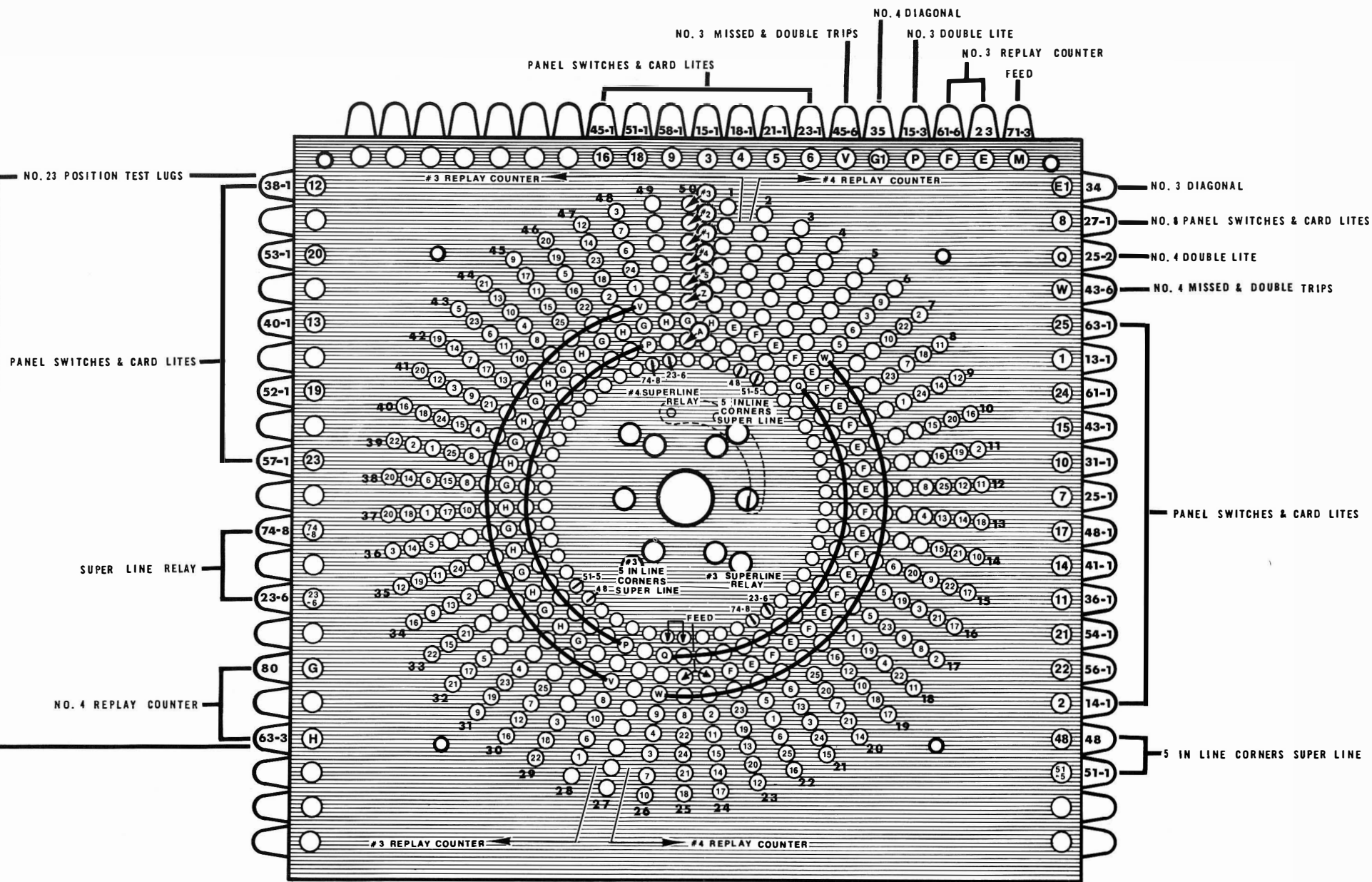
Card No.3 Winners

Super Line

3-4 CONTROL UNIT SEARCH DISC

DISC W-850-48C

WIPER AS-910-40



CONTROL UNIT WINNER SEARCH POSITIONS CHART

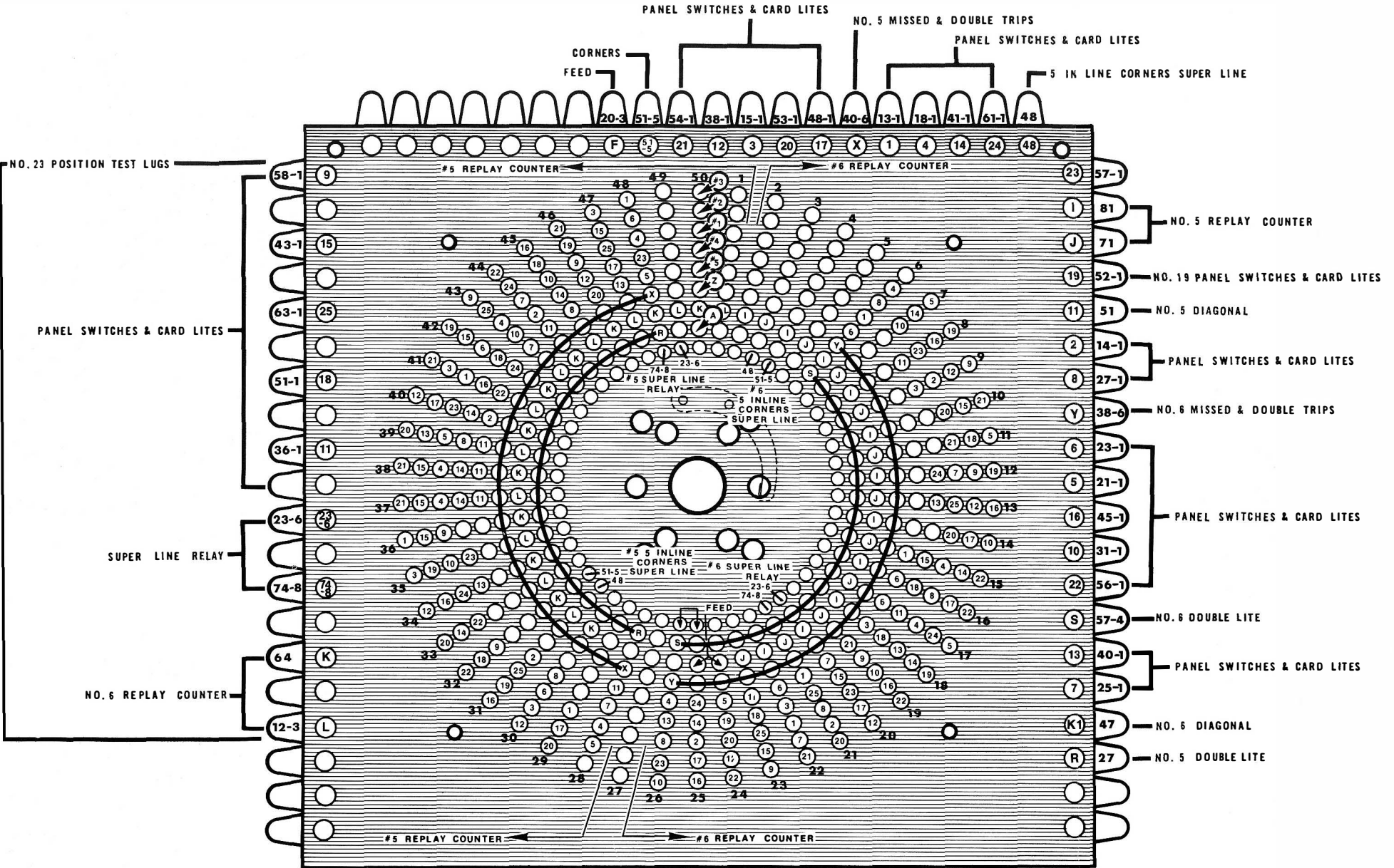
Cards 5 & 6

WIPER AT DISC LOCATION NO.	WIPER NO. 5 SEARCH RELAY NO. 1	WIPER NO. 6 SEARCH RELAY NO. 2	WIPER NO. 7 SEARCH RELAY NO. 3	WIPER NO. 4 SEARCH RELAY NO. 4	WIPER NO. 3 SEARCH RELAY NO. 5	
1						
2						
3	BINGO CARD NUMBERS READ ACROSS					
4						
5						
6	8	4	-	1	6	Card No.6 Corners Winners
7	10	14	5	-	-	Card No.6 Winners
8	23	16	19	11	-	
9	2	12	9	3	-	
10	20	15	21	-	-	
11	21	18	5	-	-	
12	7	9	19	24	-	
13	25	12	16	13	-	
14	20	17	10	-	-	
15	4	14	22	15	1	
16	8	17	22	18	6	
17	4	24	5	11	6	
18	13	14	19	18	3	
19	10	16	22	9	21	
20	23	17	12	15	7	
21	8	2	20	25	1	
22	1	7	21	3	6	
23	25	15	9	18	11	Super Line
24	20	12	22	19	5	Card No.5 Corners Winners
25	2	17	16	14	24	
26	8	23	10	13	4	
27						
28	4	5	-	7	11	Card No.5 Winners
29	1	17	20	-	-	Card No.5 Winners
30	6	3	12	8	-	
31	25	19	16	2	-	
32	9	18	22	-	-	
33	22	14	20	-	-	
34	24	16	12	13	-	
35	10	19	3	23	-	
36	9	15	1	-	-	
37	5	17	21	18	7	
38	4	15	21	14	11	
39	5	13	20	8	11	
40	23	17	12	14	2	
41	1	3	21	16	22	
42	6	15	19	18	24	
43	4	25	9	10	7	
44	7	24	22	2	11	
45	10	18	16	14	8	Super Line
46	9	19	21	12	20	Card No.5 Winners
47	25	15	3	17	13	
48	4	6	1	23	5	
49						
50						

5-6 CONTROL UNIT SEARCH DISC

DISC W-850-48

WIPER AS-910-40



CONTROL UNIT ASSEMBLY

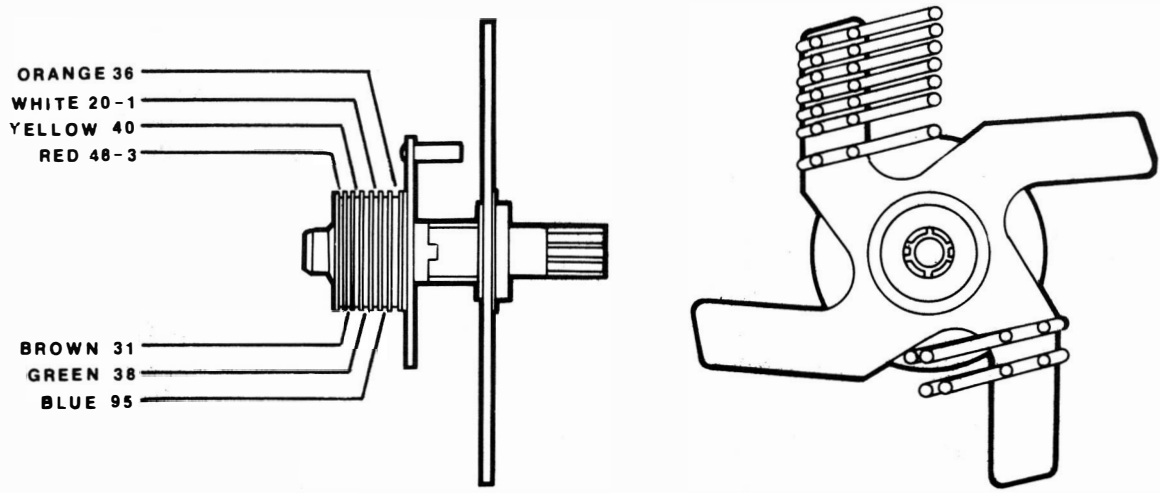
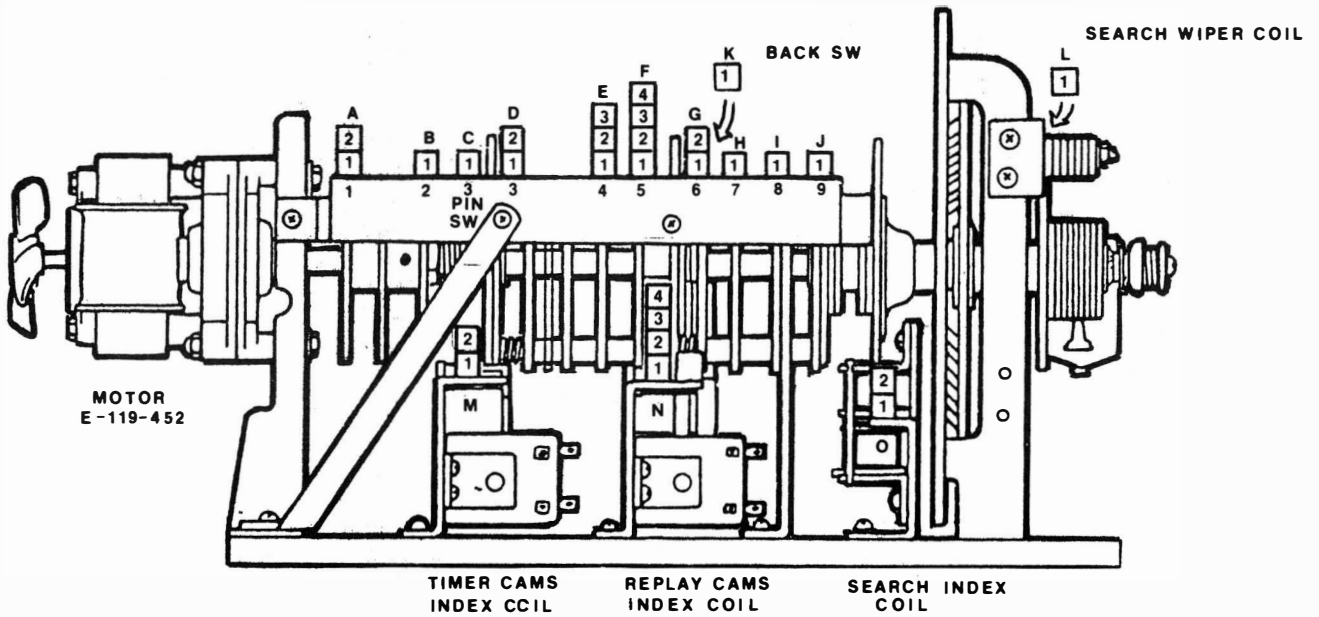
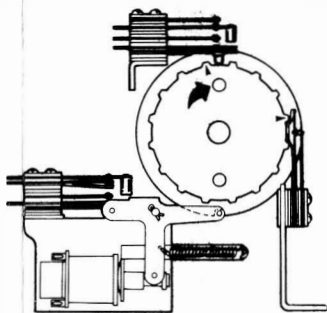
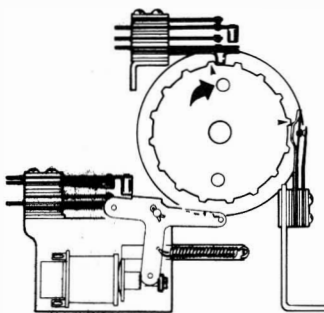


FIGURE 1



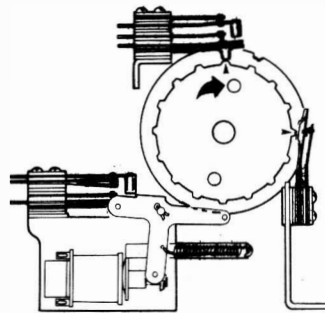
Replay Cam Shown in Normal Indexed Position. Switches A, B & C are in Normally Open Position.

