

Bally

SERVICE MANUAL
GAME 1163

TAHITI



Bally

MANUFACTURING CORPORATION

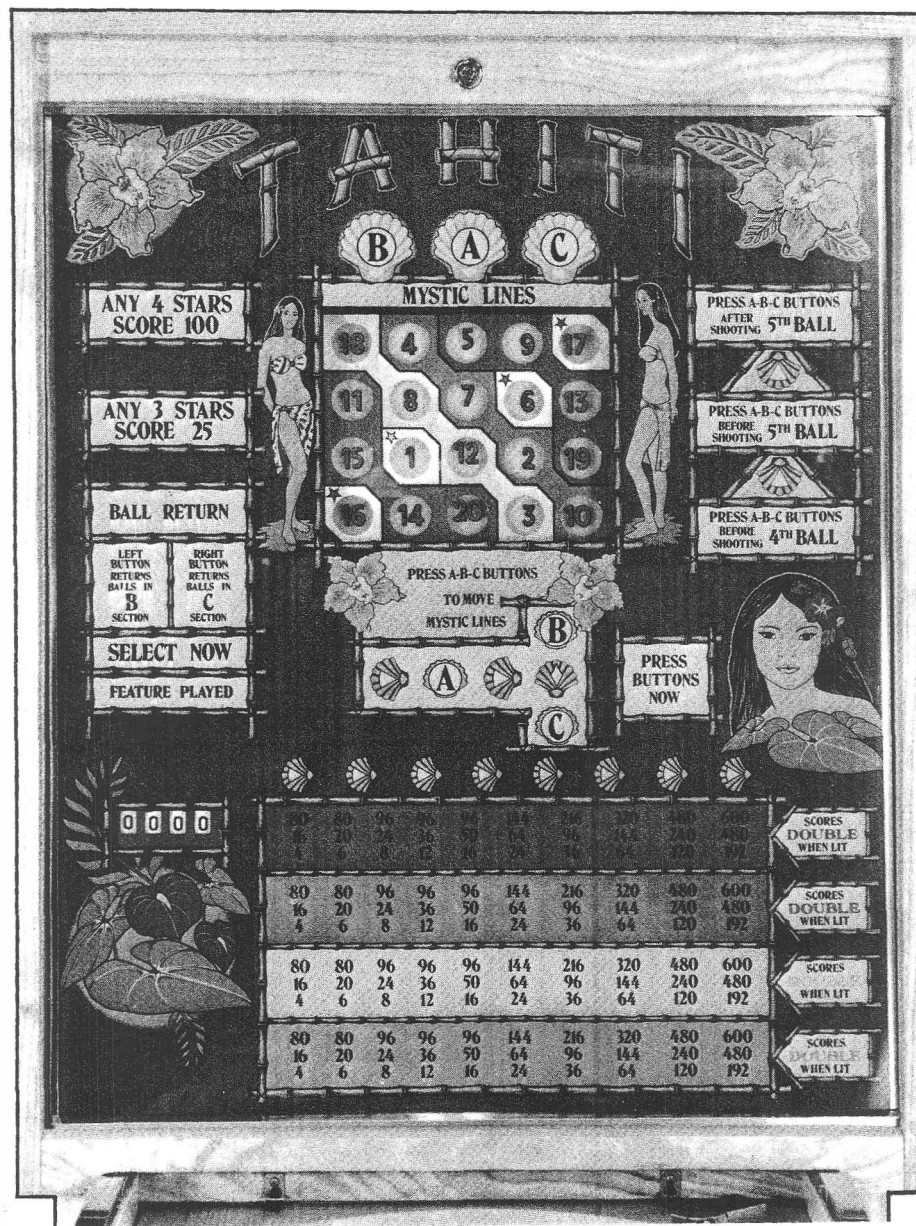
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TAHITI INTRODUCTION



The model 1163 Tahiti game is a new entry in the current line of full-featured Bally products that attract and stimulate player interest. Equipped with many recently developed features of proven appeal, the Tahiti also allows the player to return one or more selected balls from the playfield by manually activating "left" or "right" buttons on the cabinet when "Ball Return" and "Select Now" indicators on back glass are lit. All features, including Double Score (on any level of the 4-story score panel) are selected at random during coining or replay of up to 40 games. The number of features allowed increases and higher scores become available as more coins or replays are used.

The schematic diagram (W-826-70) is a main source of information. Units are easy to find when the Location Chart on the right side is used. All of the units in the Tahiti, including coils, are labeled with a part number to aid ordering replacement parts. This manual also provides information on contact plate and switch unit functions with cross references to the schematic diagram. Part numbers for switches, motors, coils and contact plates are incorporated into the individual unit function charts and disc wiring pictorials. Appearance items, mechanical assemblies and cabinet parts are listed in the rear of the manual.

MAINTENANCE AND SERVICE HINTS

To keep games working properly, regular inspection and cleaning is required. Starting with the coin chute, remove accumulated metallic dust, beverage residue and other debris. An aerosol type cleaner may be used but all parts must also be wiped off with a clean cloth to remove dirt and scum, especially electrical contacts and printed circuit discs.

All wiper assemblies (especially those with multiple fibre discs installed) are very susceptible to electrical arcing when they are even thinly coated with oil and dirt. Failure to **eliminate** arcing allows a build-up of carbon traces and eventually burns a hole through **the** fibre plate. The occurrence of arcing shorts (which are difficult to trace and **seriously** disrupt associated circuits) is another consequence of this condition. **Regular** physical inspection of wipers and discs will reveal the tell-tale carbon traces **that** indicate arcing. All contacts involved must be thoroughly cleaned and thinly coated with a **spray-type contact cleaner**.

Troubleshooting is made easier when cabinets at the back and bottom of the game are **regularly** cleared so that any broken or loose parts subsequently found will help identify the defective units.

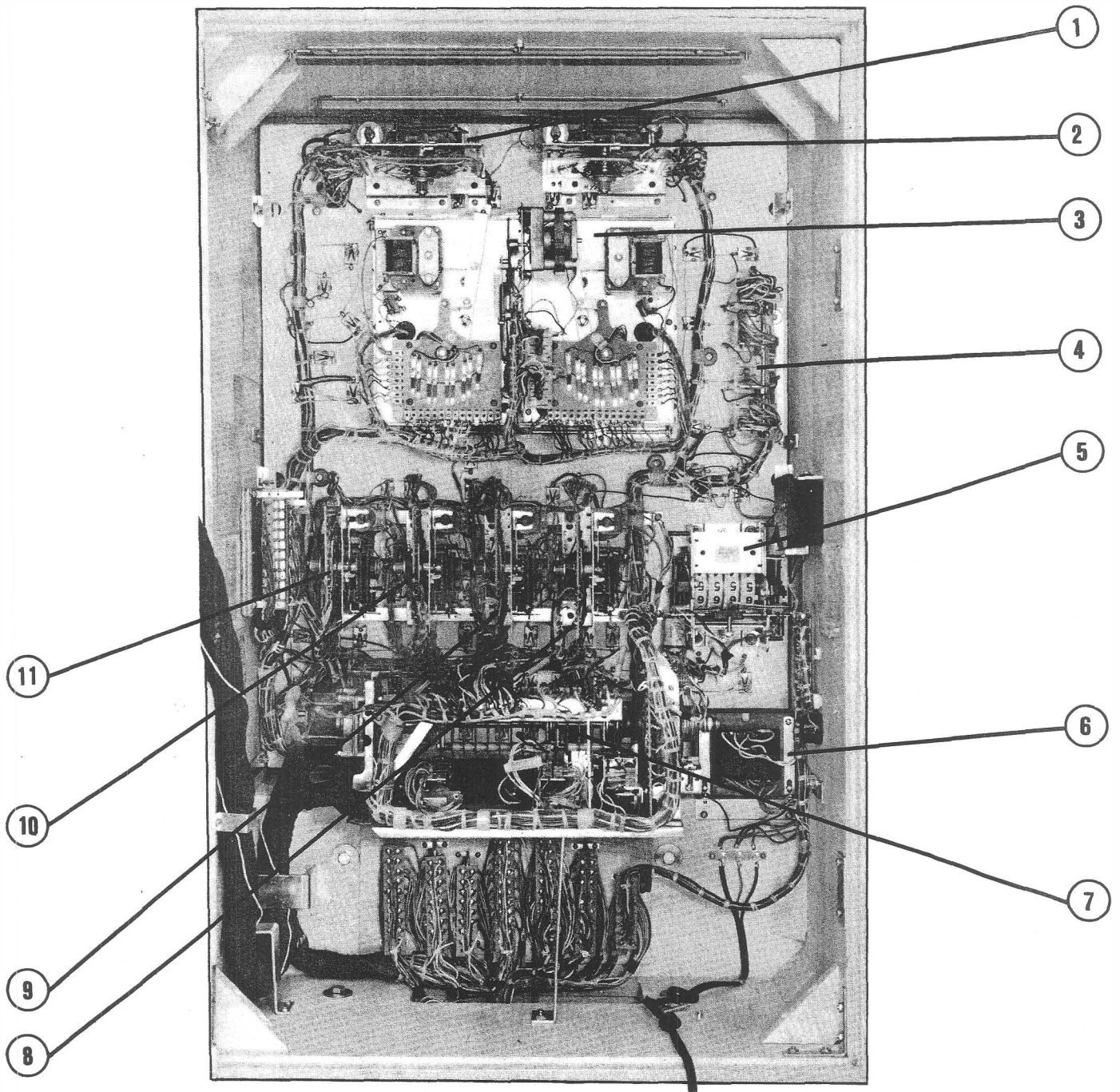
Accurate adjustments of switch blades, wipers and cams must be maintained to assure adequate continuity, prompt opening and closing of circuits and precise mechanical timing. Switch blades that are overly bent may break off at the base. Wiper blades under excess pressure will cut through printed circuit discs. Fibre cams must be examined for worn lobes or locking notches. Finally, a clean machine will provide longer, more dependable service and easier maintenance.