FIGURE 2



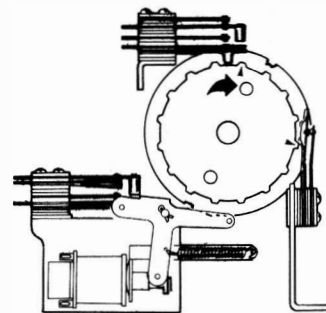
Replay Cam Starting to rotate. Switches are out of Index Position. Switches A & B are still in Normally Open Position. Switch C is now Closed.

FIGURE 3



As the Replay Cam continues to Rotate, Switches A, B & C are now closed. All switches are centered on Cam Lobes and Perfectly Synchronized.

FIGURE 4



Replay Cam rotates further, Switches A & B are again at their Normally Open Positions. However Switch C still remains Closed. After this portion of the cycle, the Cam and Switches return to Normal Index Position as Shown in Figure 1.

CONTROL UNIT FUNCTION CHART

SWITCH/COIL	PART NO.	LOCATION ON DIAGRAM	WIRE NO.	WIRE COLOR	FUNCTION
Motor	E-119-452	E-3	95-16 98-16	Gray-White Gray-Black	Operates Thru Replay Reset Relay
Cam No. 1 N.O.	ASW-C1-3	C-5	75-4 74-1	Orange-White Orange-Green	Completes Circuit From Replay Reset Rel.
N.C.	ASW-C2-4	G-5	20 30	Blue Yellow	Completes Circuit From Regular Win Rel.
Cam No. 2 N.O.	ASW-C1-4	D-9	65-2 63-2	Brown-Yellow Brown-Yellow	Completes Circuit From B-4 Lockout Trip Switch
Cam No. 3 N.C. Pin Switch	ASW-C2-28	F-8	30 82-1	Yellow Black-Blue	Completes Circuit To Multi-Play Relay
Cam No. 3 N.C.	ASW-C1-4	F-6	30 80-9	Yellow Black	Completes Circuit To Search Wiper Relay
T	ASW-C3-3	B-12	36-2 72-2 54-4	Yellow-Brown Orange-Blue White-Green	Completes Circuit From Total Play Meter
Cam No. 4 N.O.	ASW-C1-4	D-22	27-5 21-3	Blue-Orange Blue-Red	Completes Circuit To Selection Unit Step Up Coil
N.O.	ASW-C1-8	F-5	30 30J 43-2	Yellow Yellow Green-Yellow	Completes Circuit To Reflex Unit Coil
N.O.		C-4	30J 15-7	Yellow Red-White	Completes Circuit To Anti-Cheat Relay Coil
Cam No. 5 N.O.	ASW-C1-4	E-13	21-3 31-2	Blue-Red Yellow-Red	Completes Circuit To Multi-Play Relay
N.O.	ASW-C1-8	B-7	51-2 67-1	White-Red Brown-Orange	Completes Circuit To Coin Meter Coil
T	ASW-C3-3	D-6	78-1 84-2 65-1	Orange-Black Black-Green Brown-White	Completes Circuit From Coin Switch
Lug	ASW-A0-3	E-13	31-2	Yellow-Red	Completes Circuit To Multi-Play Relay
Cam No. 6 N.O.	ASW-C1-3	C-14	70J	Orange	Completes Circuit To Replay Cam Index Coil
N.O.	ASW-C1-43	C-14	41-6 40-2	Green-Red Green	Completes Circuit To Replay Cam Index Coil
Back Sw. N.O.	ASW-C1X-21	D-15	78 53	Orange-Black White-Yellow	Completes Circuit To No.1-2 Search Index Switch
Cam No. 7 N.O.	ASW-C1-4	A-15	70 70J 13-2	Orange Orange Red-Yellow	Completes Circuit From Double Win Relay No. 2

ALWAYS GIVE MODEL AND PART NUMBERS WHEN ORDERING SERVICE PARTS

CONTROL UNIT FUNCTION CHART

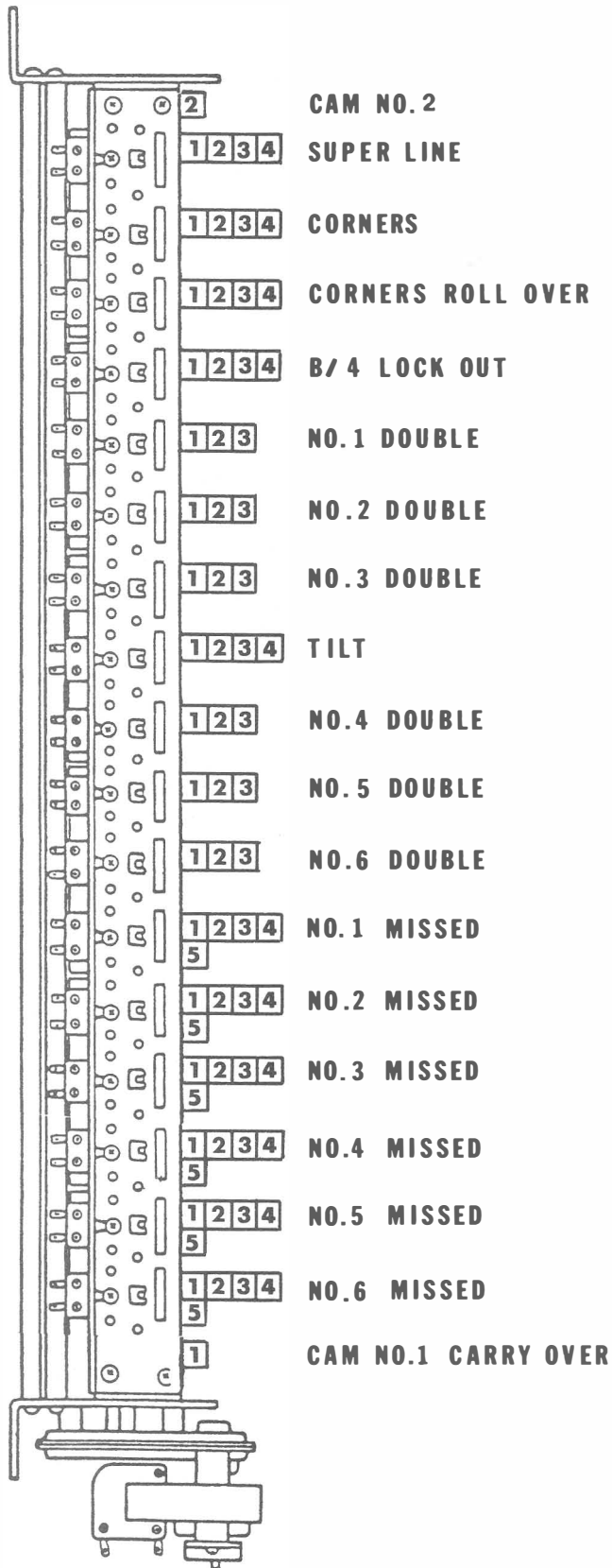
SWITCH/COIL	PART NO.	LOCATION ON DIAGRAM	WIRE NO.	WIRE COLOR	FUNCTION
Cam No. 8 N.O.	ASW-C1-4	A-15	70J 14-8	Orange Red-Green	Completes Circuit From Double Win Relay No. 2
Cam No. 9 N.C.		F-14	85-1 23-6	Black-White Blue-Yellow	Completes Circuit To Replay Cam Index
Search Ratchet Pin Sw.No.10 (1-2 Search) N.O.	ASW-C2-32	C-24	21-3 81-7	Blue-Red Black-Red	Completes Circuit To No.3-4 Search Wiper Lock Coil
Search Ratchet Pin Sw.(3-4 Search) N.O.	ASW-C1X-1	B-24	21-3 35-1	Blue-Red Yellow-White	Completes Circuit To No.5-6 Search Wiper Lock Coil
Search Wiper (1-2) Lock Coil	AS-2517-7	A-24	70 27-3	Orange Blue-Orange	Trips Thru Replay Reset Relay
N.O.	AS-982-1112	F-24	21-3 50-1	Blue-Red White	Completes Circuit To Search Wiper Relay
Search Wiper (3-4) Lock Coil	AS-2517-7	A-24	70 81-7	Orange Black-Red	Trips Thru Control Unit No.10 1-2 Search Ratchet Pin Switch
N.O.	AS-982-1112	C-24	21-3 30-1	Blue-Red White	Completes Circuit To Search Wiper Relay
Search Wiper (5-6) Lock Coil	AS-2517-7	A-24	70 35-1	Orange Yellow-White	Trips Thru 3-4 Search Ratchet Pin Switch
N.O.	AS-982-1112	F-24	21-3 50-1	Blue-Red White	Completes Circuit To Search Wiper Relay
Timer Cam Index	AS-472-157	A-8	70 52	Orange White-Blue	Trips Thru Shutter Cam Switch No. 1
N.O.	ASW-A1-11	F-3	94-16 98-16	Gray-Green Gray-Black	Completes Circuit To Search Unit Motor
N.C.	ASW-A2-18	B-7	51-2 45-3	White-Red Green-White	Completes Circuit To Coin Lockout Coil
Lug	ASW-A0-3	F-6	21-3	Blue-Red	Resistor
Replay Cam Index	AS-472-156	A-14	70 40-2	Orange Green	Trips Thru Regular Win Relay
N.O.	ASW-A1-11	E-15	53 21-3	White-Yellow Blue-Red	Completes Circuit To Control Unit Cam No. 6 Back Switch
N.O.	ASW-A1-54	E-14	85-1 23-6	Black-White Blue-Yellow	Completes Circuit To Search Relay No. 3

ALWAYS GIVE MODEL AND PART NUMBERS WHEN ORDERING SERVICE PARTS

CONTROL UNIT FUNCTION CHART

SWITCH / COIL	PART NO.	LOCATION ON DIAGRAM	WIRE NO.	WIRE COLOR	FUNCTION
N.C.	ASW-A2-27	B-9	60-2 63-2	Brown Brown-Yellow	Completes Circuit To Timer Switch
N.C.	ASW-A2-51	B-27	57-7 61	White-Orange Brown-Red	Completes Circuit To Double Play Relay Coil
Search Index (1-2)	AS-1114- 38	B-15	70 85-5	Orange Black-White	Trips Thru Search Index Relay
N.O.	ASW-A2-28	C-15	78 10-1	Orange-Black Red	Completes Circuit Search Index Relay
N.O.	ASW-A2-49	F-33	21-3 81-5	Blue-Red Black-Red	Completes Circuit To Search Index Relay Coil
Search Index (3-4)	AS-1114- 38	A-19	70 34-2	Orange Yellow-Green	Trips Thru Search Index Relay
N.O.	ASW-A2-28	D-15	78 71-3	Orange-Black Orange-Red	Completes Circuit To No. 1-2 Search Index Switch
N.O.	ASW-A2-49	F-33	21-3 81-5	Blue-Red Black-Red	Completes Circuit To Search Index Relay Coil
Search Index (5-6)	AS-1114- 38	A-20	70 62-1	Orange Brown-Blue	Trips Thru Search Index Relay
N.O.	ASW-A2-28	D-15	78 20-3	Orange-Black Blue	Completes Circuit To No. 1-2 Search Index Switch
N.O.	ASW-A2-49	F-33	21-3 81-5	Blue-Red Black-Red	Completes Circuit To Search Index Relay Coil

TRIP RELAY BANK 17



TRIP RELAY BANK 17

SWITCH/COIL	PART NO.	LOCATION ON DIAGRAM	WIRE NO.	WIRE COLOR	FUNCTION
Cam No. 2 Switch	ASW-BO-1		NOT CONNECTED		
Super Line Relay Coil	D-27-425	A-31	70 84	Orange Black-Green	Trips thru Random Disc J
1. N.C.	ASW-B-1	A-31	84-4 84	Black-Green Black-Green	Completes circuit from Random Disc J
2. N.C.		G-15	72-1 23-2	Orange-Blue Blue-Yellow	Completes Circuit Super Line Rollover Lite
3. N.O.	ASW-B20-1	G-15	30 12-2	Yellow Red-Blue	Completes Circuit From Super Line Lites (6)
4. N.O.		A-17	74-8 57	Orange-Green White-Orange	Completes Circuit 1-2 Search Disc
No. 2 Corners	D-27-425	A-31	67 70	Brown-Orange Orange	Trips Thru Random Disc H
1. N.C.	ASW-B-1	B-31	67 67J	Brown-Orange Brown-Orange	Complets Circuit From Random Disc H
2. N.C.		G-16	80-1 72-1	Black-Red Orange-Blue	Completes Circuit from Corners Roll-over Lite
3. N.O.	ASW-B20-1	G-16	30 21	Yellow Blue-Red	Completes Circuit from Corner Lites (6)
4. N.O.		F-19	51-5 61-7	White-Red Brown-Red	Completes Circuit from Search Relay 5
No.3Corners Rollover	D-27-425	A-29	57-3 70	White-Orange Orange	Trips thru Random Disc G
1. N.C.	ASW-B-1	A-29	57-3 57J	White-Orange White-Orange	Completes Circuit From Random Disc 9
2. N.O.		G-16	30 72-1	Yellow Orange-Blue	Completes Circuit From Corners Roll-over (Trip)
3. N.O.		C-31	67 47-1	Brown-Orange Green-Orange	Completes Circuit From Corners Roll-over Switch
B/4 Lock-out	D-27-425	A-40	70 75J	Orange Orange-White	Trips Thru Timer Disc
1. N.C.	ASW-B-1	A-40	75 75J	Orange-White Orange-White	Completes Circuit From Timer Disc C
2. N.O.	ASW-B20-1	F-26	21-3 83-1	Blue-Red Black-Yellow	Completes Circuit From Search Index Relay
3. N.O.		E-9	50-2 65-2	White Brown-White	Completes Circuit From Start Relay
4. N.O.		C-25	52-3 45	White-Blue Green-White	Completes Circuit From C Button Top Switch