WIRE COLOR CODE		
1. Red	A.	First digit is wire body color
2. Blue		
3. Yellow		
4. Green	B.	Second digit is color of tracer stripe
5. White		
6. Brown		
7. Orange	C.	Number after dash indicates use of same color wire in other circuits
8. Black		
9. Grey		
0. No Tracer		

EXAMPLE: 58-6 is a white wire with a black stripe used in several different circuits

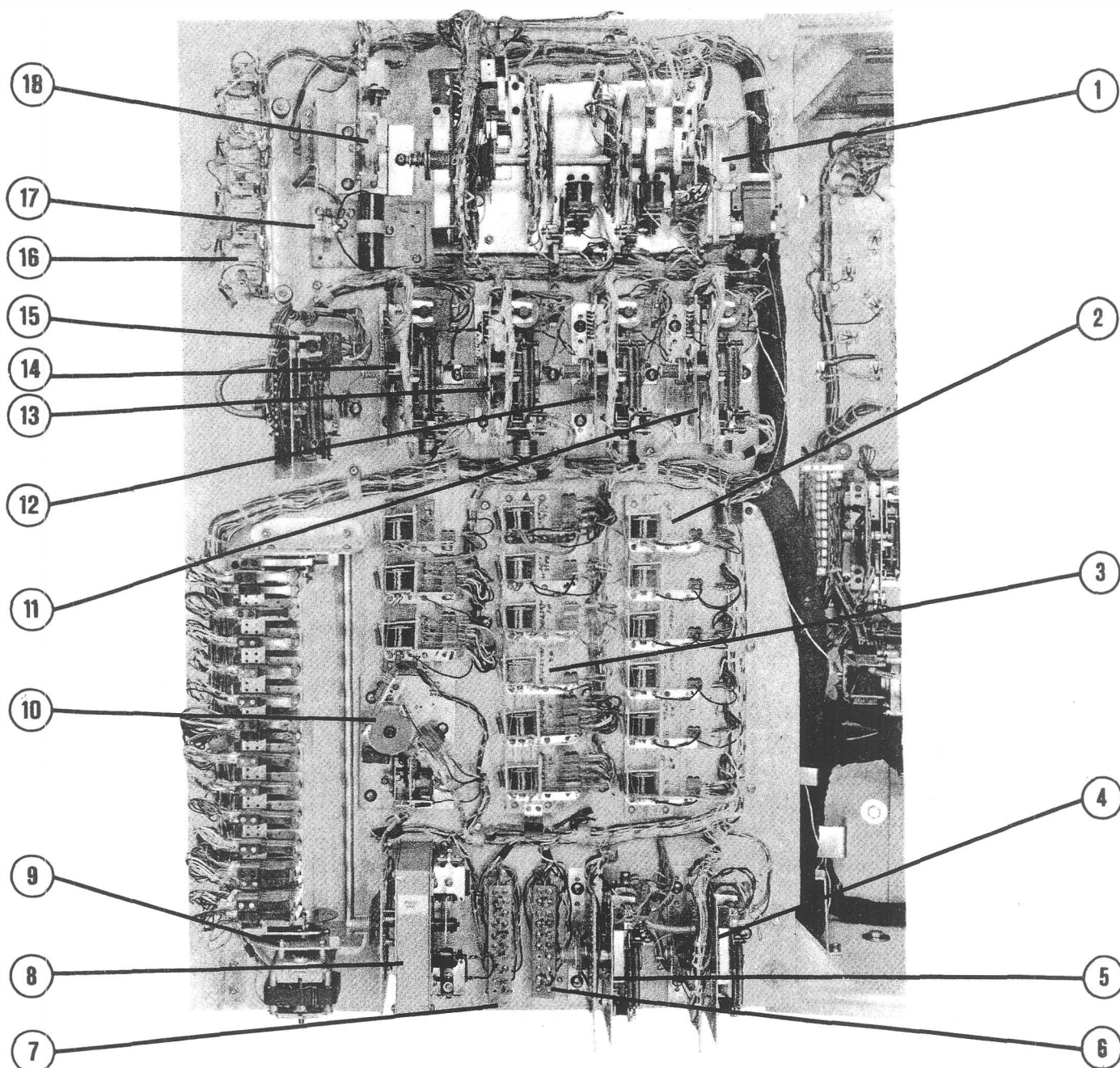
SWITCH CODE	
NOTE:	All switches on Bally diagrams work clockwise
N.C.	Normally closed
N.O.	Normally open
M.B.B.	Make before break
T.	Transfer switch - single pole double throw

BACK CABINET ASSEMBLY



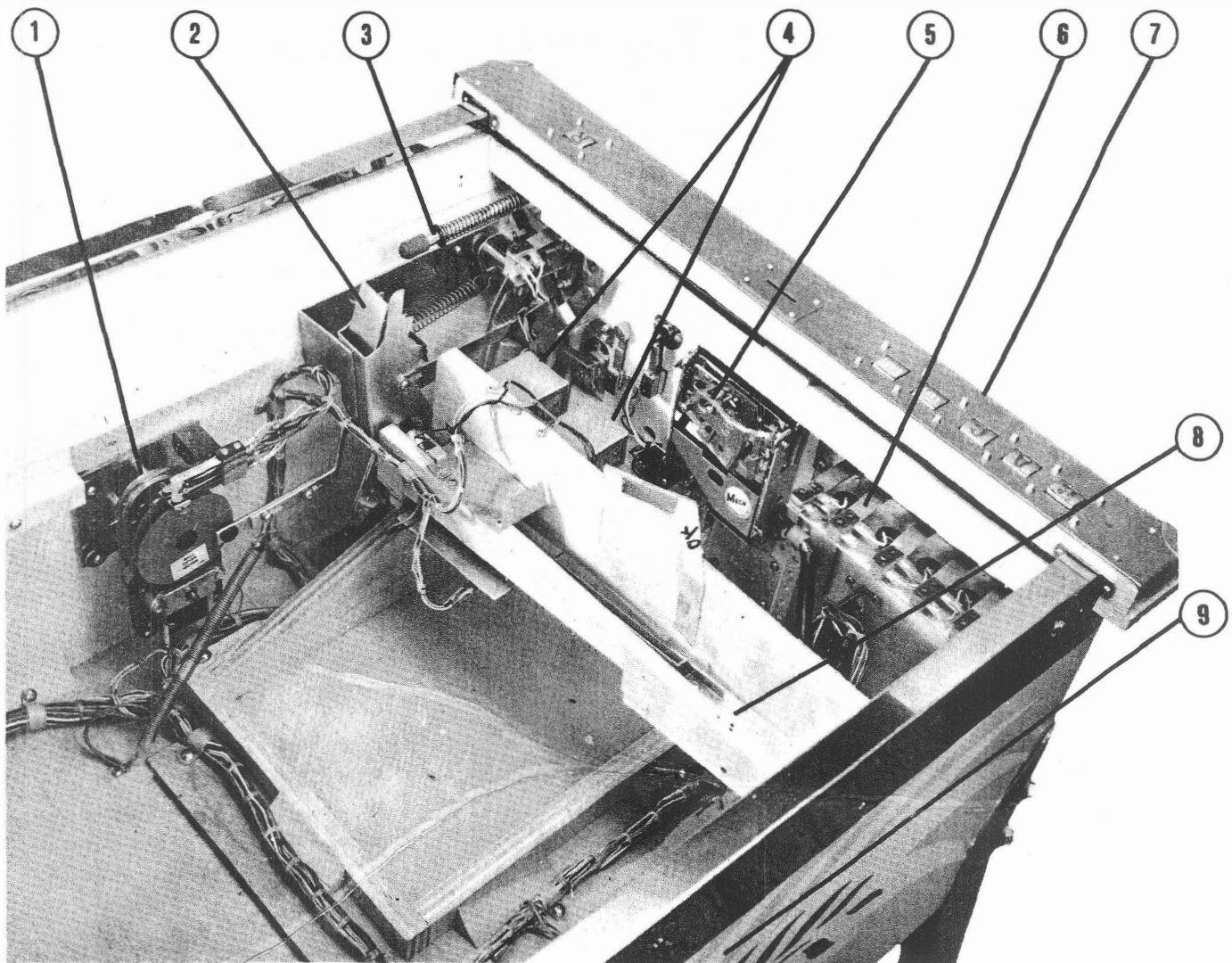
KEY NO.	PART NO.	DESCRIPTION	PAGE
1.....	AS-827-576	Selection Feature Unit	26
2.....	AS-827-714	Mystic Lines Feature Unit	25
3.....	AS-1809-10	Mystic Lines Unit	17
4.....	E-300-737	4 Relay Bank (Anti-Cheat etc.)	42
5.....	AS-473-54	Replay Register	
6.....	E-122-103	Transformer	
7.....	AS-798-134	Control Unit	12
8.....	AS-1148-43	Blue Score Unit	32
9.....	AS-1148-43	Green Score Unit	32
10.....	AS-1148-43	Yellow Score Unit	32
11.....	AS-1148-44	Red Score Unit	32

BACK DOOR ASSEMBLY



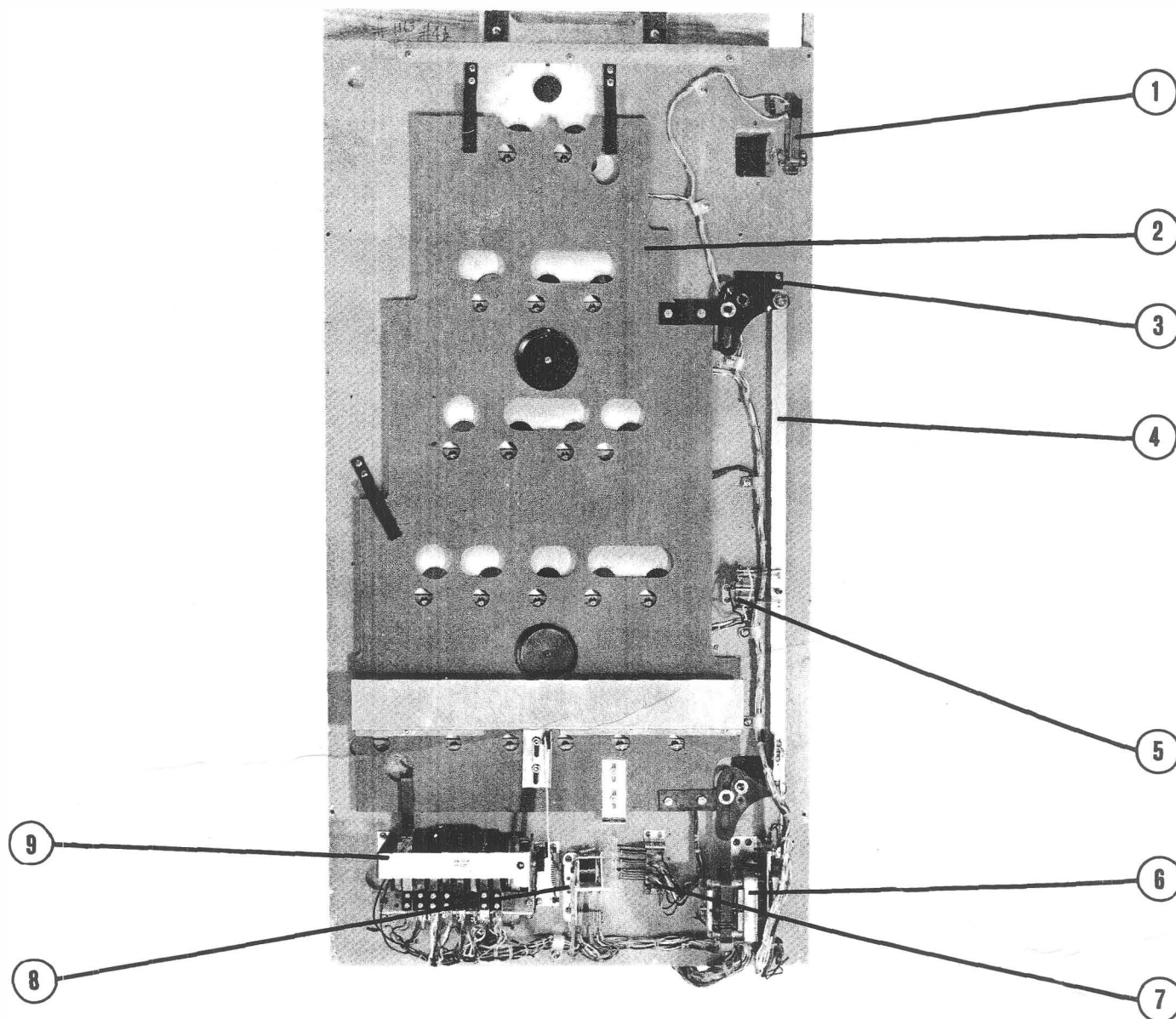
KEY NO.	PART NO.	DESCRIPTION	PAGE
1.....	AS-1020-69	Program Unit	10
2.....	E-300-952	6 Relay Bank (Score etc.)	40
3.....	E-300-954	6 Relay Bank (Reflex etc.)	41
4.....	AS-1022-147	Scrambler Unit	27
5.....	AS-1110-61	Timer Unit	29
6.....	E-139-18	Gong Diodes W/Connector	
7.....	E-139-20	Score Diodes W/Connector	
8.....	AS-873-59	Reflex Unit	
9.....	AS-2409-46	12 Relay Bank (Trip Assy.)	36
10.....	AS-1237-12	Star Replay Counter	24
11.....	AS-797-513	Blue Replay Counter	30
12.....	AS-797-513	Green Replay Counter	30
13.....	AS-797-513	Yellow Replay Counter	30
14.....	AS-797-513	Red Replay Counter	30
15.....	AS-1358-29	Coin Counter	28
16.....	E-300-632	5 Relay Bank (Search)	39
17.....	E-300-957	Score Safety Delay Relay	
18.....	AS-1900-169	Alternator Unit	33

FRONT CABINET ASSEMBLY



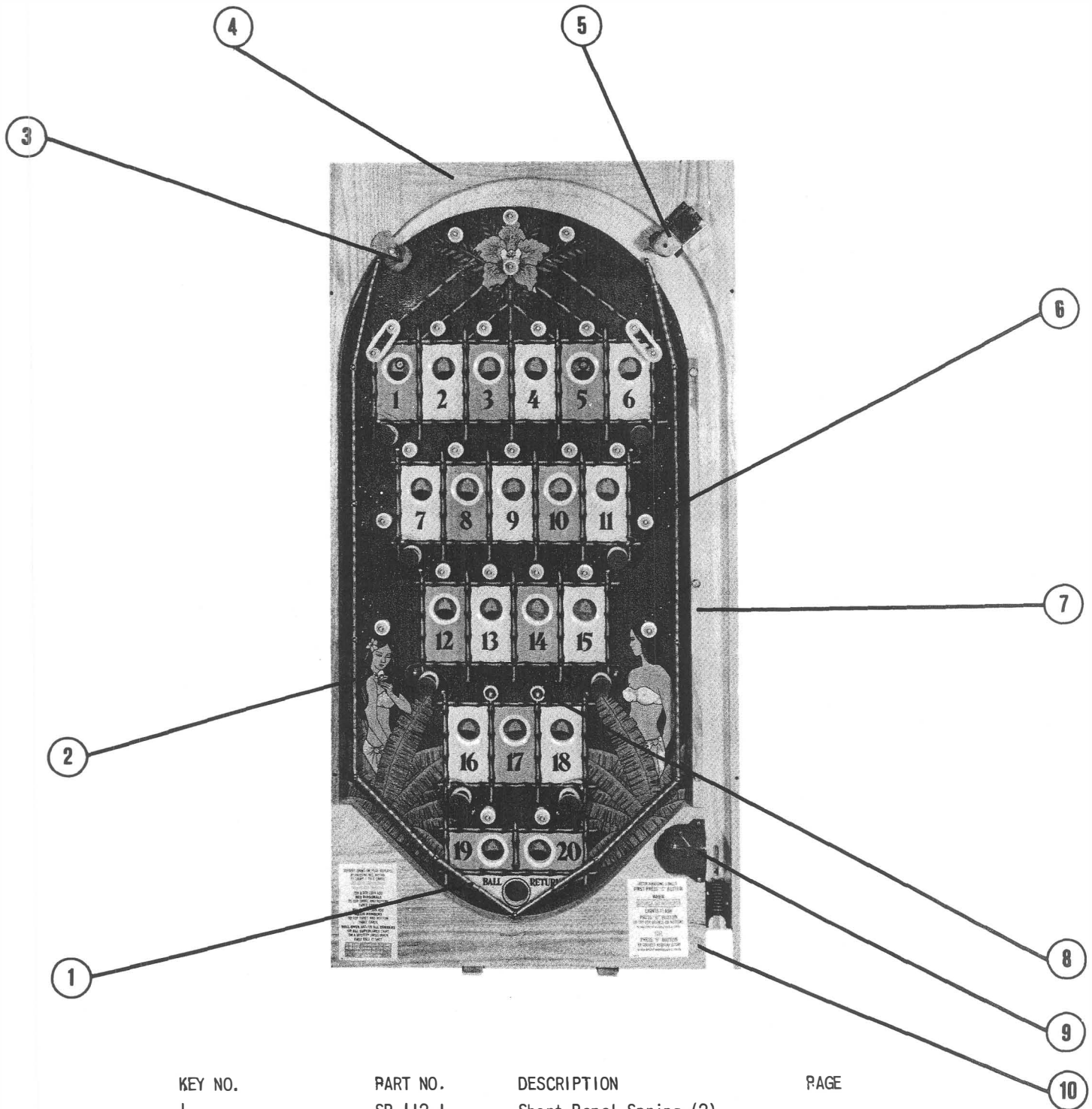
KEY NO.	PART NO.	DESCRIPTION	PAGE
1.....	AS-1139-33	Ball Lifter Motor Assy.	35
2.....	AS-186-11	Ball Lifter Assy.	
3.....	AS-187-20	Ball Shooter Assy.	
4.....	E-130-29	Coin & Key Meters	45
5.....	M-1400-Coin	Slug Rejector	
6.....	AS-982-1234	Button Switch & Bracket Assy. (A,B,C, Left, Right)	44
7.....	AS-1305-70	Front Molding Assy.	
8.....	AS-1145-52	Ball Trough & Switch Assy.	44
9.....	M-281-58	Lock	
	AS-982-671	Key Switch & Bracket Assy. (Small)	45
	AS-982-673	Key Switch & Bracket Assy. (Large)	45

PANEL ASSEMBLY – BOTTOM



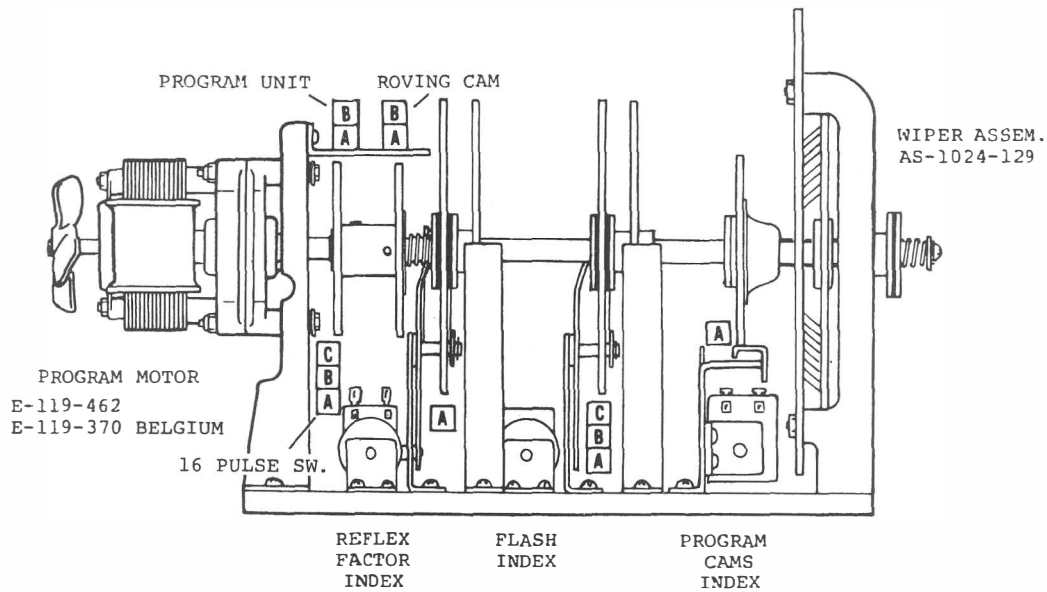
KEY NO.	PART NO.	DESCRIPTION	PAGE
1.....	ASW-A1-30	Ball Runway Switch	35
2.....	AS-1433-23	Shutter Assy.	34
3.....	A-1593	Plate & Stud Assy.	
4.....	A-1592-1	Guide Arm Assy.	
5.....	AS-982-1215	Switch & Bracket Assy. (Panel Guide)	35
6.....	AS-2935	Shifter Motor Assy.	
7.....	AS-982-1025	Switch & Bracket Assy. (Shutter)	35
8.....	AS-2930-38	Lifter Start Relay	35
9.....	AS-232-103	Shutter Motor Assy.	34