TRIP RELAY BANK 17

SWITCH/COIL	PART NO.	LOCATION ON DIAGRAM	WIRE NO.	WIRE COLOR	FUNCTION
5. N.O.	ASW-B20-1	E-10	85-6 53-4	Black-White White-Yellow	Completes Circuit From Timer Disc E
No. 1 Double	D-27-425	A-33	70J 23-4	Orange Blue-Yellow	Trips Thru Double Win Relay No. 1
N.C.	ASW-B-1	H-5	48-10 36-7	Green-Black Yellow-Brown	Completes Circuit From No. 1 Replay Counter
T	ASW-B-3	H-6	12 65-6 30	Red-Blue Brown-White Yellow	Completes Circuit From No. 1 Double Lite
T		E-33	75-5 50-6 56-5	Orange-White White White-Brown	Completes Circuit From No. 1 - 2 Search Disc T
No. 2 Double	D-27-425	A-34	70J 25-4	Orange Blue-White	Trips Thru Double Win Relay No. 1
N.C.	ASW-B-2	G-7	31-8 52-7	Yellow-Red White-Blue	Completes Circuit From No. 2 Replay Counter
T	ASW-B-3	H-7	57-5 23-3 30	White-Orange Blue-Yellow Yellow	Completes Circuit From No. 2 Double Lite
T		E-34	74-5 51-8 56-5	Orange-Green White-Red White-Brown	Completes Circuit From No. 1 - 2 Search Disc Unit
No. 3 Double	D-27-425	A-34	70J 10-3	Orange Red	Trips Thru Double Win Relay No. 1
N.C.	ASW-B-2	G-8	53-7 15	White-Yellow Red-White	Completes Circuit No. 3 Replay Counter
T	ASW-B-3	H-9	58-3 60-5 30	White-Black Brown Yellow	Completes Circuit From No. 3 Double Lite
T		E-35	71-7 45-6 56-5	Orange-Red Green-White White-Brown	Completes Circuit From No. 3 - 4 Search Disc V
TILT	D-27-425	A-11	70J 65-1	Orange Brown-White	Trips Thru All Tilt Switches
N.C.	ASW-B-2	E-2	96-16 98-16	Gray-Brown Gray-Brown	Completes Circuit From Timer Open
N.C.		I-20	14-10 10	Red-Green Red	Completes Circuit From Insert Lites
T	ASW-B-3	I-18	51-7 41-10 13-10	White-Red Green-Red Red-Yellow	Completes Circuit From Anti-Cheat Relay
T		F-9	21-3 30 36-3	Blue-Red Yellow Yellow-Brown	Completes Circuit To Shutter Cam No. 4

TRIP RELAY BANK 17

SWITCH / COIL	PART NO.	LOCATION ON DIAGRAM	WIRE NO.	WIRE COLOR	FUNCTION
No. 4 Double	D-27-425	A-35	70J 31-5	Orange Yellow-Red	Trips Thru Double Win Relay No. 1
N.C.	ASW-B-2	G-10	82 60	Black-Blue Brown	Completes Circuit From No. 4 Replay Counter
T	ASW-B-3	H-11	21-5 38-4 30	Blue-Red Yellow-Black Yellow	Completes Circuit From No. 4 Double Lite
T		D-35	65-5 43-6 56-5	Brown-White Green-Yellow White-Brown	Completes Circuit From No. 3 - 4 Search Disc V
No. 5 Double	D-27-425	A-36	70J 36-5	Orange Yellow-Brown	Trips Thru Double Win Relay No. 1
N.C.	ASW-B-2	G-11	83-6 75-7	Black-Yellow Orange-White	Completes Circuit From No. 5 Replay Counter
T	ASW-B-3	H-12	53-5 41-4 30	White-Yellow Green-Red Yellow	Completes Circuit From No. 5 Double Lite
T		D-36	63-6 40-6 56-5	Brown-Yellow Green White-Brown	Completes Circuit From No. 5 - 6 Search Disc X
No. 6 Double	D-27-425	A-37	70J 21-6	Orange Blue-Red	Trips Thru Double Win Relay No. 1
N.C.	ASW-B-2	G-13	18-6 20-7	Red-Black Blue	Completes Circuit From No. 6 Replay Counter
T	ASW-B-3	H-13	61-5 47-2 30	Brown-Red Green-Orange Yellow	Completes Circuit From No. 6 Double Lite
T		D-37	58-4 38-6 56-5	White-Black Yellow-Black White-Brown	Completes Circuit From No. 5 - 6 Search Disc X
No. 1 Missed	D-27-425	A-34	70J 40J	Orange Green	Trips Thru No. 1 Missed Trip
N.C.	ASW-B-2	B-34	40-7 40J	Green Green	Completes Circuit From Double Delay Relay
N.C.		B-16	10-2 85	Red-Blue Black-White	Completes Circuit From Selection Disc
N.C.		G-5	30 48-10	Yellow Green-Black	Completes Circuit From No. 1 Double Trip
T	ASW-B-3	G-6	12 74-6 30J	Red-Blue Orange-Green Yellow	Completes Circuit From No. 1 Nothing Lite

TRIP RELAY BANK 17

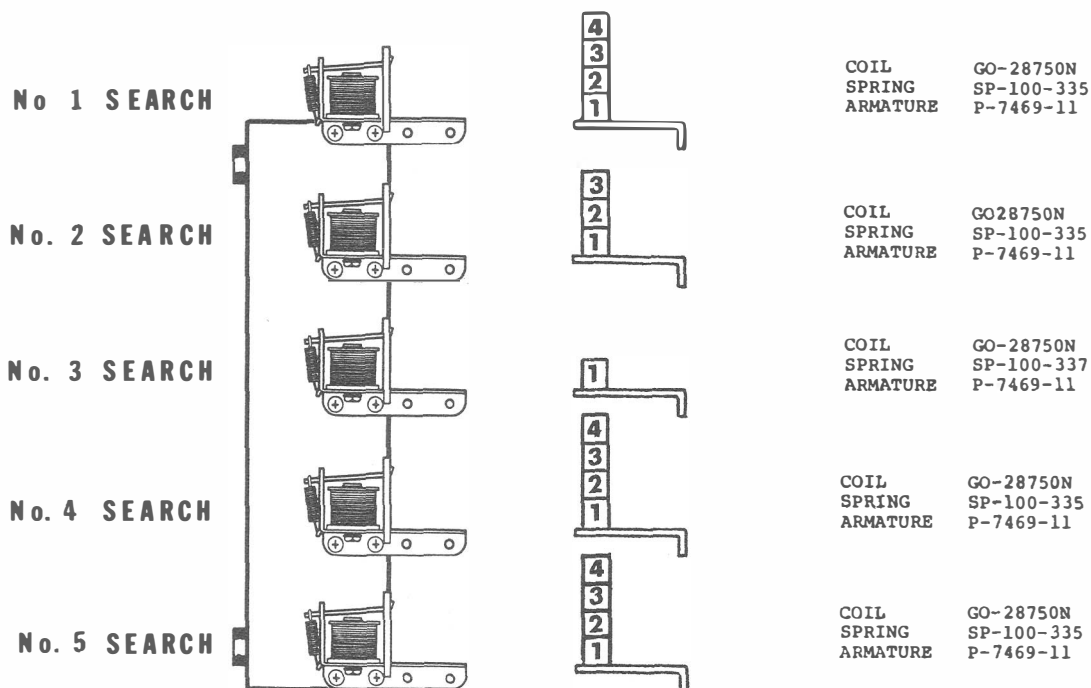
SWITCH/COIL	PART NO.	LOCATION ON DIAGRAM	WIRE NO.	WIRE COLOR	FUNCTION
N.C.	ASW-B-2	H-6	65-6 78-5	Brown-White Orange-Black	Completes Circuit From No. 1 Double Lite
No. 2 Missed	D-27-425	A-34	70J 41J	Orange Green-Red	Trips Thru No. 2 Missed Trip
N.C.	ASW-B-2	B-34	41-7 41J	Green-Red Green-Red	Completes Circuit From Double Delay Relay
N.C.		B-16	13-3 67-2	Red-Yellow Brown-Orange	Completes Circuit From Selection Disc G
N.C.		G-7	30 31-8	Yellow Yellow-Red	Completes Circuit From No. 2 Double Trip
T	ASW-B-3	G-7	57-5 36-4 30J	White-Orange Yellow-Brown Yellow	Completes Circuit From No. 2 Double Trip
N.C.	ASW-B-2	H-8	23-3 32	Blue-Yellow Yellow-Blue	Completes Circuit From No. 2 Double Lite
No. 3 Missed	D-27-425	A-35	70J 40J	Orange Green	Trips Thru No. 3 Missed Trip
N.C.	ASW-B-2	B-35	43-7 43J	Green-Yellow Green-Yellow	Completes Circuit From Double Delay Relay
N.C.		B-17	14-2 23	Red-Green Blue-Yellow	Completes Circuit From Selection Disc I
N.C.		G-8	30 53-7	Yellow White-Yellow	Completes Circuit No. 3 Double Trip
T	ASW-B-3	H-9	58-3 83 30J	White-Black Black-Yellow Yellow	Completes Circuit No. 3 Nothing Lite
N.C.	ASW-B-2	H-9	60-5 15-3	Brown-White Red-White	Completes Circuit From No. 3 Double Lite
No. 4 Missed	D-27-425	A-35	70J 45J	Orange Green-White	Trips Thru No. 4 Missed Trip
N.C.	ASW-B-2	B-35	45-7 45J	Green-White Green-White	Completes Circuit From Double Delay Relay
N.C.		B-19	18-5 80	Red-Black Black	Completes Circuit From Selection Disc K
N.C.		G-10	30 60	Yellow Brown	Completes Circuit From No. 4 Double Trip

TRIP RELAY BANK 17

SWITCH/COIL	PART NO.	LOCATION ON DIAGRAM	WIRE NO.	WIRE COLOR	FUNCTION
T	ASW-B-3	G-10	21-5 51-3 30J	Blue-Red White-Red Yellow	Completes Circuit From No. 4 Nothing Lite
N.C.	ASW-B-2	H-11	38-4 25-2	Yellow-Black Blue-White	Completes Circuit From No. 4 Double Lite
No. 5 Missed	D-27-425	A-36	70J 48J	Orange Green-Black	Trips Thru No. 5 Missed Trip
N.C.	ASW-B-2	B-36	48-7 48J	Green-Black Green-Black	Completes Circuit From Double Delay Relay
N.C.		B-20	20-2 81	Blue Black-Red	Completes Circuit From Selection Disc M
N.C.		G-11	30 83-6	Yellow Black-Yellow	Completes Circuit From N. 5 Double Trip
T	ASW-B-3	G-12	53-5 64-2 30J	White-Yellow Brown-Green Yellow	Completes Circuit From No. 5 Nothing Lite
N.C.	ASW-B-2	H-12	41-4 27	Green-Red Blue-Orange	Completes Circuit From No. 5 Double Lite
No. 6 Missed	D-27-425	A-37	70J 50J	Orange White	Completes Circuit From No. 6 Missed Trip
N.C.	ASW-B-2	B-37	50-7 50J	White White	Completes Circuit From Double Delay Relay
N.C.		B-21	21-2 64	Blue-Red Brown-Green	Completes Circuit From Selection Disc Q
N.C.		G-12	30 18-6	Yellow Red-Black	Completes Circuit From No. 6 Double Trip
T	ASW-B-3	G-13	61-5 43-4 30J	Brown-Red Green-Yellow Yellow	Completes Circuit From No. 6 Nothing Lite
N.C.	ASW-B-2	H-14	47-2 57-4	Green-Orange White-Orange	Completes Circuit From No. 6 Double Lite
Cam No. 1 Carry Over	ASW-B20-1	E-21		Red-Black Yellow	Completes Circuit To Trip Bank Motor
MOTOR	E-119-464	A-22	18 30	Red-Black Yellow	Energized Thru Shutter Cam No. 3 and No. 6

ALWAYS GIVE MODEL AND PART NUMBERS WHEN ORDERING SERVICE PARTS

5 RELAY SEARCH BANK



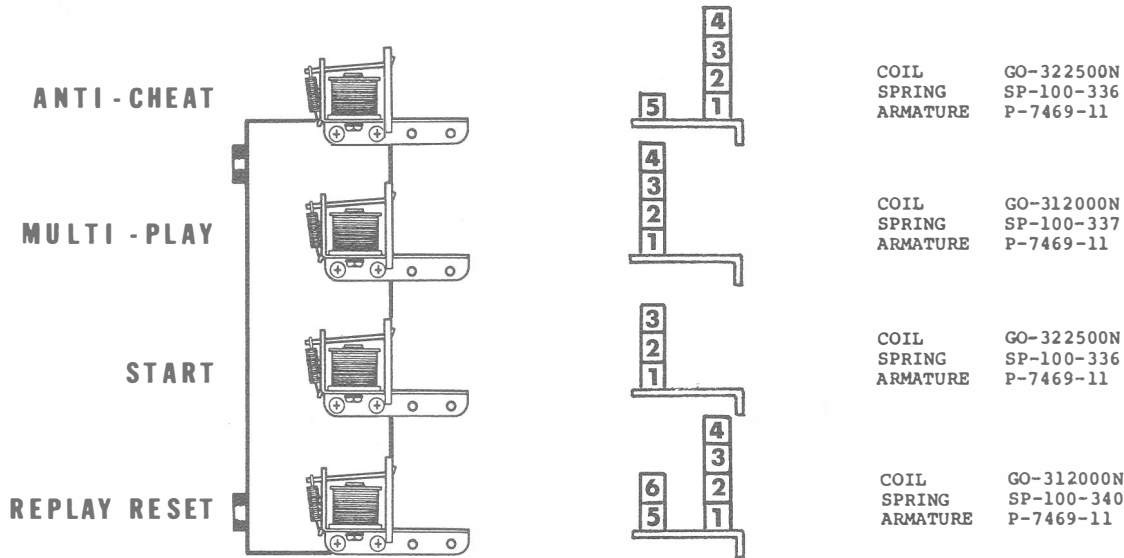
SWITCH/COIL	PART NO.	LOCATION ON DIAGRAM	WIRE NO.	WIRE COLOR	FUNCTION
Search Relay No. 1	AS-2930-14	I-30	10 10J 20-1	Red Red Blue	Trips Thru No. 1-2 Search Disc
N.O.	ASW-R1-3	E-15	75-2 52-2	Orange-White White-Blue	Completes Circuit From Search Relay No. 2
N.O.		F-18	60-7 85-2 85J	Brown Black-White Black-White	Completes Circuit From Search Relay No. 4
N.O.	ASW-R1-5	E-18	50-8 85J	White Black-White	Completes Circuit From Search Relay No. 4
N.O.	ASW-R1-6	F-16	25-6 23-6	Blue-White Blue-Yellow	Completes Circuit From Control Unit Cam No. 9
Search Relay No. 2	AS-2930-16	I-31	10J 31	Red Yellow-Red	Trips Thru No. 1-2 Search Disc
N.O.	ASW-R1-8	F-16	71-2 74-2 74J	Orange-Red Orange-Green Orange-Green	Completes Circuit From Search Relay No. 3
N.O.	ASW-R1-3	E-16	75-2 74J	Orange-White Orange-Green	Completes Circuit From Search Relay No. 3
N.O.	ASW-R2-5	F-17	25-6 27-6	Blue-White Blue-Orange	Completes Circuit From Search Relay No. 1
Search Relay No. 3	AS-2930-15	I-31	10J 36	Red Yellow-Brown	Trips Thru No. 1-2 Search Disc
N.O.	ASW-R1-8	F-16	23-6 74-2	Blue-Yellow Orange-Green	Completes Circuit From Control Unit Cam No. 9

5 RELAY SEARCH BANK

SWITCH/COIL	PART NO.	LOCATION ON DIAGRAM	WIRE NO.	WIRE COLOR	FUNCTION
Search Relay No.4	AS-2930-14	I-32	10J 38	Red Yellow-Black	Trips Thru No. 1-2 Search Disc
N.O.	ASW-R1-3	E-16	75-2 52-2	Orange-White White-Blue	Completes Circuit From Search Relay No. 2
N.O.		E-17	74-2 81-2	Orange-Green Black-Red	Completes Circuit From Search Relay no. 3
N.O.	ASW-R1-5	F-17	85-2 71-2	Black-White Orange-Red	Completes Circuit From Search Relay No. 2
N.O.	ASW-R1-6	F-17	14-6 27-6	Red-Green Blue-Orange	Completes Circuit From Search Relay No. 2
Search Relay No.5	AS-2930-14	I-33	10J 40	Red Green	Trips Thru No.1-2 Search Disc
N.O.	ASW-R1-3	E-17	52-2 81-2	White-Blue Black-Red	Completes Circuit From Search Relay No. 4
N.O.		E-17	50-8 85-2	White Black-White	Completes Circuit From Search Relay No. 4
N.O.	ASW-R1-5	E-18	60-7 48	Brown Green-Black	Completes Circuit From Search Relay No. 1
N.O.	ASW-R1-6	F-18	61-7 14-6	Brown-Red Red-Green	Completes Circuit From Search Relay No. 4