PANEL ASSEMBLY – PLAYFIELD



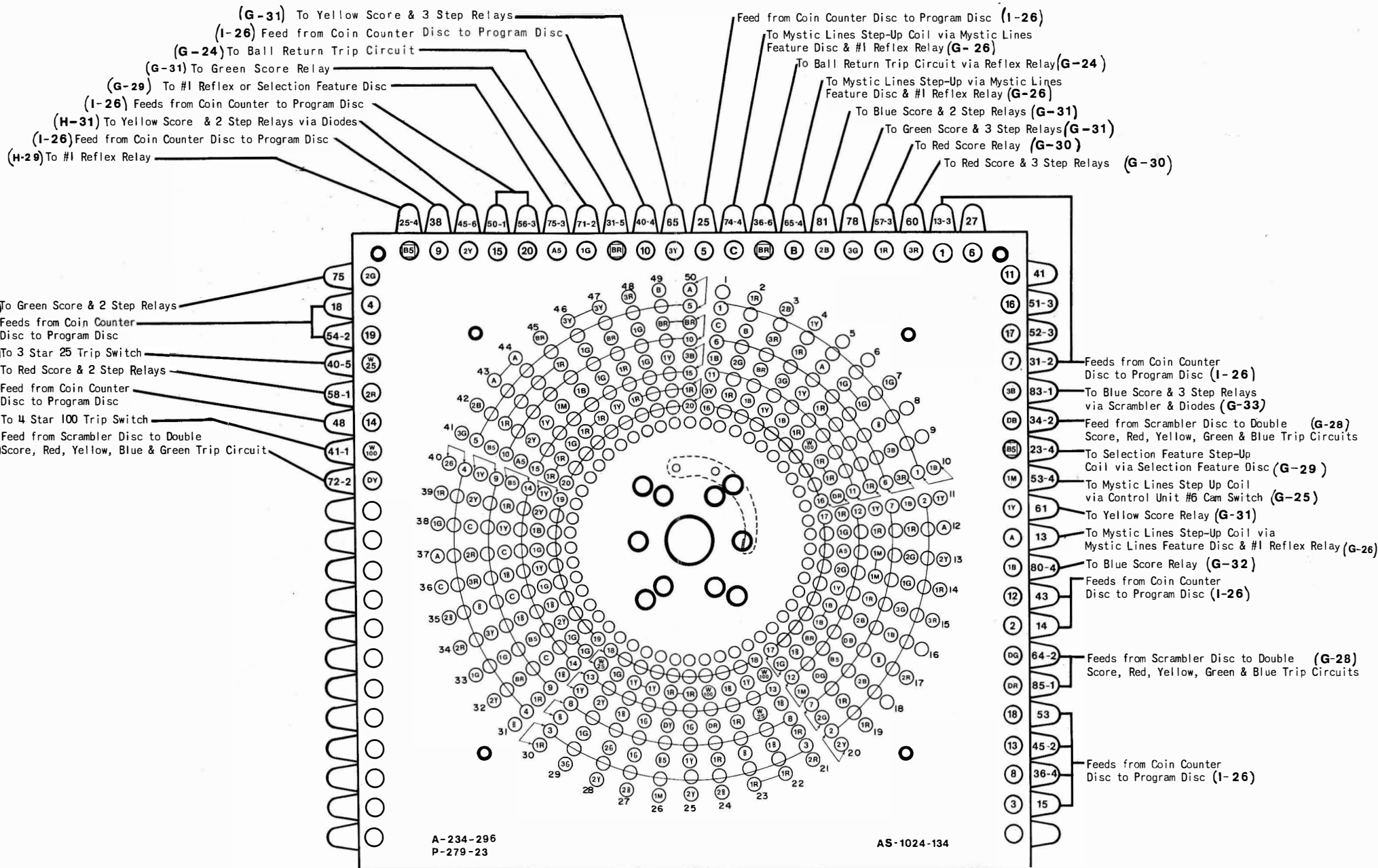
KEY NO.	PART NO.	DESCRIPTION	PAGE
1.....	SP-112-1	Short Panel Spring (2)	35
2.....	SP-112	Long Panel Spring (10)	
3.....	R-115-4	Rebound Rubber	
4.....	CA-1104	Arch Top	
5.....	AS-1315-8	Ball Gate & Switch Assy.	
6.....	R-243	Bumper Rubber, White (23)	
7.....	CA-1103	Arch Guide Strip	
8.....	R-243-2	Bumper Rubber, White (2)	
9.....	C-153	Ball Lifter Cover, Red	
10.....	CA-1100-11	Arch Bottom	

PROGRAM UNIT FUNCTION CHART



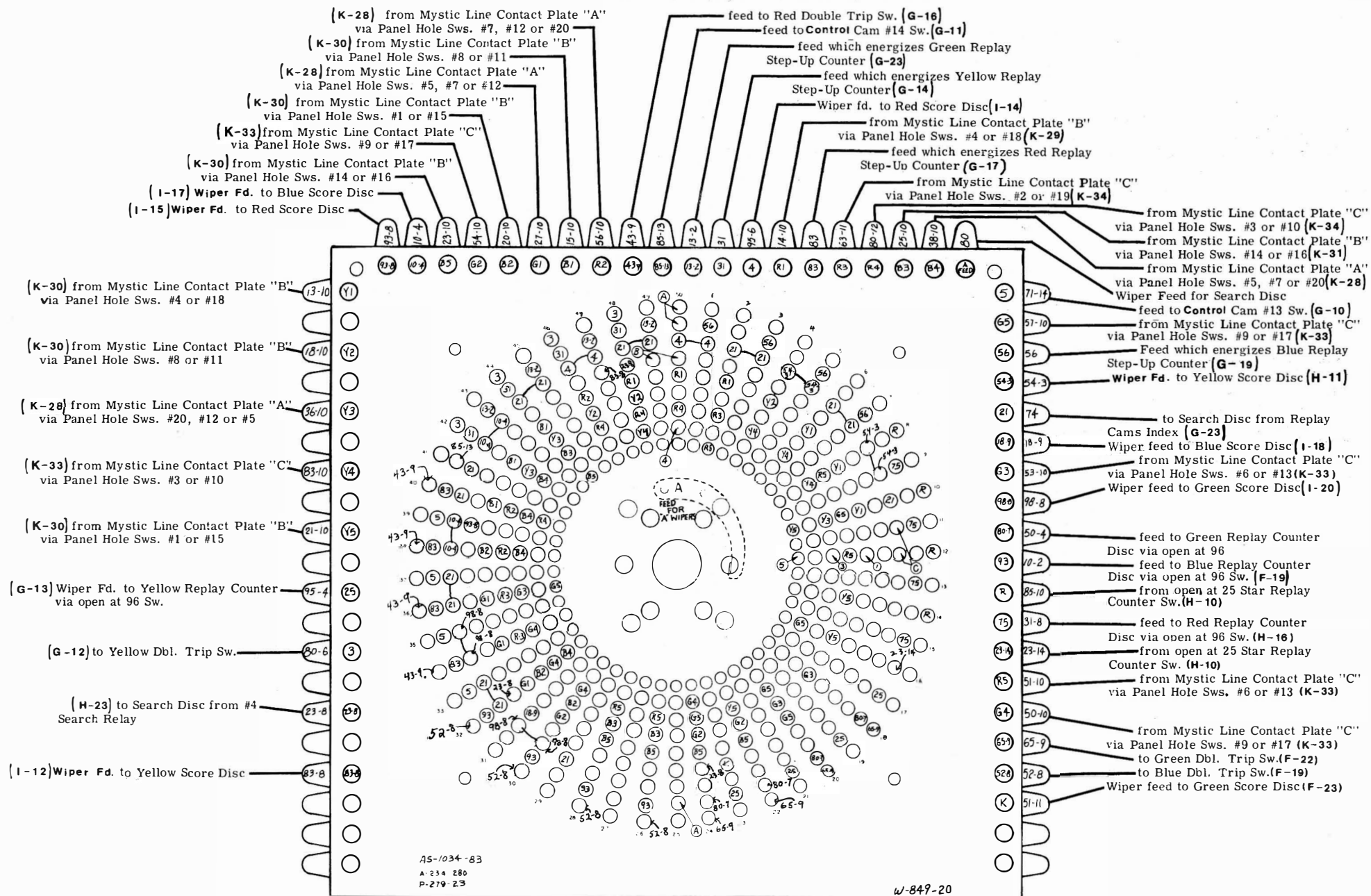
SWITCH/COIL	PART NO.	DIAGRAM LOCATION	WIRE NO.	WIRE COLOR	FUNCTION
Motor, Domestic Motor, Belgium	E-119-462 E-119-370	B-2	98-16 95-16	Grey-Black Grey-White	Energized from Tilt-Trip Switch
Program Index	Coil BF-27-1250	A-12	70 14J	Orange Red-Green	Coil energized by "Before 4th" Trip Switch
A. N.C.	ASW-A2-64	B-12	14-3 14J	Red-Green Red-Green	Places resistor in series with Program Index Coil
Resistor 20 Ohms 12 W	E-104-88	B-12	14-3 14J	Red-Green Red-Green	Drops voltage to prevent burnout of Program Index Coil
Flash Index	Coil CR-28-1100	A-13	70 20-4	Orange Blue	Coil energized from Control Unit #3 cam switch
A. N.O.	ASW-A1-124	J-4	52-5 30	White-Blue Yellow	Flashes arrow lites through Flasher Disc
B. N.O.	ASW-C1-40	J-21	13-4 30J	Red-Yellow Silver	Flashes Mystic Lines lites through Flasher Disc
C. N.O.	ASW-C1-40	K-22	81-6 30J	Black-Red Silver	Flashes selected feature lites through Flasher Disc
Reflex Factor Index	Coil CR-28-1100	A-12	70 56-6	Orange White-Brown	Coil energized from Program Unit Roving cam switch
A. N.O.	ASW-A1-124	D-12	35 41-5	Yellow-White Green-Red	Closes Reflex Factor Index coil holding circuit
Roving Cam A. N.O.	ASW-C1X-1	C-14	85-8 27-2	Black-White Blue-Orange	Pulses Timer Unit step-up coil
B. N.C.	ASW-C2-15	C-12	41-5 56-6	Green-Red White-Brown	Opens circuit to Reflex Factor Index coil
16 Pulse Cam (Top) A. N.O.	ASW-C1X-1	C-6	75-2 53-7	Orange-White White-Yellow	Pulses Replay Register Reset Coil
B. N.C.	ASW-C1X-2	G-11	30 38-9	Yellow Yellow-Black	Pulses Alternator Unit Coil
16 Pulse Cam (Side) A. N.O.	ASW-C1X-1	G-26	58-2 61-2	White-Black Brown-Red	Pulses Mystic Lines Unit step-up coil
B. N.O.	ASW-C1X-2	G-29	80-7 81-2	Black Black-Red	Pulses Selection Feature Unit step-up coil
C. N.O.	ASW-C1X-2	L-18	20 13-11	Blue Red-Yellow	Pulses "Select Now", "Press A, B, C Buttons Now" and Feature lites

PROGRAM DISC ASSEMBLY



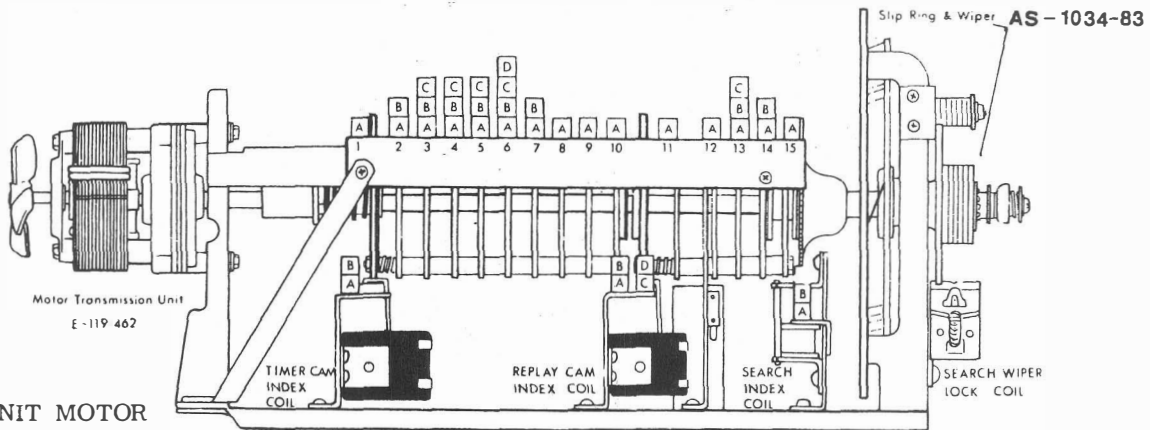
NOTE: DIAGRAM LOCATION OF COMPONENTS SHOWN IN PARENTHESES

CONTROL DISC ASSEMBLY



NOTE: DIAGRAM LOCATION OF COMPONENTS SHOWN IN PARENTHESES

CONTROL UNIT ADJUSTMENT

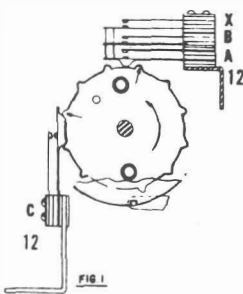


CONTROL UNIT MOTOR

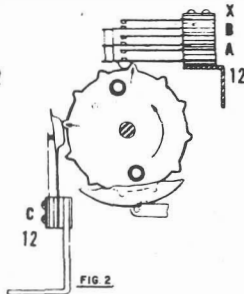
E-119-462 50/60 Cy. 23.4 R.P.M. Domestic

E-119-370 50 Cy. only 25 R.P.M. Belgium

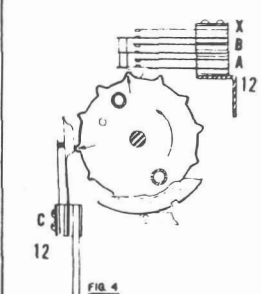
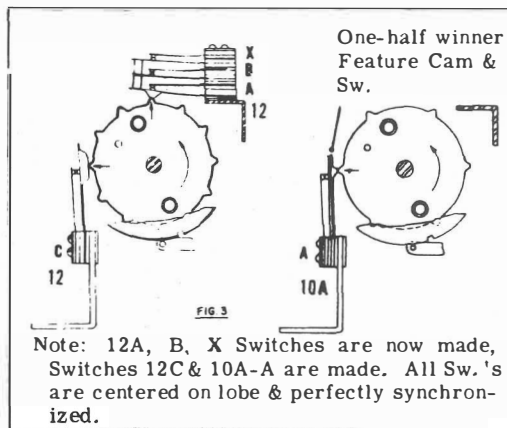
The correct adjustment & synchronization of the Switches controlled by Cam No.'s 10A & 12 is vitally important to the Replay Counter Circuit. Out of adjustment Back Switches (12-C & 10A-A) can cause the four Replay Counters to become overloaded & burn out (affects the Printed Circuit Disc). Figure 3 shows these Cam Switches in a proper "Made" position. The Back Switches are adjustable. Note that the 12-C switch closes first & opens last. Cam Switch 12X is used for our testing purposes only.



Replay Cam 12 shown in a normal indexed position. Switches 12 A, B, C are open.



Cam 12 starting to rotate. Switches out of indexed pos. Switches A & B are open, Switch C is closed.



Cam #12 Switches A & B are now open again, however Switch C is still closed. After this cycle Cam & Switches return to the Fig. 1 position (open).

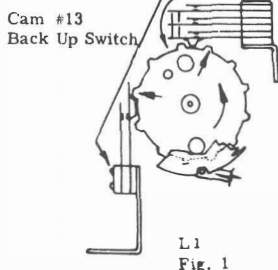
This entire sequence is repeated throughout the scoring cycle.

ADJUSTMENT PROCEDURES

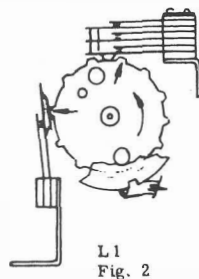
Adjust Height and Switch so that the entire bent part of Switch Blade fits between Cam Lobes firmly on Cam & at Cam Center.

With Replay Cam Index Pin in Index Cam Notch. Replay Cam Index must be adjusted in so that switches are positioned between Cam Lobes as shown.

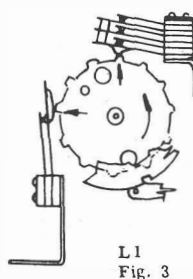
3/4 of Space from last Lobe



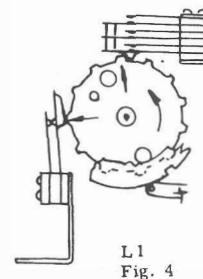
Replay Cams shown in their normal Indexed Positions. Switches are Open. Arrows point to Lobes that will actuate Switches.



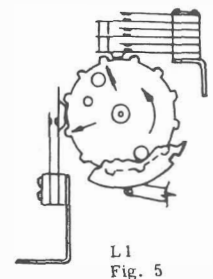
Replay Cams shown starting to Rotate they are now out of their Indexed Positions. Switches 1G, 2G & 3G are Open Switch 1L is now Open, Switch L1 is now Closed.



Switches 1G, 2G & 3G are now Closed. Switch L1 is still closed.



Switches 1G, 2G & 3G are now Open again. Switch L1 is still closed.



All Switches are now Open again. Same as in Fig. 1. This sequence is repeated thruout Replay Scoring Cycle.

CONTROL UNIT FUNCTION CHART

SWITCH/COIL	PART NO.	DIAGRAM LOCATION	WIRE NO.	WIRE COLOR	FUNCTION
Motor, Domestic Motor, Belgium	E-119-462 E-119-370	8-1	98-16 95-16	Grey-Black Grey-White	Energizes Control Unit Motor through Replay Reset Relay Switch
#1 Pin Switch N.C.	ASW-C2-28	D-8	30 25-9	Yellow Blue-White	Opens Multiplay Relay Holding circuit
#2 Cam A. N.C.	ASW-C1-3	E-6	30 48-2	Yellow Green-Black	Opens Start Relay Coil circuit, Closed at Index
B. T. Check Switch	ASW-C3-3	G-8	62-1 60-1 47-2	Brown-Blue Brown Green-Orange	Pulses Total Replay Meter Step-Up (62-1) and Total Play Meter Step-Up (47-2)
#3 Cam A. N.O.	ASW-C1-3	C-13	20-4 21-3	Blue Blue-Red	Closes Flash Index Coil circuit
B. N.C.	ASW-C2-4	I-27	21-3 60-8	Blue-Red Brown	Opens Feature Coil circuits through Scrambler Disc
C. T.	ASW-C3-2	D-7	14-5 13-9 50J	Red-Green Red-Yellow White	14-5 Closes circuit to Tilt Trip Coil, 50J directs Coin Switch to Single Play (10-5) or Multiplay (15-13)
Terminal Assy L1 L2	ASW-A0-9	D-7	10-5 15-13	Red Red-White	To Single Play circuit To Multiplay circuit
#4 Cam A. N.O.	ASW-C1-3	D-8	27-9 80-2	Blue-Orange Black	Closes circuit to Coin Meter
B. N.O.	ASW-C1-8	E-12	21-3 35	Blue-Red Yellow-White	Closes circuit to Reflex Factor Index Coil
C. N.C.	ASW-C2-4	B-4	82 52-11	Black-Blue White-Blue	Opens circuit to Coils of #1 Reflex Relay and #2 Reflex Relay
#5 Cam A. N.O.	ASW-C1-3	C-12	35 41-5	Yellow-White Green-Red	Closes circuit to Reflex Factor Index Coil
B. N.O.	ASW-C1-8	B-16	23-9 57-4	Blue-Yellow White-Orange	Closes circuit to Coin Counter Step-Up Coil
C. N.O.	ASW-C1-8	E-3	30 78-4	Yellow Orange-Black	Closes circuit to Anti-Cheat Relay Coil
#6 Cam A. N.O.	ASW-C1-52	H-33	83-3 68-2	Black-Yellow Brown-Black	Closes circuit to Blue and Green All Score Switches
B. N.O.	ASW-C1-8	G-33	83-3 85-4	Black-Yellow Black-White	Closes circuit to Red and Yellow All Scores Switches and All Scores Relay Coil
C. N.O.	ASW-C1-8	G-29	18-1 80-8	Red-Black Black	Closes circuit to Selection Feature Step-Up Coil
D. N.O.	ASW-C1-8	G-25	53-4 58-2	White-Yellow White-Black	Closes circuit to Mystic Lines Step-Up Coil
#7 Cam A. N.O.	ASW-C1-3	I-34	20-7 82-2	Blue Black-Blue	Closes circuit to Red, Yellow, Blue and Green Score Switches
B. N.O.	ASW-C1-8	D-5	30 80-9	Yellow Black	Closes circuit to Reflex Play Magnet Coil
Resistor 1.8K Ohm 7W	E-104-89	D-5	30 80-9	Yellow Black	Absorbs Voltage surges and Bleeds current to prevent hang-up after Drop-Out of Reflex Play Magnet Coil
Terminal Assy L1 L2	ASW-A0-8	D-5	30 80-9	Yellow Black	Terminals for Resistor
C. N.O.	ASW-C1-8	F-29	84-3 13-12	Black-Green Red-Yellow	Closes circuit to Gong Coil