ALWAYS GIVE MODEL AND PART NUMBERS WHEN ORDERING SERVICE PARTS

4 RELAY BANK



COIL GO-322500N
 SPRING SP-100-336
 ARMATURE P-7469-11

COIL GO-312000N
 SPRING SP-100-337
 ARMATURE P-7469-11

COIL GO-322500N
 SPRING SP-100-336
 ARMATURE P-7469-11

COIL GO-312000N
 SPRING SP-100-340
 ARMATURE P-7469-11

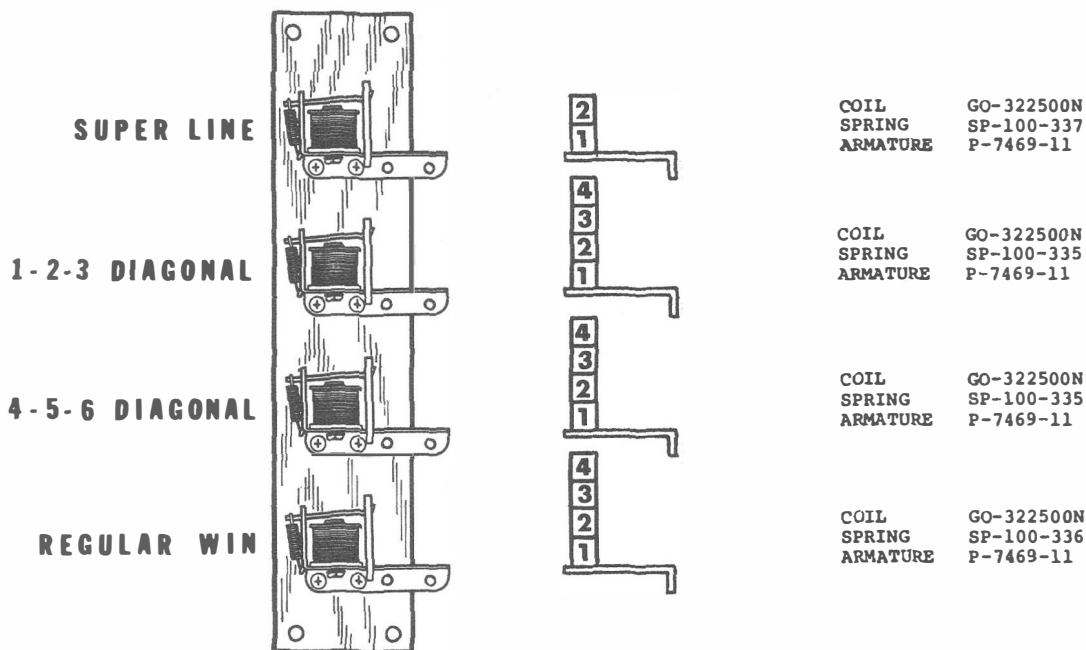
SWITCH/COIL	PART NO.	LOCATION ON DIAGRAM	WIRE NO.	WIRE COLOR	FUNCTION
Anti-Cheat Relay	AS-2930-2	A-4	70J 15J	Orange Red-White	Trips Thru Relay Key Switch
N.O.	ASW-R1-8	C-4	30 15-7 15J	Yellow Red-White Red-White	Completes Circuit From Control Unit Cam No. 4
N.O.	ASW-R1-3	H-19	14-10 80-5	Red-Green Black	Completes Circuit From Tilt Trip
N.C.	ASW-R2-5	E-6	81-3 63-4	Black-Red Brown-Yellow	Completes Circuit From Search Wiper Relay
T	ASW-R3-6	H-19	13-10 74-10 41-10	Red-Yellow Orange-Green Green-Red	Completes Circuit From Tilt Trip
T		D-5	75-4 56-2 34-1	Orange-White White-Brown Yellow-Green	Completes Circuit From Replay Register "0"
Multi-Play Relay	AS-2930-3	A-8	70-J 78J	Orange Orange-Black	Trips Thru Control Unit Cam No. 5
N.O.	ASW-R1-3	E-8	82-1 78-1 78J	Black-Blue Orange-Black Orange-Black	Completes Circuit From Control Unit Cam No. 3
N.O.		D-7	53-8 13-7	White-Yellow Red-White	Completes Circuit From Coin Switch
N.C.	ASW-R2-5	B-5	65-7 50	Brown-White White	Completes Circuit From Replay Reset Relay
T	ASW-R3-6	C-13	41-6 14 31-2	Green-Red Red-Green Yellow-Red	Completes Circuit From Control Unit Cam No. 6

4 RELAY BANK

SWITCH / COIL	PART NO.	LOCATION ON DIAGRAM	WIRE NO.	WIRE COLOR	FUNCTION
Start Relay	AS-2930-4	A-5	70J 48-2	Orange Green-Black	Trips Thru Replay Key Switch
N.O.	ASW-R1-8	E-8	80-9 53-3 53J	Black White-Yellow White-Yellow	Completes Circuit From Control Unit Cam No. 3
N.O.	ASW-R1-3	C-8	58 53J	White-Black White-Yellow	Completes Circuit From Replay Reset Relay
N.C.	ASW-R2-5	E-9	21-3 50-2	Blue-Red White	Completes Circuit From Tilt Trip
Replay Reset Relay	AS-2930-5	A-5	70 70J 75J	Orange Orange Orange-White	Trips Thru Anti-Cheat Relay
N.O.	ASW-R1-3	D-5	56-2 75-4 75	White-Brown Orange-White Orange-White	Completes Circuit From Replay Register "O"
N.O.		F-2	94-16 98-16	Gray-Green Gray-Black	Completes Circuit From Power Source
N.C.	ASW-R2-5	D-14	30 60-1	Yellow Brown	Completes Circuit From Shutter Cam No. 1
N.C.		B-6	13-7 53-3	Red-Yellow White-Yellow	Completes Circuit From Replay Register "O" Switch
N.C.		B-23	18-2 27-3	Red-Black Blue-Orange	Completes Circuit From C Button Switch
T	ASW-R3-6	C-5	43-2 65-7 74-1	Green-Yellow Brown-White Orange-Green	Completes Circuit From Control Unit Cam No. 1

ALWAYS GIVE MODEL AND PART NUMBERS WHEN ORDERING SERVICE PARTS

4 RELAY BANK



SWITCH/COIL	PART NO.	LOCATION ON DIAGRAM	WIRE NO.	WIRE COLOR	FUNCTION
Super Line Relay	AS-2930-21	A-17	70 70J 57	Orange Orange White-Orange	Trips Thru Super Line Trip
N.O.	ASW-R1-3	D-15	52-2 53-2 53J	White-Blue White-Yellow White-Yellow	Completes Circuit From Search Relay No. 1
T	ASW-R3-6	E-18	53J 50-8 48	White-Yellow White Green-Black	Completes Circuit From Search Relay No. 5
Diagonal Relay 1-2-3	AS-2930-9	A-32	70J 68-1	Orange Brown-Black	Trips Thru Selection Disc 11
N.O.	ASW-R1-3	B-16	85 64-1	Black-White Brown-Green	Completes Circuit From No. 1 Missed Trip
N.O.		B-16	67-2 72	Brown-Orange Orange-Blue	Completes Circuit From No. 2 Missed Trip
N.O.		B-17	23 34	Blue-Yellow Yellow-Green	Completes Circuit From No. 3 Missed Trip
N.O.		H-17	83-2 30	Black-Yellow Yellow	Completes Circuit From Red Diagonal 1-2-3 Card Lites
Diagonal Relay 4-5-6	AS-2930-9	A-32	70J 84-1	Orange Black-Green	Trips Thru Selection Disc 12
N.O.	ASW-R1-3	B-20	80 35	Black Yellow-White	Completes Circuit From No. 4 Missed Trip

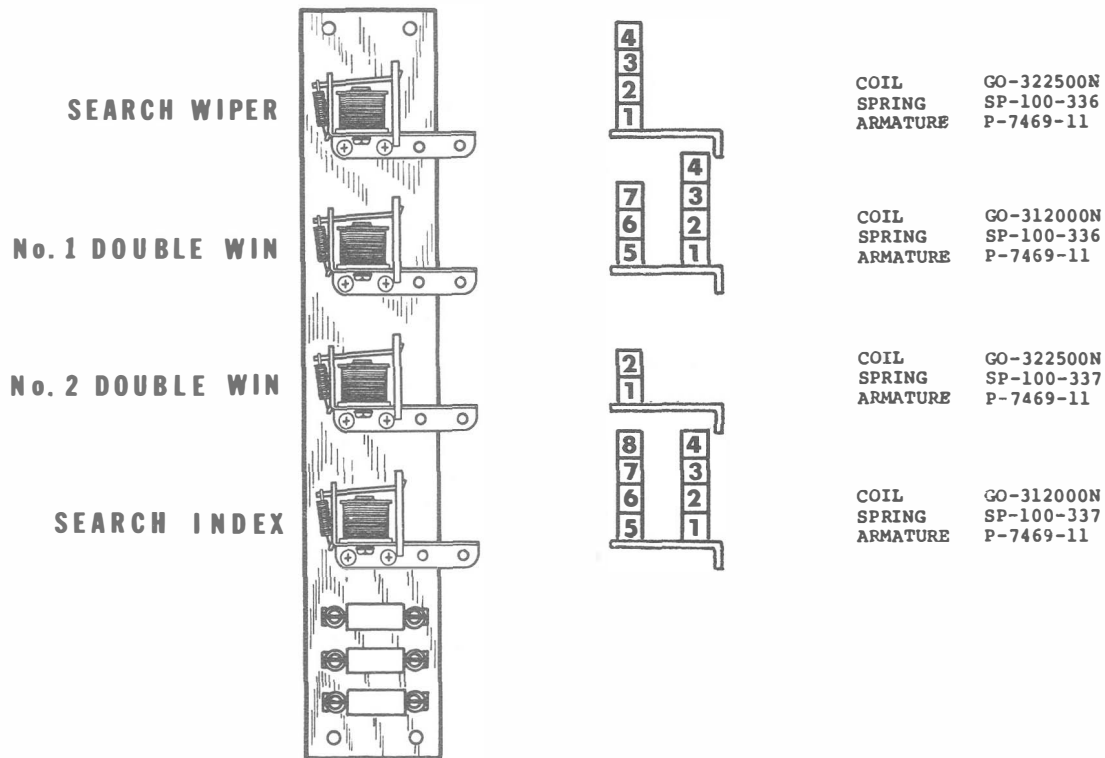
ALWAYS GIVE MODEL AND PART NUMBERS WHEN ORDERING SERVICE PARTS

4 RELAY BANK

SWITCH/COIL	PART NO.	LOCATION ON DIAGRAM	WIRE NO.	WIRE COLOR	FUNCTION
N.O.	ASW-R1-3	B-21	81 51	Black-Red White-Red	Completes Circuit From No. 5 Missed Trip
N.O.		B-22	64 47	Brown-Green Green-Orange	Completes Circuit From No. 6 Missed Trip
N.O.		H-17	83-2 30	Black-Yellow Yellow	Completes Circuit From Red Diagonal 4-5-6 Card Lites
Regular Coin Relay	AS-2930-8	A-26	70J 56	Orange White-Brown	Trips Thru Double Play Relay
N.O.	ASW-R1-8	C-14	78 40-2	Orange-Black Green	Completes Circuit From No. 5-6 Search Index Switch
N.C.	ASW-R2-5	G-5	20 50-3	Blue White	Completes Circuit From Search Index Relay
N.C.		C-27	65-8 71-1 71-1	Brown-White Orange-Red Orange-Red	Completes Circuit From Double Button Switch
T	ASW-R3-6	E-26	61-2 23-5	Brown-Red Blue-Yellow	Completes Circuit From Search Index Relay

ALWAYS GIVE MODEL AND PART NUMBERS WHEN ORDERING SERVICE PARTS

4 RELAY BANK



SWITCH/COIL	PART NO.	LOCATION ON DIAGRAM	WIRE NO.	WIRE COLOR	FUNCTION
Search Wiper Relay	AS-2930-13	A-24	70 70J 50-1	Orange Orange White	Trips thru No. 1-2 Search Wiper Lock Cam Switch
N.O.	ASW-R1-3	F-38	21-3 14-9	Blue-Red Red-Green	Completes Circuit From No. 5 - 6 Search Index Switch
(2) Lugs		B-39	15-6	Red-White	Across Search Wiper Relay
N.O.	ASW-R1-8	F-1	94-16 98-16	Gray-Green Gray-Black	Completes Circuit To Control Unit Motor
N.C.	ASW-R2-5	F-5	80-9 81-3	Black Black-Red	Completes Circuit From Control Unit Cam No. 3
T	C-813-1	E-27	54-2 83-1 38-3	White-Green Black-Yellow Yellow-Black	Completes Circuit from B-4 Lock Trip Switch
Double Win Relay No.1	AS-2930-12	A-27	70J 43J	Orange Green-Yellow	Completes Circuit From Random Index Switch
N.O.	ASW-R1-8	A-27	61 43 43J	Brown-Red Green-Yellow Green-Yellow	Completes Circuit From Double Play Relay

ALWAYS GIVE MODEL AND PART NUMBERS WHEN ORDERING SERVICE PARTS

4 RELAY BANK

SWITCH / COIL	PART NO.	LOCATION ON DIAGRAM	WIRE NO.	WIRE COLOR	FUNCTION
N.O.	ASW-R1-3	B-33	12-1 23-4	Red-Blue Blue-Yellow	Completes Circuit From Double Delay Relay
N.O.		B-34	25-4 83-4	Blue-White Black-Yellow	Completes Circuit From Double Delay Relay
N.O.		B-34	32-1 10-3	Yellow-Blue Red	Completes Circuit From Double Delay Relay
N.O.		B-35	85-4 31-5	Black-White Yellow-Red	Completes Circuit From Double Delay Relay
N.O.		B-36	80-4 36-5	Black Yellow-Brown	Completes Circuit From Double Delay Relay
N.O.		B-36	20-5 21-6	Blue Blue-Red	Completes Circuit From Double Delay Relay
Double Win Relay No.2	AS-2930-21	A-37	70J 56-5	Orange White-Brown	Trips Thru No. 6 Double Trip Switch
N.O.	ASW-R1-3	B-14	78 40-2	Orange-Black Green	Completes Circuit From No. 5 - 6 Search Index Switch
T	ASW-R1-6	A-15	13-2 81-1 14-8	Red-Yellow Black-Red Red-Green	Completes Circuit From No. 1 Replay Counter Step-Up
Search Index Relay	ASW-2930- 11	A-33	70J 81-5	Orange Black-Red	Trips Thru Search Index Switches
N.O.	ASW-R1-8	E-26	83-1 61-2	Black-Yellow Brown-Red	Completes Circuit From B-4 Lock Trip
N.O.	ASW-R1-3	H-5	50-3 48-3 48J	White Green-Black Green-Black	Completes Circuit From Double Box Lite
N.O.			78-6 48-J	Orange-Black Green-Black	Completes Circuit From Double Box Lite
N.O.			D-27	58-2 18-8	White-Black Red-Black
N.C.	ASW-R1-5	A-19	71-3 34-2	Orange-Red Yellow-Green	Completes Circuit From No. 3 - 4 Search Index Switch
N.C.			C-15	10-1 85-5	Red Black-White