CONTROL UNIT FUNCTION CHART

SWITCH/COIL	PART NO.	DIAGRAM LOCATION	WIRE NO.	WIRE COLOR	FUNCTION
#8 Cam N.O.	ASW-CI-3	H-34	32-3 82-2	Yellow-Blue Black-Blue	Directs circuit from 2 Step Relay or 3 Step Relay to Red, Yellow, Green and Blue Score switches and Step-Up Coils
#9 Cam N.O.	ASW-CI-3	I-35	65-2 82-2	Brown-White Black-Blue	Directs circuit from 3 Step Relay only, to Red, Yellow, Green and Blue Score Switches and Step-Up Coils
#10 Cam N.O.	ASW-CI-3	I-7	30 36-13	Yellow Yellow-Brown	Closes circuit to Multiplay Relay Switch and Replay Register Step-Up Coil. Amount of Replays determined by number of Lobes on Cam
#11 Cam N.O.	ASW-CI-4	F-15	63 12-2	Brown-Yellow Red-Blue	Closes Replay Multiplier circuit X12 Cam Switch to Score Discs or Alternator Unit
#12 Cam N.O.	ASW-CI-3	F-14	57 12-2	White-Orange Red-Blue	Closes Replay Multiplier circuit X6 Cam Switch to Score Discs or Alternator Unit
#13 Cam A.	ASW-CI-3	G-10	71-14 27-17	Orange-Red Blue-Orange	Closes Multiplier Replay circuit from Search Disc to Star Replay Counter Coil
B.	ASW-CI-8	H-8	80 41-4	Black Green-Red	Closes circuit to Reflex Replay Magnet Step-Up Coil
C.	ASW-CI-8	F-13	12-2 45	Red-Blue Green-White	Directs Multiplier Relay circuits via Cam switches to Score Discs
D.	ASW-CI-8		27J	Blue-Orange	Factory service test switch
Resistor 1.8K Ohm 7W	E-104-89	I-9	41-4 21-3	Green-Red Blue-Red	Prevents open circuit hang-up of Reflex Replay Magnet Coil by bleeding current
Terminal Assy L1 L2	ASW-AO-8	I-9	41-4 21-3	Green-Red Blue-Red	Terminals for Resistor
E. Back Switch (X1) N.O.	ASW-CIX-9	I-8	21-3 23-13	Blue-Red Blue-Yellow	Multiplier circuit to Replay Cams Index Switch and Reflex Magnet Coil
#14 Cam A.	ASW-CI-3	F-13	52 12-2	White-Blue Red-Blue	Multiplier circuit X4 Cam to Score Discs
B.	ASW-CI-9	G-11	85-13 27-17	Black-White Blue-Orange	Closes circuit from Search Disc to Star Replay Counter and Replay Multiplier Coil Switch
#15 Cam N.C.	ASW-CI-4	G-24	74 31-11	Orange-Red Yellow-Red	Safety Switch, Opens circuit to three, four and five-in-line replay circuits
Search Wiper Lock Coil	FD-30-1300	F-5	70 23-16	Orange Blue-Yellow	Energizes Magnet to release wipers and begin Replay Search
Search Wiper Cam Switches A.	ASW-CI-16	I-5	10-13 57-12	Red White-Orange	Opens circuit to Mystic Lines Unit Disc through Selection Feature Disc
B.	ASW-CI-17	B-7	53-13 13-16	White-Yellow Red-Yellow	Opens circuit to Start Relay Coil
C.	ASW-CI-17	F-5	52-9 23-16	White-Blue Blue-Yellow	Opens circuit to Search Lock Magnet Coil
Timer Cam Index Coil	BF-27-1250	A-9	70 61-7	Orange Brown-Red	Releases Timer Index Cam
A.	ASW-AI-43	C-2	94-16 98-16	Grey-Green Grey-Black	Energizes motors of Control Unit and Program Unit
B.	ASW-A2-18	D-9	67 27-9	Brown-Orange Blue-Orange	Opens circuit through Coin Counter Switch or Shutter Switch to Coin Lockout Coil

CONTROL UNIT FUNCTION CHART

SWITCH/COIL	PART NO.	DIAGRAM LOCATION	WIRE NO.	WIRE COLOR	FUNCTION
Replay Cam Index Coil	CF-28-1025	F-9	70 40-19	Orange Green	Releases Replay Index Cam
A. N.O.	ASW-A1-11	G-23	31-11 74	Yellow-Red Orange-Green	Direct feed circuit to Search and Score Discs to win three, four and five in line replays
B. N.O.	ASW-A1-54	D-12	21-3 12-7	Blue-Red Red-Blue	Closes circuit from Score Safety Delay switch to Tilt Trip switch
C. N.C.	ASW-A2-27	B-13	27-2 36-9	Blue-Orange Yellow-Brown	Opens circuit to Timer Step-Up coil circuit and Timer (open at top) switch
D. N.C.	ASW-A2-51	K-37	52-6 Lug	White-Blue	Keeps Delay Relay coil energized and switch closed until capacitor discharges
Resistor 10 Ohm 1/2 W	E-105-118	L-37	Lug 30	Yellow	Surge resistor for Safety Delay Relay coil
E. N.O.	ASW-A1-56	I-8	80 23-13	Black Blue-Yellow	Closes circuit to Reflex Replay Magnet coil
F. N.C.	ASW-A2-29	F-10	15-2 80	Red-White Black	Directs circuit through resistor in series with Search Index coil
Resistor 30 Ohm 10 W	E-104-77	F-10	15-2 80J	Red-White Black	Limits voltage to Search Index coil to prevent burnout
Search Index Coil	EA-29-950	F-10	70 15-2	Orange Red-White	Energizes Search Index coil and stops Search Wipers as win circuits are activated
A. N.O.	ASW-A2-28	G-9	40-19 80	Green Black	Closes circuit to Replay Cams Index coil
B. N.C.	ASW-A1-69	B-7	51-8 53-13	White-Red White-Yellow	Opens circuit to Start Relay coil via Search Wiper Cam switch and Key switch

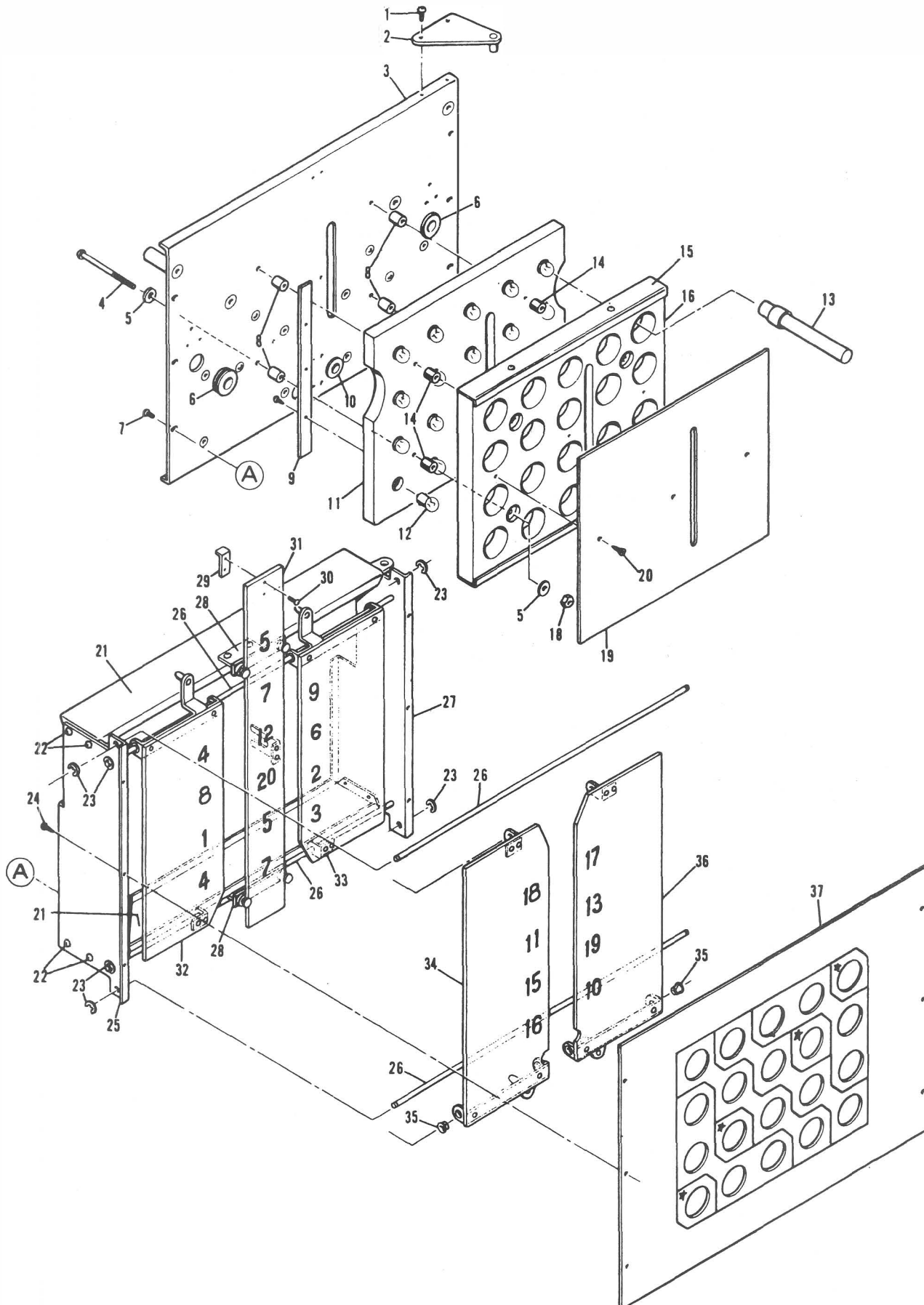
MISCELLANEOUS CIRCUIT FUNCTIONS

SWITCH/COIL	PART NO.	DIAGRAM LOCATION	WIRE NO.	WIRE COLOR	FUNCTION
Search Slip Rings (from inside out)	AS-579-27				
A.		J-35	20-5	Blue	Directs win circuit from Search Disc to Search Relay #1
B.		J-36	65-7	Brown-White	Directs win circuit from Search Disc to Search Relay #2
C.		J-36	60-4	Brown	Directs win circuit from Search Disc to Search Relay #3
D.		J-37	15-3	Red-White	Directs win circuit from Search Disc to search Relay #4
Score Safety Delay Relay	E-146-792	K-35	10-1 52-6	Red White-Blue	Energized from Replay Cams Index through diode
Switch N.C.	(Part Of E-146-792)	D-12	12-7 14-5	Red-Blue Red-Green	Energizes Tilt Trip Coil when Score Safety Delay Relay drops out
Reflex Play Magnet	Coil EA-32-1550	A-5	70 80-9	Orange Black	Energized from Control Unit #7 Cam Switch
Reflex Replay Magnet	Coil EA-30-1150	F-8	70 41-4	Orange Green-Red	Energized from Control Unit #13 Cam Switch

MYSTIC LINES MOTORS - FUNCTION CHART

SWITCH/COIL	PART NO.	DIAGRAM LOCATION	WIRE NO.	WIRE COLOR	FUNCTION
"A" Cam Motor	E-119-457	F-5	70 80-19	Orange Black	Motor energized from "C" Cam Relay Switch and "A" Button Switch
"A" Cam Switches					
A. N.O.	ASW-C1-12	G-5	13-5 21-3	Red-Yellow Blue-Red	Energizes Mystic Lines "A" Motor
B. N.C.	ASW-C2-2	L-35	10-1 18-4	Red Red-Black	Opens all Search Relay Coil circuits
"B" Cam Motor	E-119-353	F-5	70 80J	Orange Black	Motor energized from "C" Cam Relay Switch and "B" Button Switch
"B" Cam Switch					
N.O.	ASW-C1-11	G-5	80-20 21-3	Black Blue-Red	Energizes Mystic Lines "B" Motor
"C" Cam Motor	E-119-353	F-6	70 31J	Orange Yellow-Red	Motor energized from "B" Cam Relay Switch and "C" Button Switch
"C" Cam Switch					
N.O.	ASW-C1-11	G-6	21-3 31-19	Blue-Red Yellow-Red	Energizes Mystic Lines "C" Motor
"B" Cam Relay	Coil G032-02500-N	F-6	70 80-20	Orange Black	Coil energized from "C" Cam Relay Switch and "B" Button Switch
A. N.C.	ASW-R2-5	F-7	25-6 31-19	Blue-White Yellow-Red	Opens circuit to "C" Cam Relay Coil
B. N.C.	ASW-R2-5	G-5	40-13 45-5	Green Green-White	Opens circuit to Mystic Lines "A" Motor
C. N.C.	ASW-R2-5	K-35	18-4 54-7	Red-Black White-Green	Opens all Search Relay Coil circuits
"C" Cam Relay	Coil G032-02500-N	E-7	70 31-19	Orange Yellow-Red	Coil energized from "B" Cam Relay Switch and "C" Button Switch
A. N.C.	ASW-R2-5	F-5	13-5 40-13	Red-Yellow Green	Opens circuit to Mystic Lines "A" Motor
B. N.C.	ASW-R2-5	K-35	54-7 50-9	White-Green White	Opens all Search Relay Coil circuits
C. N.C.	ASW-R2-5	F-6	80-20 48-5	Black Green-Black	Opens circuit to "B" Cam Relay Coil

MYSTIC LINES UNIT-FRONT VIEW



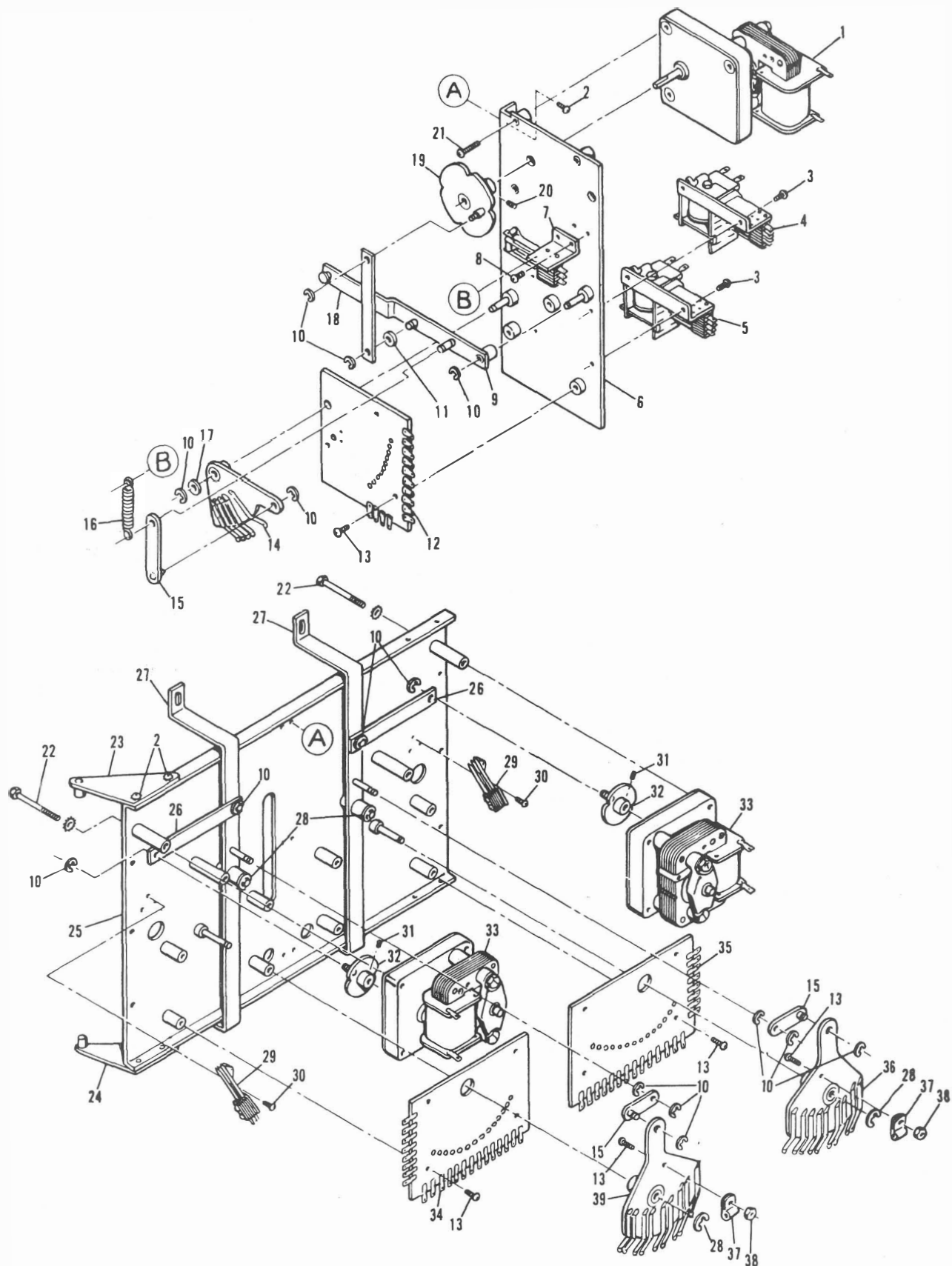
ALWAYS GIVE MODEL AND PART NO. WHEN ORDERING SERVICE PARTS

MYSTIC LINES UNIT-FRONT VIEW

Note: This list of parts and the associated illustration refer to the illuminated front portion or "Score Card" of the AS-1809-10 Mystic Lines Unit. Key numbers 21 - 37 call out the hinged section of the unit which allows easy access to the light bulbs and is shown in a partially assembled state to provide clarity for assembly reference.

KEY NO.	PART NO.	DESCRIPTION	QUAN.	KEY NO.	PART NO.	DESCRIPTION	QUAN.
1	LSPR-632-1103	Screw	4	22	LSPR-632-1103	Screw	8
2	A-2997	Hinge Plate Assy. - Top	1	23	P-6316-4	Retaining Ring	8
3	A-2997-1	Hinge Plate Assy. - Bot.	1	24	SAPR-800-1108	Wood Screw (attaches entire unit to Back Cab. Insert)	6
4	LSPR-1032-1138	Screw (full thread)	4	25	P-6587	End Plate, left	1
5	PW10-12	Washer	8	26	S-739-166	Guide Rod	4
6	R-111-37	Grommet - Wire Tunnel	2	27	P-6587-1	End Plate, right	1
7	LSPR-832-1103	Screw - Hinge Retaining	2	28	A-2995	"A" Strip Guide Bracket Assy.	2
8	S-231-688	Spacer Bushing	4		LSPR-832-1103	Screw	4
9	P-5447-2	Insulator Strip	5	29	P-6606	Stop Bracket	1
10	R-111-8	Grommet - Wire Tunnel	1	30	MSPR-440-1104	Screw	2
11	CA-967-4	Aux. Insert W/	1	31	A-2990	3rd Row Assy.	1
	A-1653-1	Lamp Socket Assy.	20	32	A-2989	2nd Row Assy.	1
12	E-125-47	#1464 Lamp (17 V.)	20		CA-537-3	Nyliner (Top slide bar)	2
13	AS-1115	Lamp Removing Tool	1	33	A-2991	4th Row Assy.	1
14	S-231-687	Spacer Bushing	4		CA-537-3	Nyliner (Top slide bar)	2
15	P-6601	Guide Rail	2	34	A-2988	1st Row Assy.	1
		(Plastic overlay)		35	C-537	Nyliner (Bottom slide bar)	4
16	CA-967-5	Aux. Insert Overlay	1	36	A-2992	5th Row Assy.	1
17		(not Used)		37	P-6588	Front Plate	1
18	N-1032-2112	Nut	4				
19	M-1423	Plastic Overlay	1				
20	WSPF-600-1108	Wood Screw - Flat Head	3				
21	P-6598	Bracket, Side supporting	2				

MYSTIC LINES UNIT-REAR VIEW



ALWAYS GIVE MODEL AND PART NO. WHEN ORDERING SERVICE PARTS

MYSTIC LINES UNIT-REAR VIEW

KEY NO.	PART NO.	DESCRIPTION	QUAN.	KEY NO.	PART NO.	DESCRIPTION	QUAN.
1	E-119-457	Motor, "A" Line	1	22	LSSH-1032-1124	Screw, Hex Head	4
2	LSPR-832-1103	Screw, Motor Assy. Mtg.	3	23	A-2997	Hinge Plate Assy. - Top	1
3	LSPR-632-1103	Screw, relay mounting	4		LSPR-632-1103	Screw	2
4	AS-2930-71	"B" Cam Relay	1	24	A-2997-1	Hinge Plate Assy. (bottom)	1
5	AS-2930-71	"C" Cam Relay	1	25	A-3000	Base Plate Assy.	1
6	A-3001-1	Drive Link Plate Assy.	1	26	P-1973-125	Link (shown assembled)	2
7	AS-982-535	Switch & Bracket Assy.	1	27	A-2998-1	Drive Bracket Assy.	2
	ASW-C1-12	Switch	1			(In operating position - moves slats)	
8	LSPR-632-1103	Screw	2	28	P-6316-6	Retaining Ring, 1/4" I.D.	4
9	A-2996-1	"A" Cam Pivot Arm Assy.	1	29	AS-982-579	Switch & Bracket Assy.	2
10	P-6316-4	Retaining Ring	15		ASW-C1-11	Switch	2
11	P-801-393	Washer	1	30	LSPR-632-1103	Screw	4
12	A-101-356	"A" Contact Plate Assy.	1	31	PCA0-832-1104	Set Screw	2
13	MSPR-832-1106	Screw (contact plates, clips)	13	32	A-800-131	"B" & "C" Cam & Hub Assy.	2
14	A-1371-114	"A" Wiper Arm Assy.	1	33	E-119-353	Motor, "B" & "C" Lines	2
15	A-2991-1	Wiper Drive Link Assy.	3	34	A-101-275	"C" Contact Plate Assy.	1
16	SP-100-245	Extension Spring	1	35	A-101-276	"B" Contact Plate Assy.	1
17	PW-10-11	Washer	1	36	A-1371-95	"B" Wiper Arm Assy.	1
18	P-1973-124	Link	1	37	C-271	Clip	2
19	A-800-130	"A" Cam & Hub Assy.	1	38	N-832-2112	Nut	2
20	PCA0-832-1104	Set Screw	1	39	A-1371-96	"C" Wiper Arm Assy.	1
21	LSPR-1032-1112	Screw	3				

PART NO.