4 RELAY BANK

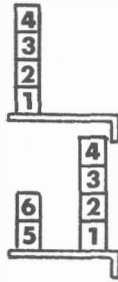
SWITCH/COIL	PART NO.	LOCATION ON DIAGRAM	WIRE NO.	WIRE COLOR	FUNCTION
N.C.	ASW-R1-5	B-20	20-3 62-1	Blue Brown-Blue	Completes Circuit From No. 5 - 6 Search Disc
N.C.		B-38	15-6 14-9	Red-White Red-Green	Completes Circuit From Search Wiper Relay
	E-104-77	C-15	10-1 85-5	Red Black-White	Across Search Index Relay
		B-19	71-3 34-2	Orange-Red Yellow-Green	Across Search Index Relay
		B-20	20-3 62-1	Blue Brown-Blue	Across Search Index Relay

ALWAYS GIVE MODEL AND PART NUMBERS WHEN ORDERING SERVICE PARTS

2 RELAY BANK

DOUBLE DELAY

DOUBLE PLAY

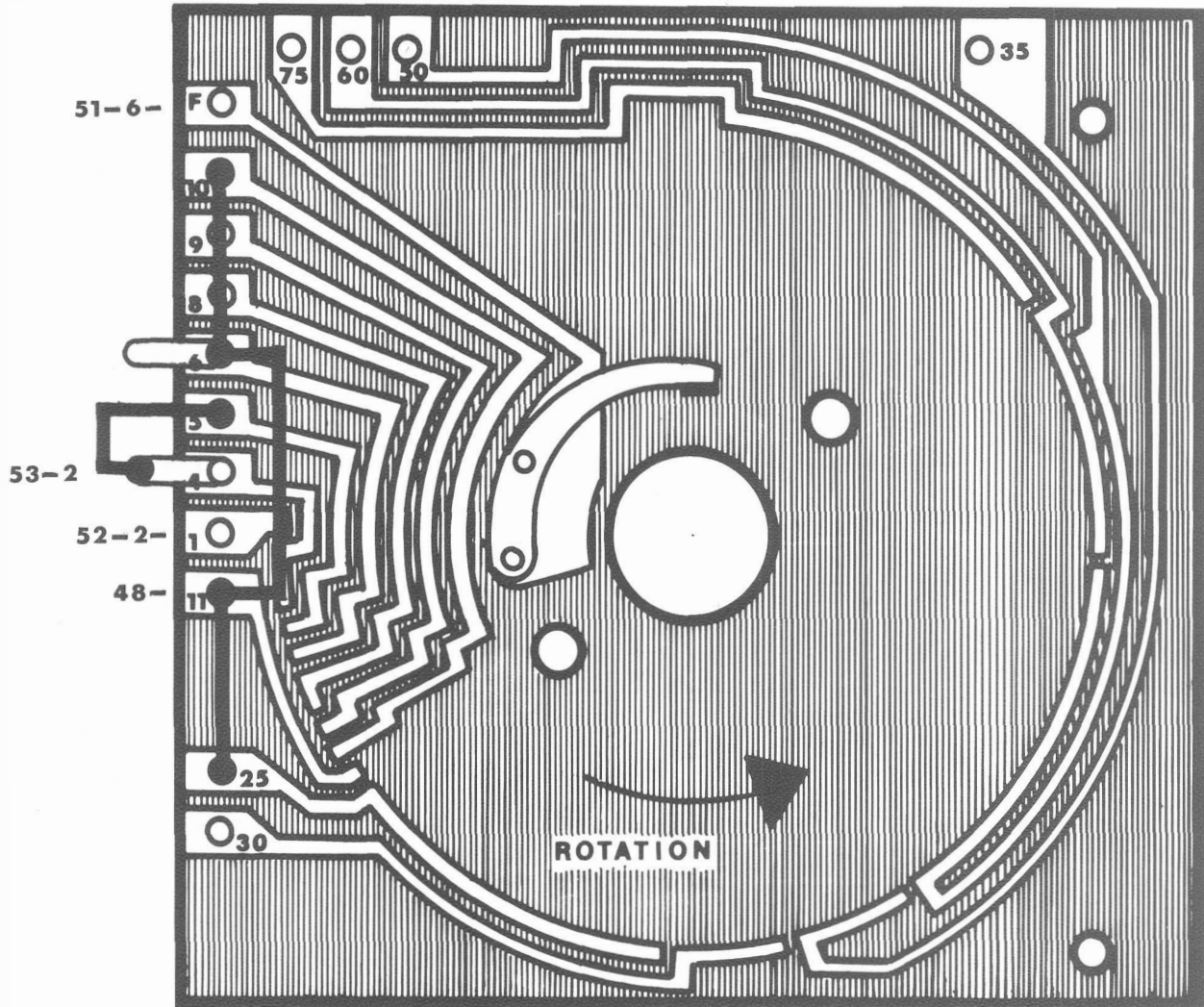


COIL GN-3522003001
 SPRING SP-100-336
 ARMATURE P-7469-11

COIL G31-2000N
 SPRING SP-100-337
 ARMATURE P-7469-11

SWITCH / COIL	PART NO.	LOCATION ON DIAGRAM	WIRE NO.	WIRE COLOR	FUNCTION
Double Play Relay	AS-2930-7	A-27	70 70J 61J	Orange Orange Brown-Red	Trips Thru Relay Cam Index
N.O.	ASW-R1-8	C-27	71-1 61 61J	Orange-Red Brown-Red Brown-Red	Completes Circuit From Regular Win Relay
N.O.	ASW-R1-3	E-27	58-2 38-3	White-Black Yellow-Black	Completes Circuit From Search Wiper Relay
N.C.	ASW-R2-5	C-26	56 23-5	White-Brown Blue-Yellow	Completes Circuit From Regular Button Switch
N.C.		D-25	21-3 31-6	Blue-Red Yellow-Red	Completes Circuit From Control Unit No. 10
Double Delay Relay	AS-2930-6	A-25	70J 31-6	Orange Yellow-Red	Trips Thru Double Play Relay
T	ASW-R3-6	C-33	40-7 75-5 12-1	Green Orange-White Red-Blue	Completes Circuit From No. 1 Double Trip
T		C-34	41-7 74-5 83-4	Green-Red Orange-Green Black-Yellow	Completes Circuit From No. 2 Double Trip
T		C-35	43-7 71-7 32-1	Green-Yellow Orange-Red Yellow-Blue	Completes Circuit From No. 3 Double Trip
T		C-35	45-7 65-5 85-4	Green-White Brown-White Black-White	Completes Circuit From No. 4 Double Trip
T		C-37	50-7 58-4 20-5	White White-Black Blue	Completes Circuit From No. 5 Double Trip
T		C-36	48-7 63-6 80-4	Green-Black Brown-Yellow Black	Completes Circuit From No. 6 Double Trip

CARD NO.1 REPLAY UNIT DISC



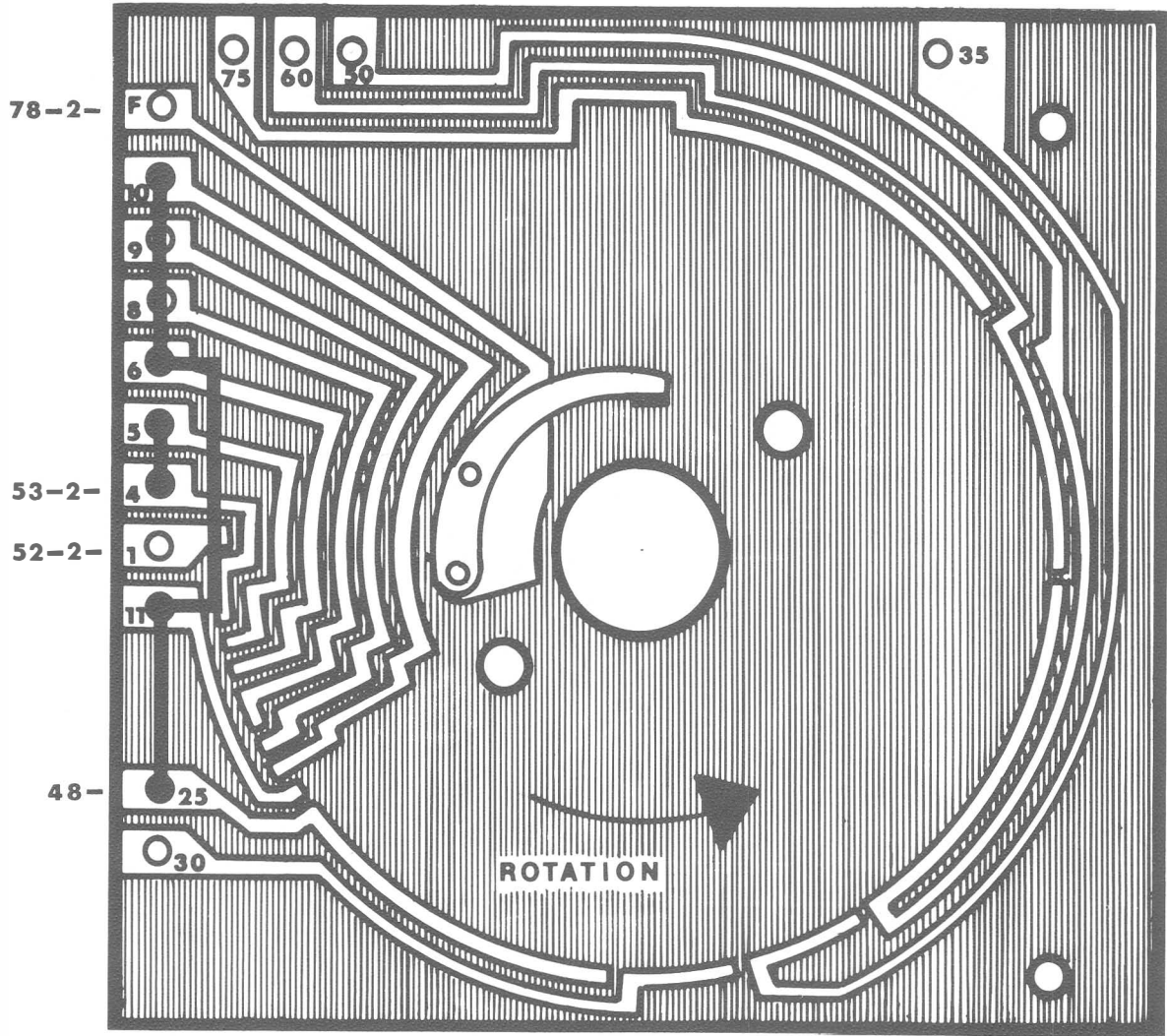
VIEW FROM WIPER SIDE

DESCRIPTION	PART NUMBER
Complete Unit	AS-1022-162
Ratchet & Shaft	C-100-76
Reset Coil	C-28-1100
Step-Up Coil	B-25-925
Step-Up Plunger	AS-1366-3
Step-Up Arm	A-1765-8
Disc WIRED	W-923-269
Wiper Assembly	AS-923-664

SWITCH/COIL	PART NO.	LOCATION ON DIAGRAM	WIRE NO.	WIRE COLOR	FUNCTION
Step Up Coil	B-25-925	A-16	58-6 81-1	White-Black Black-Red	Energized Thru Winner Search Circuit
Reset Coil	C-28-1100	C-23	70 85-3	Orange Black-White	Energized Thru Shutter Cam No. 3
S.P.D.T.	ASW-U3	H-5	60-10 36-7 12	Brown Yellow-Brown Red-Blue	Completes Circuit From No. 1 Regular Lite

ALWAYS GIVE MODEL AND PART NUMBERS WHEN ORDERING SERVICE PARTS

CARD NO.2 REPLAY UNIT DISC

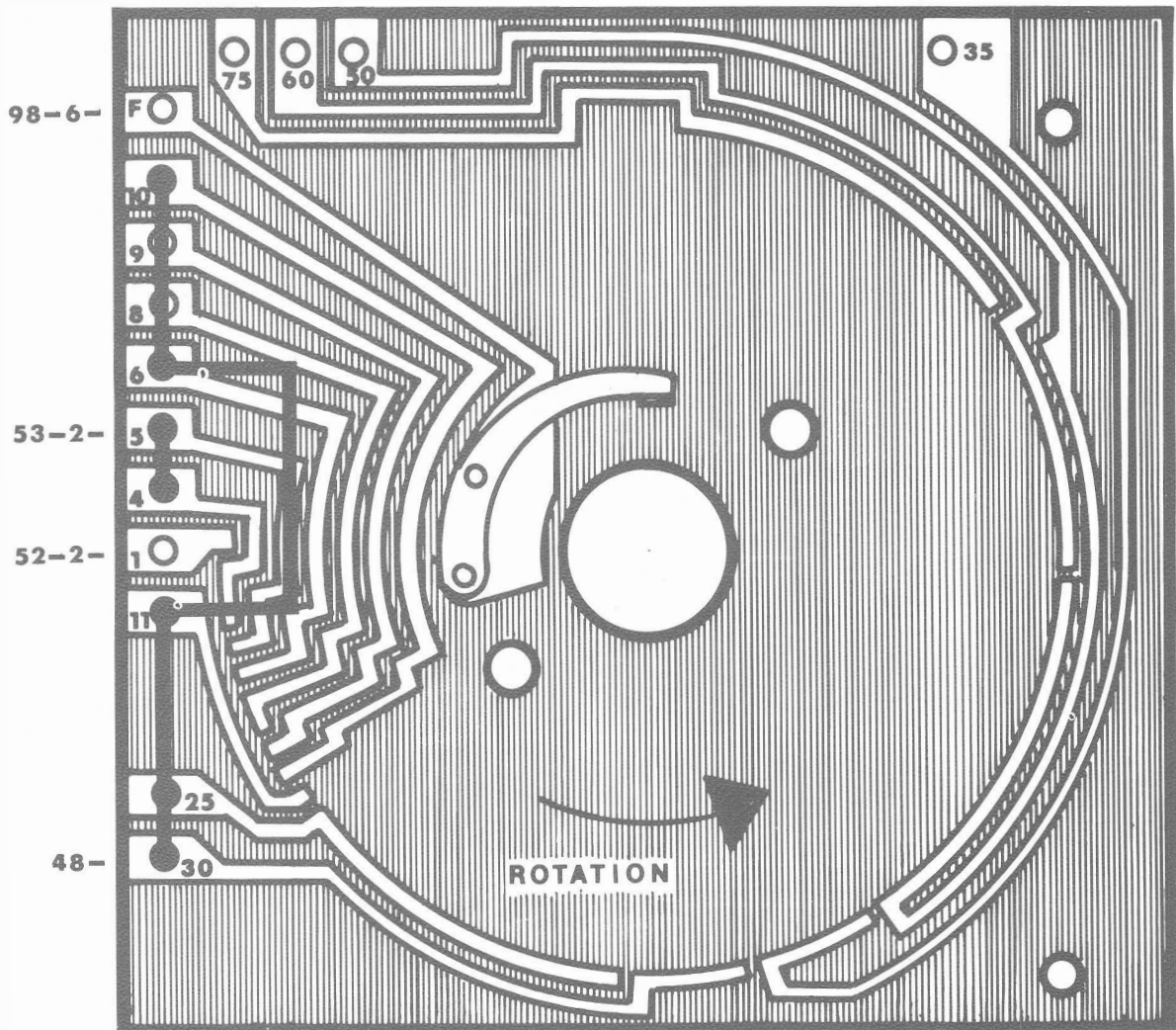


VIEW FROM WIPER SIDE

DESCRIPTION	PART NUMBER
Complete Unit	AS-1022-163
Ratchet & Shaft	C-100-76
Reset Coil	C-28-1100
Step-Up Coil	B-25-925
Step-Up Plunger	AS-1366-3
Step-Up Arm	A-1765-8
Disc WIRED	W-923-238
Wiper Assembly	AS-923-664

SWITCH/COIL	PART NO.	LOCATION ON DIAGRAM	WIRE NO.	WIRE COLOR	FUNCTION
Step Up Coil	B-25-925	A-21	71 81-1	Orange-Red Black-Red	Energized Thru Winner Search Circuit
Reset Coil	C-28-1100	B-23	70 78-4	Orange Orange-Black	Energized Thru Shutter Cam No. 6
S.P.D.T.	ASW-U3	H-11	53-5 84 75-7	White-Yellow Black-Green Orange-White	Completes Circuit From No. 5 Regular Lite

CARD NO.3 REPLAY UNIT DISC

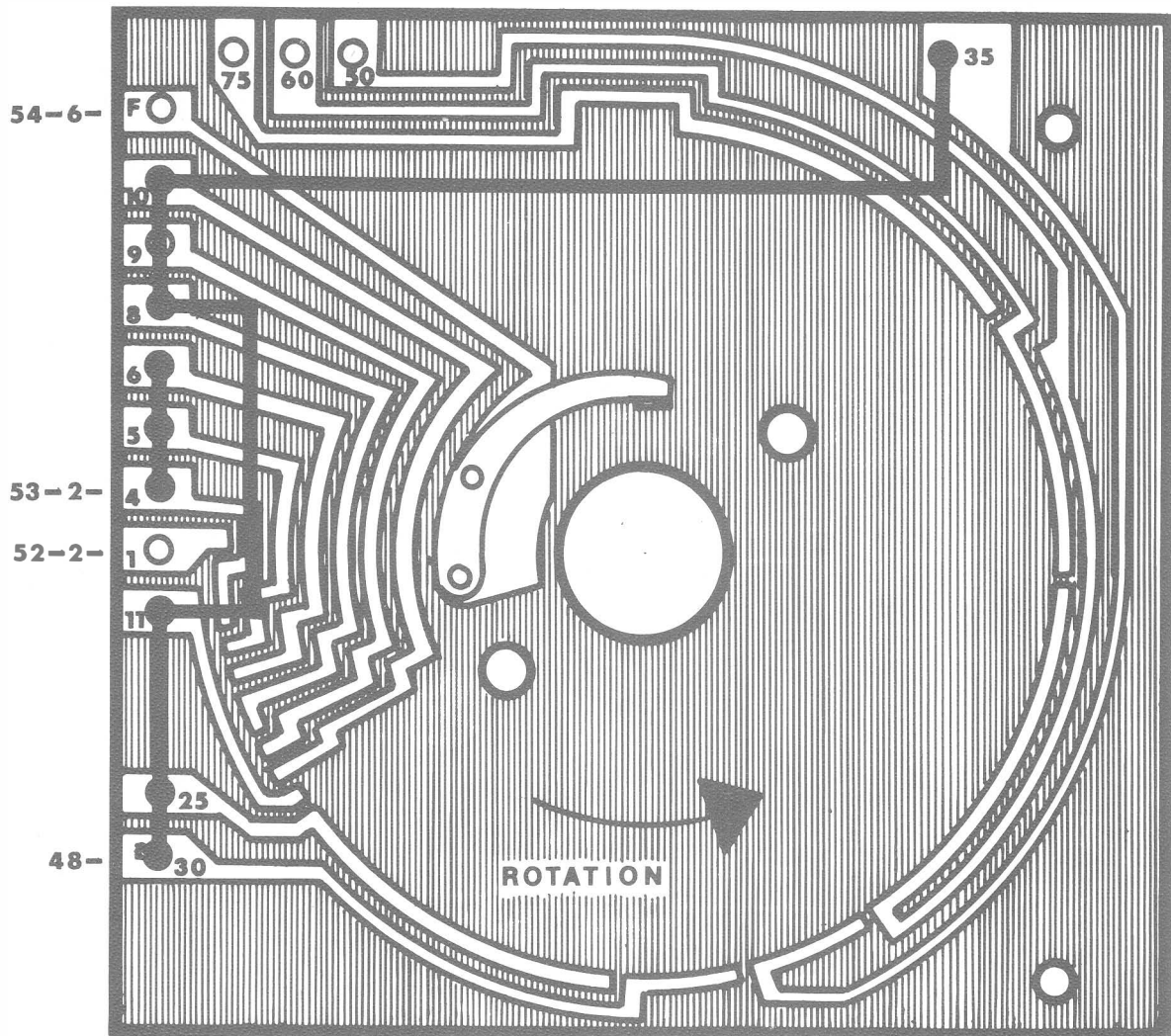


VIEW FROM WIPER SIDE

DESCRIPTION	PART NUMBER
Complete Unit	AS-1022-164
Ratchet & Shaft	C-100-76
Reset Coil	C-28-1100
Step-Up Coil	B-25-925
Step-Up Plunger	AS-1366-3
Step-Up Arm	A-1765-8
Disc WIRED	W-923-265
Wiper Assembly	AS-923-664

SWITCH / COIL	PART NO.	LOCATION ON DIAGRAM	WIRE NO.	WIRE COLOR	FUNCTION
Step Up Coil	B-25-925	A-17	61-6 81-1	Brown-Red Black-Red	Energized Thru Winner Search Circuit
Reset Coil	C-28-1100	A-23	70 85-3	Orange Black-White	Energized Thru Shutter Cam No. 3
S.P.D.T.	ASW-U3	H-8	58-3 63-10 15	White-Black Brown-Yellow Red-White	Completes Circuit From No. 3 Regular Lite

CARD NO.4 REPLAY UNIT DISC

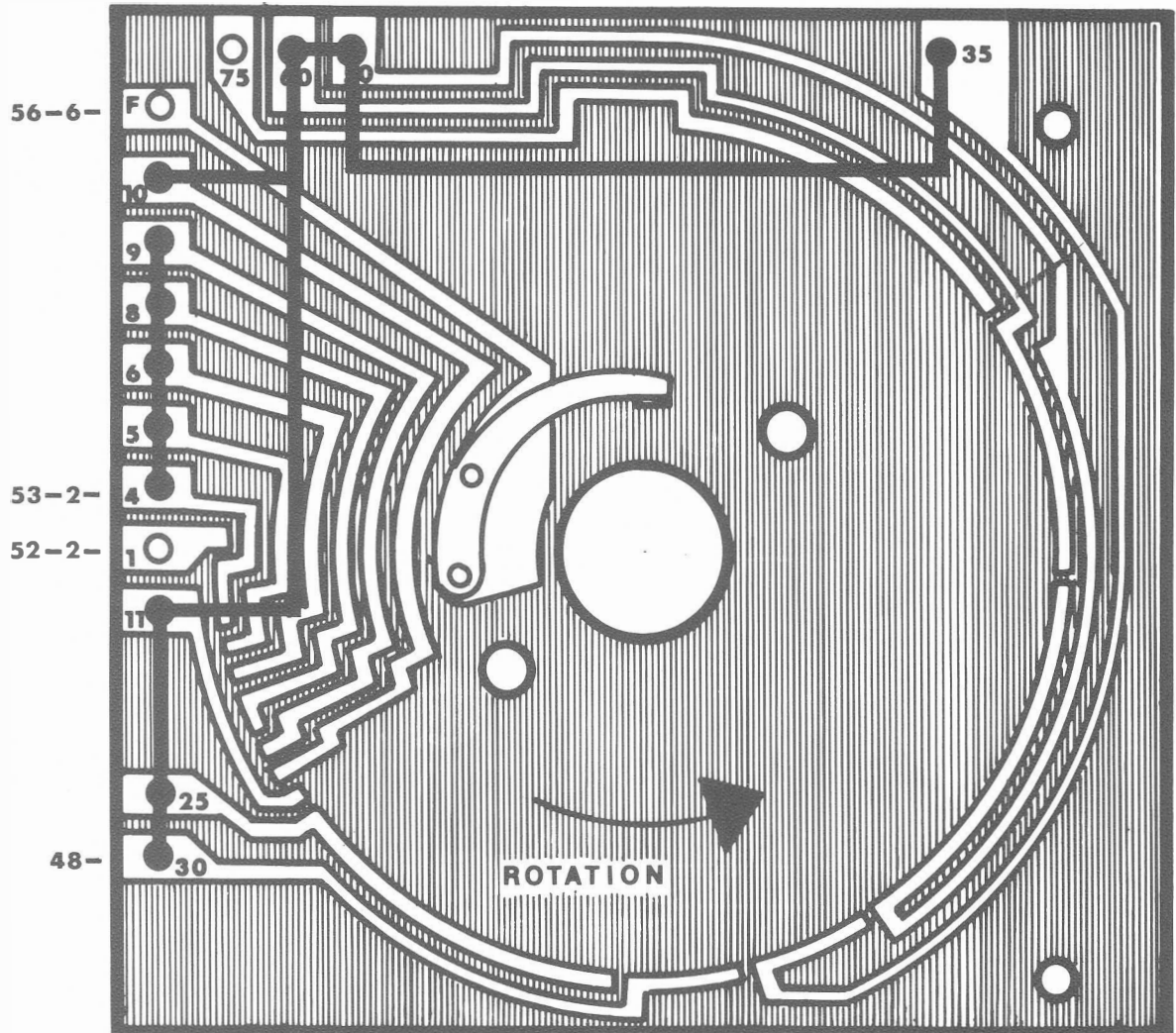


VIEW FROM WIPER SIDE

DESCRIPTION	PART NUMBER
Complete Unit	AS-1022-165
Ratchet & Shaft	C-100-76
Reset Coil	C-28-1100
Step-Up Coil	B-25-925
Step-Up Plunger	AS-1366-3
Step-Up Arm	A-1765-8
Disc WIRED	W-923-266
Wiper Assembly	AS-923-664

SWITCH/COIL	PART NO.	LOCATION ON DIAGRAM	WIRE NO.	WIRE COLOR	FUNCTION
Step Up Coil	B-25-925	A-19	63-3 81-1	Brown-Yellow Black-Red	Energized Thru Winner Search Circuit
Reset Coil	C-28-1100	C-23	70 78-4	Orange Orange-Black	Energized Thru Shutter Cam No. 6
S.P.D.T.	ASW-U3	H-10	21-5 65-10 82	Blue-Red Brown-Black Black-Blue	Completes Circuit From No. 4 Regular Lite

CARD NO.5 REPLAY UNIT DISC

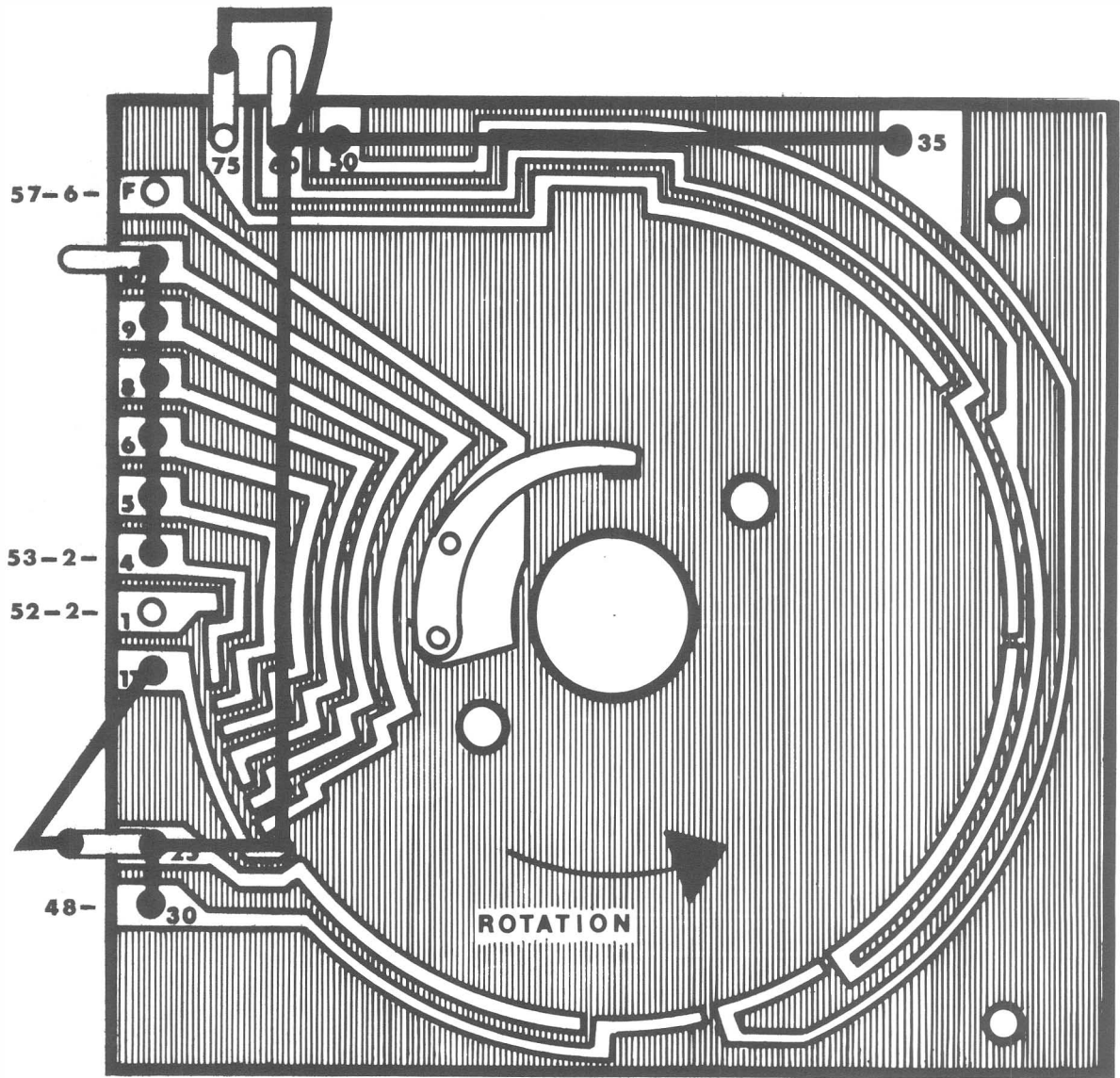


VIEW FROM WIPER SIDE

DESCRIPTION	PART NUMBER
Complete Unit	AS-1022-166
Ratchet & Shaft	C-100-76
Reset Coil	C-28-1100
Step-Up Coil	B-25-925
Step-Up Plunger	AS-1366-3
Step-Up Arm	A-1765-8
Disc WIRED	W-923-267
Wiper Assembly	AS-923-664

SWITCH/COIL	PART NO.	LOCATION ON DIAGRAM	WIRE NO.	WIRE COLOR	FUNCTION
Step Up Coil	B-25-925	A-21	71 81-1	Orange-Red Black-Red	Energized Thru Winner Search Circuit
Reset Coil	C-28-1100	B-23	70 78-4	Orange Orange-Black	Energized Thru Shutter Cam No. 6
S.P.D.T.	ASW-U3	H-11	53-5 84 75-7	White-Yellow Black-Green Orange-White	Completes Circuit From No. 5 Regular Lite

CARD NO.6 REPLAY UNIT DISC

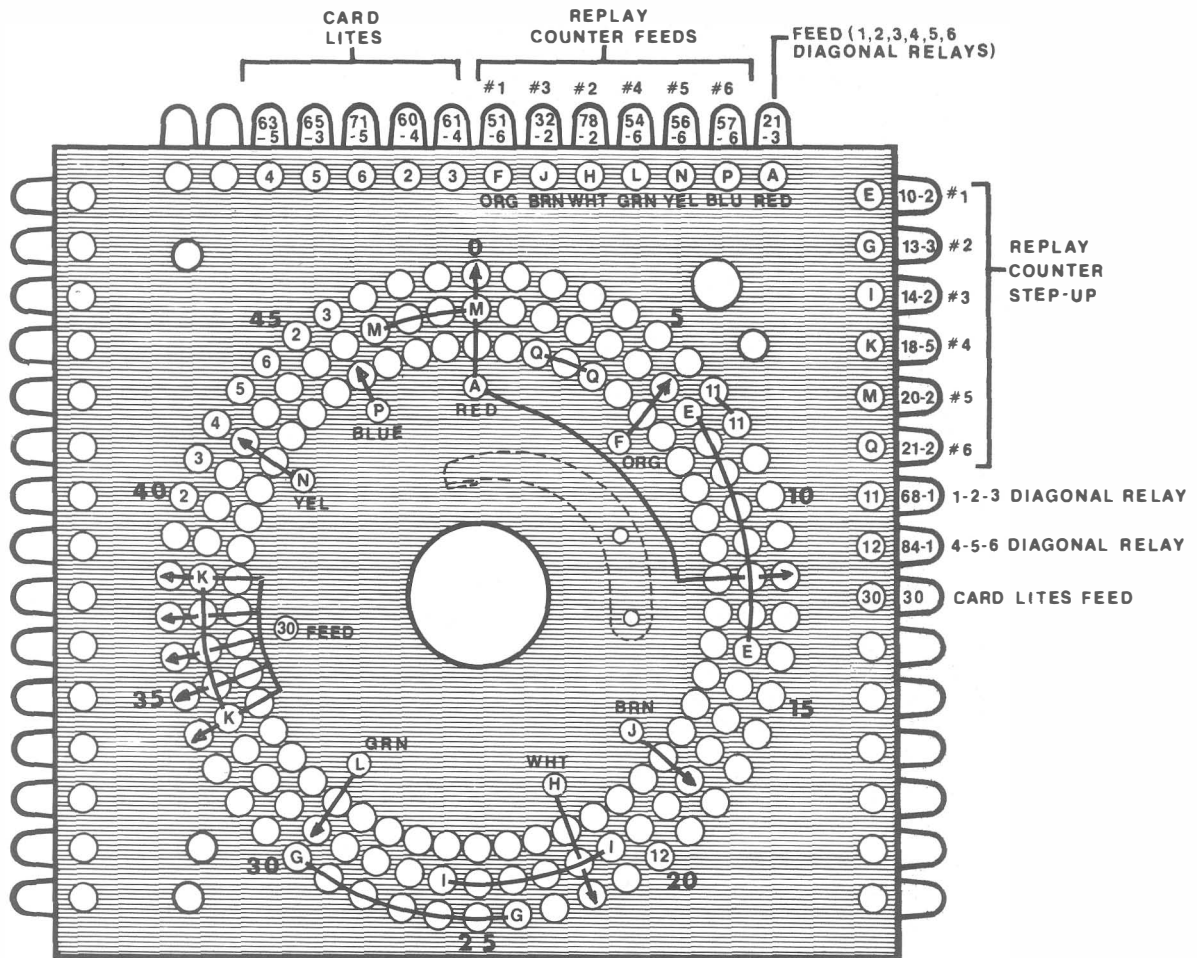


VIEW FROM WIPER SIDE

DESCRIPTION	PART NUMBER
Complete Unit	AS-1022-167
Ratchet & Shaft	C-100-76
Reset Coil	C-28-1100
Step-Up Coil	B-25-925
Step-Up Plunger	AS-1366-3
Step-Up Arm	A-1765-8
Disc WIRED	W-923-268
Wiper Assembly	AS-923-664

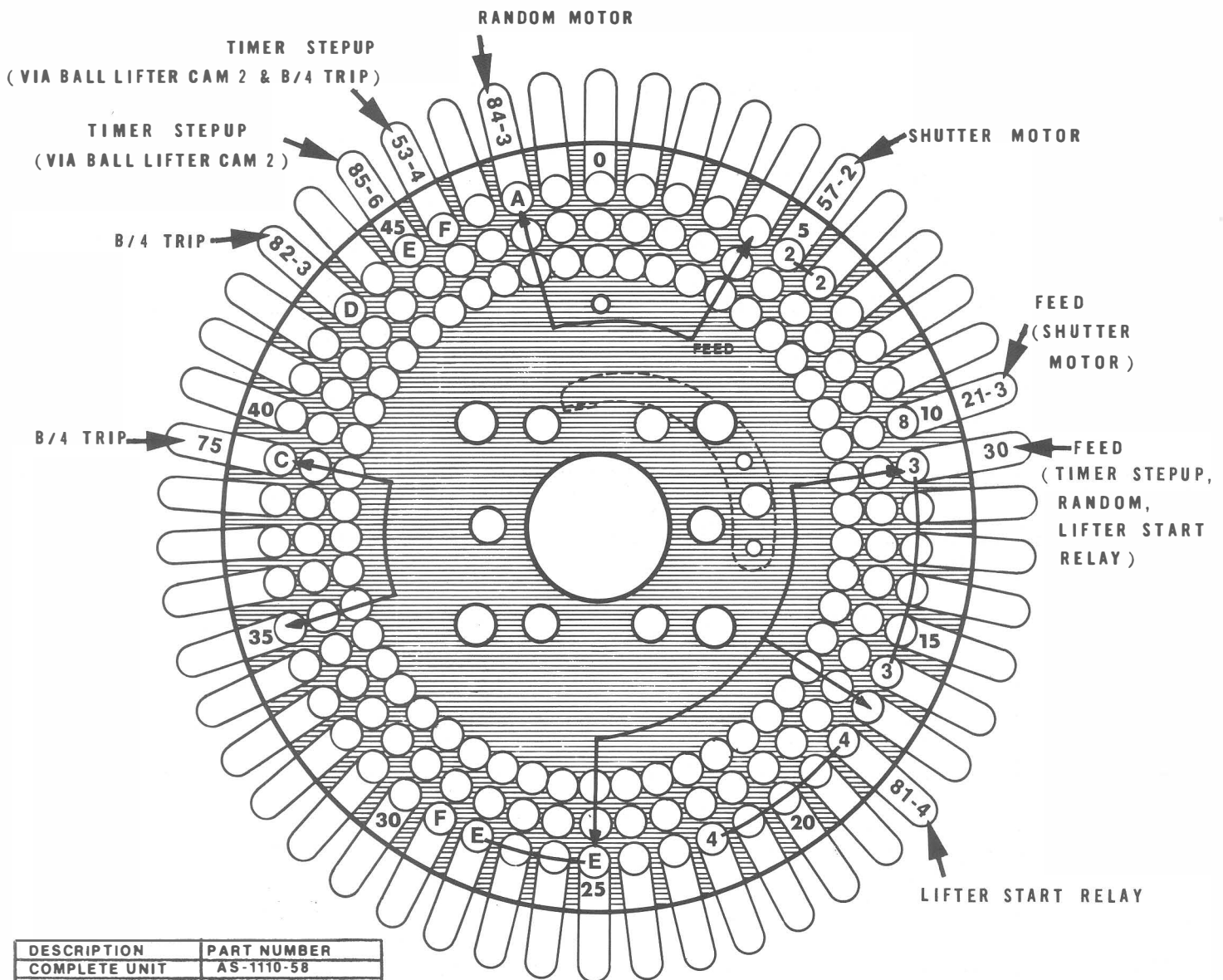
SWITCH/COIL	PART NO.	LOCATION ON DIAGRAM	WIRE NO.	WIRE COLOR	FUNCTION
Step Up Coil	B-25-925	A-21	12-3 81-1	Red-Blue Black-Red	Energized Thru Winner Search Circuit
Reset Coil	C-28-1100	A-23	70 78-4	Orange Orange-Black	Energized Thru Cam No. 6
S.P.D.T.	ASW-U3	H-13	61-5 83-5	Brown-Red Black-Yellow	Completes Circuit From No. 6 Regular Lite

SELECTION UNIT DISC



SWITCH/COIL	PART NO.	LOCATION ON DIAGRAM	WIRE NO.	WIRE COLOR	FUNCTION
Reflex In Coil	AS-1060-1	A-5	70 43-2	Orange Green-Yellow	Trips Thru Control Unit Cam No. 4
Reflex Out Coil	AS-1060	A-13	70 41-6	Orange Green-Red	Trips Thru Control Unit Cam No. 6

TIMER UNIT DISC



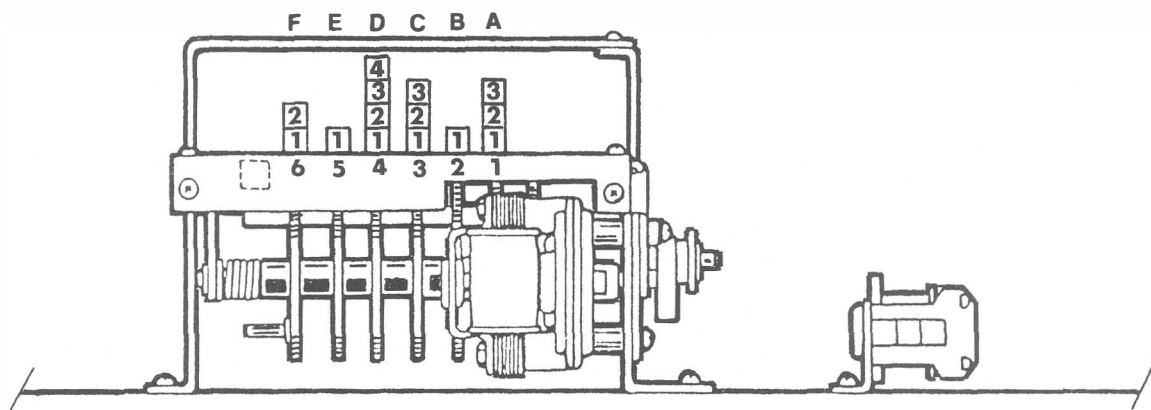
VIEW FROM WIRING SIDE

DESCRIPTION	PART NUMBER
COMPLETE UNIT	AS-1110-58
RATCHET & SHAFT	C-1050-538
RESET COIL	C-28-1100
STEP-UP COIL	B-25-925
STEP-UP ARM	A-1765-4
DISC (WIRED)	W-1151-4
WIPER ASSEMBLY	AS-1046-844

SWITCH/COIL	PART NO.	LOCATION ON DIAGRAM	WIRE NO.	WIRE COLOR	FUNCTION
Step Up Coil	B-25-925	A-9	70	Orange	Trips Thru Timer Switch
			70J	Orange	
			60J	Brown	
Reset Coil	C-28-1100	A-25	70J	Orange	Trips Thru Timer Switch
			45J	Green-White	
Open at A Zero Sw. N.O.	ASW-U2	B-25	45	Green-White	Completes Circuit From Shutter Cam No. 3
			45J	Green-White	
Open at B Zero Sw. N.O.	ASW-U2-1	C-12	61-3	Brown-Red	Completes Circuit From Ball Lifter Switch
			74-3	Orange-Green	
Open at C Top N.C.	ASW-U2-6	F-2	94-16	Gray-Green	Completes Circuit From Power Source
			96-16	Gray-Brown	
Open at D Top N.C.	ASW-U2-5	B-9	60-2	Brown	Completes Circuit From Replay Cam Index
			60J	Brown	

ALWAYS GIVE MODEL AND PART NUMBERS WHEN ORDERING SERVICE PARTS

PANEL SHUTTER ASSEMBLY



SWITCH/COIL	PART NO.	LOCATION ON DIAGRAM	WIRE NO.	WIRE COLOR	FUNCTION
Motor	E-119-379	A-9	80-2 70		Energized when game is coined or when credits are on register thru start relay switches.
A1 Cam 1	N.O. ASW-C1-27	E-8	30 30J 80-2	Yellow Yellow Jumper Black	Carry over switch.
A2 Cam 1	N.C. ASW-C2-15	F-14	30J 85-1	Yellow Jumper Black-White	Open circuit to 1, 2, 3, 4, 5 & 6 search discs.
A3 Cam 1	N.C. ASW-C2-2	A-8	54 52	White-Green White-Blue	Open circuit to timer index cam coil.
B1 Cam 2	N.C. ASW-C2-6	E-40	15-9 21-3	Red-White Blue-Red	Open circuit to B-3 lockout trip.
C1 Cam 3	N.O. ASW-C10-5	F-26	30 30J 45	Yellow Yellow Jumper Green-White	Completes timer reset circuit.
C2 Cam 3	N.O. ASW-C10-1	E-23	30J 85-3	Yellow Jumper Black-White	Completes circuit to selection unit and replay counters 1, 2 & 3 reset coils.
C3 Cam 3	N.O.	F-22	30J 18	Yellow Jumper Red-Black	Completes trip bank motor circuit.
D1 Cam 4	N.C. ASW-C2-6	E-10	81-4 56-3	Black-Red White-Brown	Completes Circuit to lifter start relay coil.
D2 Cam 4	N.C. ASW-C2-2	F-9	36-3 38-2 38J	Yellow-Brown Yellow-Black Yellow-Black Jumper	Complete circuit to Shutter motor if tilted.
D3 Cam 4	N.C.	F-29	27-2 38J	Blue-Orange Yellow-Black Jumper	Completes circuit to shutter motor thru timer unit disc.
D4 Cam 4	T ASW-C3-2	B-8	80-2 58 54	Black White-Black White-Green	Completes circuit to shutter motor and opens to timer cam index coil.
E1 Cam 5	N.C. ASW-C1-27	E-29	21-3 72-3	Blue-Red Orange-Blue	Completes circuit to reflex disc.
F1 Cam 6	N.O. ASW-C10-5	E-22	18 30 30J	Red-Black Yellow Yellow Jumper	Completes Circuit to trip bank meter.
F2 Cam 6	N.O. ASW-C10-1	F-23	78-4 30J	Orange-Black Yellow Jumper	Completes Circuit to 4, 5 & 6 relay counters reset coil.

ALWAYS GIVE MODEL AND PART NUMBERS WHEN ORDERING SERVICE PARTS

SWITCH/COIL	PART NO.	LOCATION ON DIAGRAM	WIRE NO.	WIRE COLOR	FUNCTION
Lifter Start Relay	AS-2930-1	A-11	70 40J	Orange Green Jumper	Energized by lifter Start Relay.
N.O.	ASW-R1-1	C-10	54-3 40-3 40J	White-Green Green Green	Completes Circuit from Ball Gate Switch
N.C.	ASW-R2-5	D-40	20-9 15-9	Blue Red-White	Completes Circuit from Shutter Cam No. 2
N.C.		E-12	21-3 60-3	Blue-Red Brown	Completes Circuit to Timer
N.C.		D-9	57-2 38-2	White-Orange Yellow-Black	Completes Circuit from Timer Disc
Ball Lifter Motor No. 1	AS-1139-36	A-12	70 74-3	Orange Orange-Green	Energized thru 5th ball trough Switch
N.O.	ASW-C1-54	E-12	30 61-3	Yellow Brown-Red	Completes Circuit to Timer
N.C.	ASW-C2-15	B-9	27-2 80-2	Blue-Orange Black	Completes Circuit to Shutter Motor
N.C.	ASW-C2-2	C-40	25-9 20-9	Blue-White Blue	Completes Circuit to 2nd Switch ball trough
No. 2 N.O.	ASW-C1-54	D-10	85-6 63-2	Black-White Brown-Yellow	Completes Circuit from Timer
Ball Lifter Switch N.O.	ASW-A1-7	E-12	60-3 61-3	Brown Brown-Red	Completes Circuit from Lifter Start Relay
Manual Lift N.O.	ASW-A1-26	D-12	60-3 61-3	Brown Brown-Red	Completes Circuit to Ball Lifter Motor
N.C.	ASW-A2-9	D-10	30 56-3	Yellow White-Brown	Completes Circuit to Ball Runway Switch
Toggle Switch N.O.	E-108-57	E-1	90-16 93-16	Gray Gray-Yellow	Powers Game
Tilts N.O.	ASW-1-25	C-11	65-1 21-3	Brown-White Blue-Red	Completes Circuit to Tilt Trip
5th Ball Trough Switch N.O.		D-12	61-3 74-3	Brown-Red Orange-Green	Completes Circuit to Ball Lifter Motor
2nd Ball Trough Switch N.C.		B-40	25-9 82-3	Blue-White Black-Blue	Completes Circuit to Timer Disc
Ball Runway N.O.	ASW-A1-2	C-10	30 40-3	Yellow Green	Completes Circuit to Lifter Start Relay
Ball Gate N.C.	ASW-A2-62	D-10	56-3 54-3	White-Brown White-Green	Completes Circuit to Lifter Start Relay
Coin Switch T	AS-2744	D-6	51-2 84-2 53-8	White-Red Black-Green White-Yellow	Completes Circuit to Control Unit Cam No. 5
Front Door Lite Switch N.O.		G-19	15-2 30	Red-White Yellow	Completes Circuit to Meter Lite
Replay Button Switch N.O.		D-6	34-1 75-1	Yellow-Green Orange-White	Completes Circuit to Replay Register
Replay Key Switch N.C.	ASW-A1-11	A-5	53-3 48-2	White-Green Green-Black	Completes Circuit to Start Relay
N.O.	ASW-A1-54	A-14	78-3 43-3	Orange-Black Green-Yellow	Completes Circuit to Key Meter

ALWAYS GIVE MODEL AND PART NUMBERS WHEN ORDERING SERVICE PARTS

SWITCH/COIL	PART NO.	LOCATION ON DIAGRAM	WIRE NO.	WIRE COLOR	FUNCTION
N.O.	ASW-A2-27	B-11	21-3 65-1	Blue-Red Brown-White	Completes Circuit to Tilt Trip
N.O.	ASW-A2-51	C-4	30 15-7	Green Red-White	Completes Circuit to Anti Cheat Relay
C Button N.O.	ASW-A11-4	C-24	54-2 18-2	White-Green Red-Black	Energizes 1, 2, 3 Search Wiper Lock Coil
N.O.		D-25	21-3 52-3	Blue-Red White-Blue	Energizes Timer Reset Coil
Regular Button E		D-26	23-5 61-2	Blue-Yellow Brown-Red	Pushed after 4th or 5th Ball to put Regular Win on Register
Double Button N.O.	ASW-A1-22	C-27	65-8	Brown-White	Determines Double or Nothing Win on Register

ALWAYS GIVE MODEL AND PART NUMBERS WHEN ORDERING SERVICE PARTS

PARTS GUIDE

FRONT CABINET ASSEMBLY

Part No.	Description
CA-1119-55	Front Cabinet
M-281-58	Lock
CA-439-27	Ball Return Panel
G-424	Top Glass
P-5940-18	Front Door Trim (Left)
P-5940-33	Front Door Trim (Right)
P-5940-40	Front Door Trim (Top)
P-5940-41	Front Door Trim (Bottom)
P-921-39	Left Side Moulding
P-921-40	Right Side Moulding
AS-187-20	Ball Shooter Assembly
A-100-7	Knob & Shooter Assembly
AP-262	Front Compression Spring
AS-1835-1	Shooter Guide Assembly
AP-200-24	Rear Compression Spring
P-2879	Spring Cup
P-2891-8	Retaining Ring
R-108-3	Shooter Tip
A-2618	Leg
M-106-1	Leg Bolt
M-163-4	Leg Adjuster
N-37516-2112	Nut
A-2790-59	Cash Box Assembly
P-3089-55	Cash Box Cover
M-168-15	Ball
E-108-57	Game On-Off Switch
AS-982-948	Red Switches, Switch & Bracket Assembly
AS-982-933	"C" Button, Switch & Bracket Assembly
AS-982-671	Key E.D.S. Switches, Switch & Bracket Assembly
AS-1305-65	Front Moulding Assembly

BACK CABINET ASSEMBLY

Part No.	Description
G-292-44	High Flyer Back Glass
CA-1120-62	Back Cabinet
M-281-74	Lock
E-126-63	Cord Set
A-1511-33	Back Door Hinge (Bottom)
A-1511-34	Back Door Hinge (Top)
A-1272-20	Button & Pin Assembly (D)
A-1272-25	Button & Pin Assembly (C)
A-1272-59	Button & Pin Assembly (R)

FRONT DOOR ASSEMBLY

Part No.	Description
AS-2041-82	Front Door Assembly Complete
M-281-54	Lock
A-254-117	Hinge
M-1400	Slug Rejector (Specify Coin Denomination)
A-2958-11	Coin Lockout
AS-2517-14	Coil Magnet Assembly
P-6694	Coin Guide (Specify Coin Denomination)
E-108-57	Coin Switch
ASW-A1-25	Tilt Switch
A-1729-16	Push Button Assembly (Red)

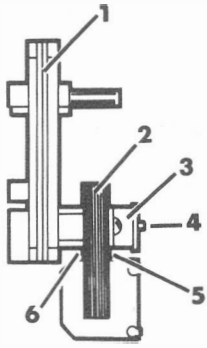
BACK DOOR ASSEMBLY

Part No.	Description
CA-1120-63	Back Door
P-2335-48	Hinge
M-281-24	2 Lock Set
P-758-31	Lock Cam
R-206-1	Rubber Bumper

PLAYFIELD PANEL

Part No.	Description
AS-2042-194	Playfield Panel Assembly Complete
CA-638-104	Panel
CA-1100-9	Arch Bottom
CA-1103	Arch Guide Strip
CA-1104	Arch Top
C-326-9	Light Shield Post (White)
E-125-2	Lamp #47 (8)
E-125-5	Lamp #55 (2)
M-170	Rebound Spring (8)
SP-112	Long Panel Spring (8)
SP-112-1	Short Panel Spring (4)
S-196	Playfield Pin (15)
S-1071-84	Panel Pin (29)
C-119-21	Red Bumper Post (4)
R-243-2	Red Bumper Rubber (4)
C-119-23	Yellow Bumper Post (30)
R-243	White Bumper Rubber (26)
C-153	Ball lift Cover

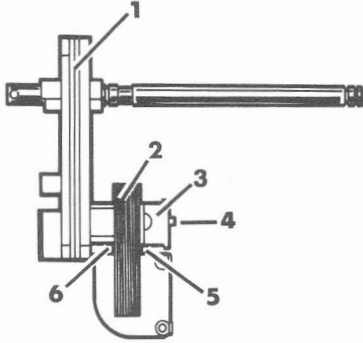
MOTOR PARTS GUIDE



BALL LIFTER MOTOR E-119-339

Item No.	Part No.	Description
1	GC2-1743-1	Transmission Assembly
2	AS2-1743-1	Stator Assembly
3	ABB-1010-01	Bearing & Bracket Assembly
4	AR2-1743-1	Rotor & Shaft Assembly
5	W-1015-03	Rotor Washer
6	J-1011-60	Rotor Spring

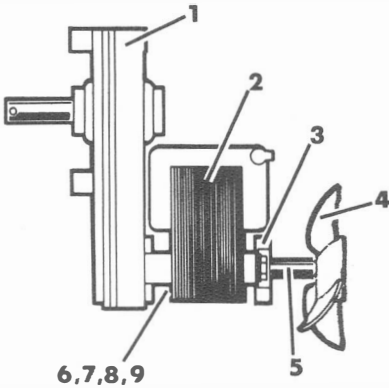
Note: Items 4, 5 & 6 should be ordered as a unit.



PANEL SHUTTER MOTOR E-119-379

Item No.	Part No.	Description
1	GC2-1725-1	Transmission Assembly
2	AS2-1725-1	Stator Assembly
3	ABB-1010-1	Bearing & Bracket Assembly
4	AR2-1725-1	Rotor & Shaft Assembly
5	W-1015-03	Rotor Washer
6	J-1011-60	Rotor Spring

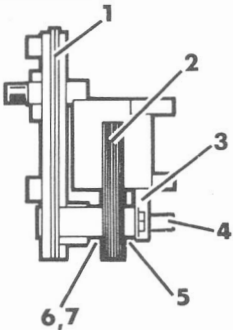
Note: Items 4, 5 & 6 should be ordered as a unit.



CONTROL UNIT MOTOR E-119-452

Item No.	Part No.	Description
1	GC3-4017-1	Transmission Assembly
2	AS3-4017-1	Stator Assembly
3	ABB-1010-02	Bearing & Bracket Assembly
4	F-1011-00	Fan
5	AR3-4017-1	Rotor & Shaft Assembly
6	W-1014-03	Washer
7	W-1014-15	Washer
8	W-1014-25	Washer
9	W-1017-20	Washer

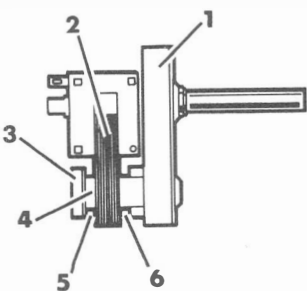
Note: Items 5, 6, 7, 8 & 9 Should be ordered as a unit.



TRIP BANK RELAY MOTOR E-119-464

Item No.	Part No.	Description
1	GC2-2543-1	Transmission Assembly
2	AS2-2543-1	Stator Assembly
3	ABB-1010-01	Bearing & Bracket Assembly
4	AR2-2543-1	Rotor & Shaft Assembly
5	W-1015-03	Washer
6	W-1014-03	Washer
7	W-1014-09	Washer

Note: Items 4, 5, 6 & 7 should be ordered as a unit.



RANDOM UNIT MOTOR E-119-479

Item No.	Part No.	Description
1	GC1-1720-1	Transmission Assembly
2	AS1-1720-1	Stator Assembly
3	ABB-1010-02	Bearing & Bracket Assembly
4	AR1-1720-1	Rotor & Shaft Assembly
5	W-1017-20	Washer
6	W-1014-09	Washer

Note: Items 4, 5 & 6 should be ordered as a unit.

ADDITIONAL GAME CARDS

AFTER SHOOTING 5 BALLS
FIRST PRESS "C" BUTTON

WHEN

DOUBLE OR NOTHING

LIGHT'S FLASH

PRESS "D" BUTTON
TO TRY FOR DOUBLE OR NOTHING
in any desired winning card or cards

OR

PRESS "R" BUTTON
TO COLLECT REGULAR SCORE
in any desired winning card or cards

BC-2

DEPOSIT COINS OR PLAY REPLAYS
BY PRESSING RED BUTTON
TO LIGHT 1 TO 6 CARDS
ONE CARD GUARANTEED
for each coin deposited

7TH & 8TH COIN ADD
RED DIAGONALS
TO TOP THREE AND BOTTOM
THREE CARDS

ROLL-OVER AND/OR ALL CORNERS
OR ALL SUPERLINES LIGHT
ON A MYSTERY BASIS WHEN
FIRST BALL IS SHOT

3 IN LINE scores as 4 IN LINE
4 IN LINE scores as 5 IN LINE
when lined up in a
LIT SUPER LINE

HF-1

ONLY HIGHEST SCORE PER CARD REGISTERS—REGULAR OR DOUBLE.

SCORE VOID IF GAME IS TILTED.

1st CARD	2nd CARD	3rd CARD	4th CARD	5th CARD	6th CARD
3 IN LINE ... 4	3 IN LINE ... 4	3 IN LINE ... 4	3 IN LINE ... 4	3 IN LINE ... 4	3 IN LINE ... 4
4 IN LINE ... 20	4 IN LINE ... 20	4 IN LINE ... 20	4 IN LINE ... 24	4 IN LINE ... 36	4 IN LINE ... 44
5 IN LINE ... 100	5 IN LINE ... 100	5 IN LINE ... 120	5 IN LINE ... 140	5 IN LINE ... 240	5 IN LINE ... 300

BC-3

A GAME OF SKILL FOR AMUSEMENT ONLY. NO GAMBLING PERMITTED.

ONLY HIGHEST SCORE PER CARD REGISTERS—REGULAR OR DOUBLE.

SCORE VOID IF GAME IS TILTED.

1st CARD	2nd CARD	3rd CARD	4th CARD	5th CARD	6th CARD
3 IN LINE ... 4	3 IN LINE ... 4	3 IN LINE ... 4	3 IN LINE ... 4	3 IN LINE ... 4	3 IN LINE ... 4
4 IN LINE ... 16	4 IN LINE ... 20	4 IN LINE ... 20	4 IN LINE ... 24	4 IN LINE ... 36	4 IN LINE ... 44
5 IN LINE ... 100	5 IN LINE ... 100	5 IN LINE ... 120	5 IN LINE ... 140	5 IN LINE ... 240	5 IN LINE ... 300

BC-3A

A GAME OF SKILL FOR AMUSEMENT ONLY. NO GAMBLING PERMITTED.

ONLY HIGHEST SCORE PER CARD REGISTERS—REGULAR OR DOUBLE.

SCORE VOID IF GAME IS TILTED.

1st CARD	2nd CARD	3rd CARD	4th CARD	5th CARD	6th CARD
3 IN LINE ... 4	3 IN LINE ... 4	3 IN LINE ... 4	3 IN LINE ... 4	3 IN LINE ... 4	3 IN LINE ... 4
4 IN LINE ... 20	4 IN LINE ... 20	4 IN LINE ... 20	4 IN LINE ... 24	4 IN LINE ... 36	4 IN LINE ... 40
5 IN LINE ... 100	5 IN LINE ... 100	5 IN LINE ... 120	5 IN LINE ... 140	5 IN LINE ... 240	5 IN LINE ... 240

A GAME OF SKILL FOR AMUSEMENT ONLY. NO GAMBLING PERMITTED