DESCRIPTION

W-1063-3

"A" Contact Plate Wiring Plan

W-1063-1

"B" Contact Plate Wiring Plan

W-1063-2

"C" Contact Plate Wiring Plan

CONTROL UNIT WINNER SEARCH POSITION CHART

CONTROL UNIT

WINNER SEARCH POS. CHART					
Red Wiper at Position	Wiper (1) Search Relay #1	Wiper (2) Search Relay #2	Wiper (3) Search Relay #3	Wiper (4) Search Relay #4	Wiper (5) Search Relay #5
1					
2					
3					
4					
5					
6					
7					
8	Y5	R5	G5		
9					
10	B5	G5	Y5		
11					
12	B5	R5	G5		
13					
14	B5	Y5	R5		
15					
16	B5	Y5	R5	G5	
17					
18	G2	G3	G4		
19					
20	G1	G3	G4		
21					
22	G1	G2	G4		
23					
24	G1	G2	G3	G4	G5
25					
26	B2	B3	B4		
27					
28	B1	B3	B4		
29					
30	B1	B2	B4		
31					
32	B1	B2	B3	B4	B5
33					
34	R2	R3	R4		
35					
36	R1	R3	R4		
37					
38	R1	R2	R4		
39					
40	R1	R2	R3	R4	R5
41					
42	Y2	Y3	Y4		
43					
44	Y1	Y3	Y4		
45					
46	Y1	Y2	Y4		
47					
48	Y1	Y2	Y3	Y4	Y5
49					
50					

3 Star
Game Winners

All 4 Star
300 - 600
Winners

Green Zone
Winners

Blue Zone
Winners

Red Zone
Winners

Yellow Zone
Winners

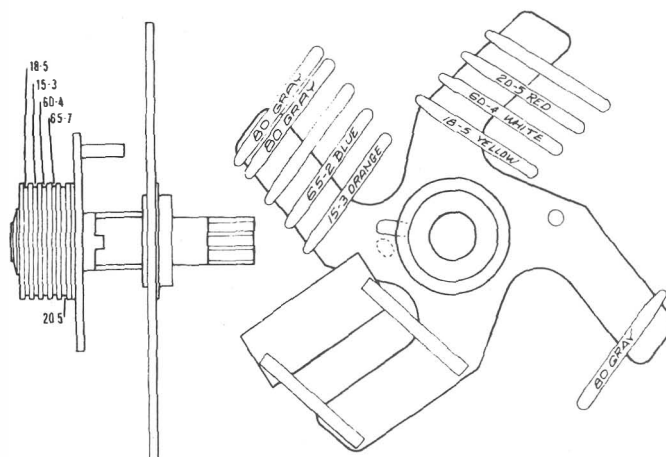
BINGO WINNERS READ ACROSS

MYSTIC LINES CHART REFERENCE

Y1	R1	G1	G2	★ G5
B1	Y2	R2	★ R5	G3
B2	★ Y5	Y3	R3	G4
★ B5	B3	B4	Y4	R4

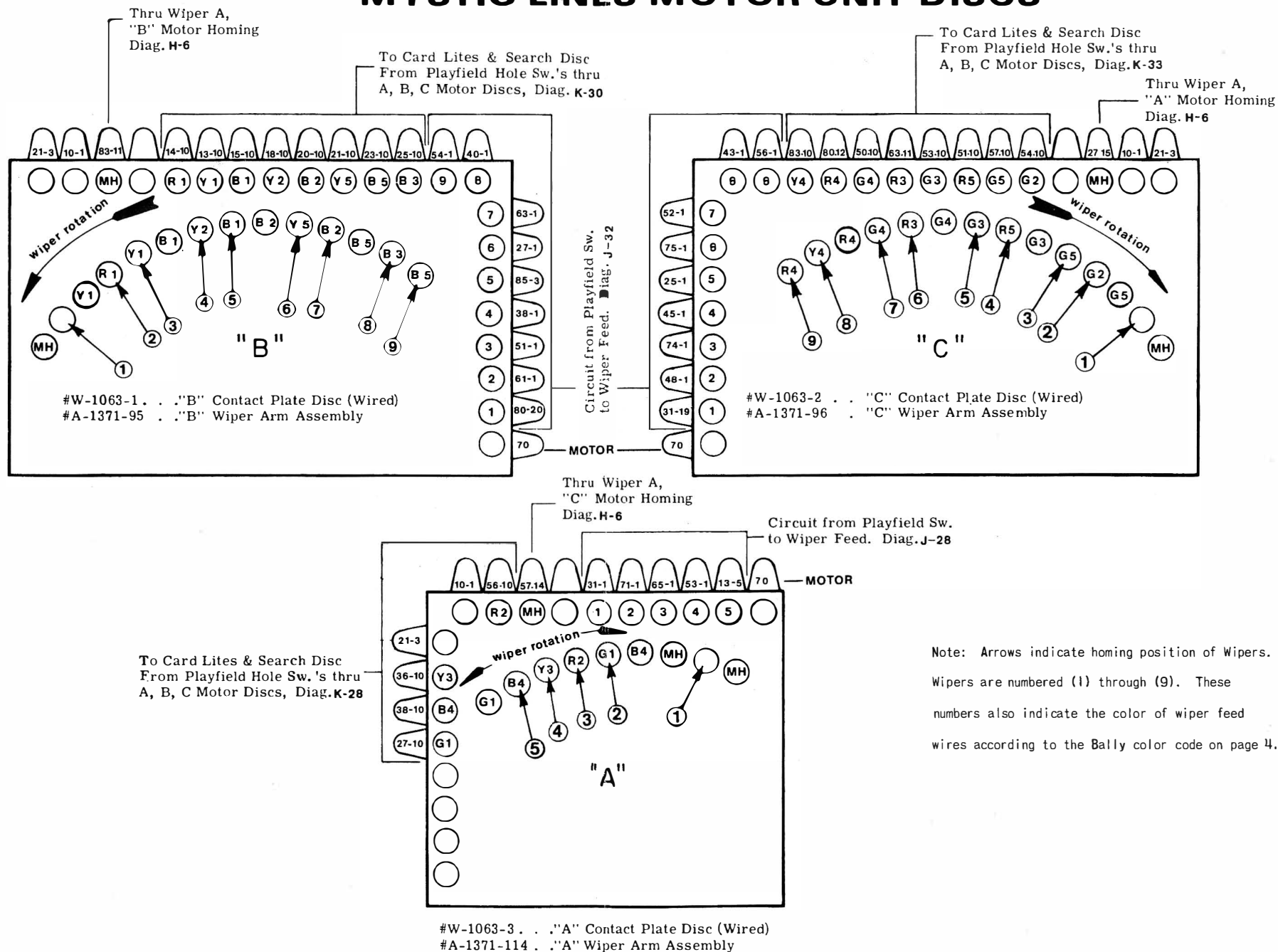
MYSTIC LINES NUMERICAL REF. (INDEXED POSITION)

18	4	7	9	★ 17
11	8	12	★ 6	13
15	★ 1	20	2	19
★ 16	14	5	3	10



C. U. SEARCH DISC WIPER UNIT

MYSTIC LINES MOTOR UNIT DISCS



STAR REPLAY COUNTER

SWITCH/COIL	PART NO.	DIAGRAM LOCATION	WIRE NO.	WIRE COLOR	FUNCTION
Star Replay Counter Coil	EA-30-1150	F-10	70 27J	Orange Blue-Orange	Energized from Search Disc via Control Unit Cam Switches
Homing Switch	N.O. ASW-C1-8	F-11	27-17 80-16	Blue-Orange Black	Closes Star Replay Counter Coil circuit to reset cam
Open at "25" A.	N.C. ASW-C1-6	H-10	57-1 85-10	White-Orange Black-White	Opens circuit to Star Replay Counter Coil via 3 Star Trip Switch
Open at "25" B.	N.C. ASW-C1-6	G-11	58-3 23-14	White-Black Blue-Yellow	Opens circuit to Star Replay Counter Coil via 4 Star Trip Switch
Step-Up Arm	N.O. ASW-A1-188	K-36	30 52-6	Yellow White-Blue	Closes circuit to Score Safety Delay Relay

STAR REPLAY COUNTER ADJUSTMENTS

Note #1: Magnet Assembly Pre-Adjustment

- (1) Loosen Lock Nut (A)
 - (2) Loosen Lock Screw (B)
 - (3) Loosen Adjustment Screw (C)
 - (4) While holding the Armature Assy. down to the Coil (D), place the .110 Gauge (E) between the Adjustment Screw (C), and the Armature Assy. as shown at (F) (Screw must clear weights).
 - (5) Tighten down the Screw (C) until the Gauge (E) cannot be removed (do not force).
 - (6) Loosen the Screw (C) slowly until the Gauge (E) may be removed (F) with the feel of rubbing of both the Armature and the Adjustment Screw (C) when removed
 - (7) Tighten Lock Nut (A)
 - (8) Remove the Gauge (E) and recheck the adjustments
- Note: Adjustments may be altered slightly for the Adjustment of the Pawl into the Teeth of the Ratchet (G)

Note #2: Magnet Assembly Adjustment

- (1) Loosen both Screws (M)
- (2) Loosen Lock Nut (A)
- (3) Adjust the Height of the Magnet Assy. so that upon the Stepping of the Pawl into the Tooth of the ratchet, approximately 1/32 spacing will be visible between the Pawl and the Ratchet Tooth as shown for (G). If done properly, approximately 1/64 free play of the Pawl at rest in the Ratchet Tooth will be visible when the Ratchet is moved by hand.
- (4) Tighten the Screws (H)
- (5) Slide the Stop (I) to rest against the Pawl (do not force). The Pawl should rest against the Stop and Ratchet only.
- (6) Tighten Lock Screw (B)
- (7) Tighten Lock Nut (A)
- (8) Step Up the Magnet Assy. electrically and check to see that the Stepping is all the way into each tooth without missing any steps.
- (9) Recheck all adjustments and re-adjust if necessary.

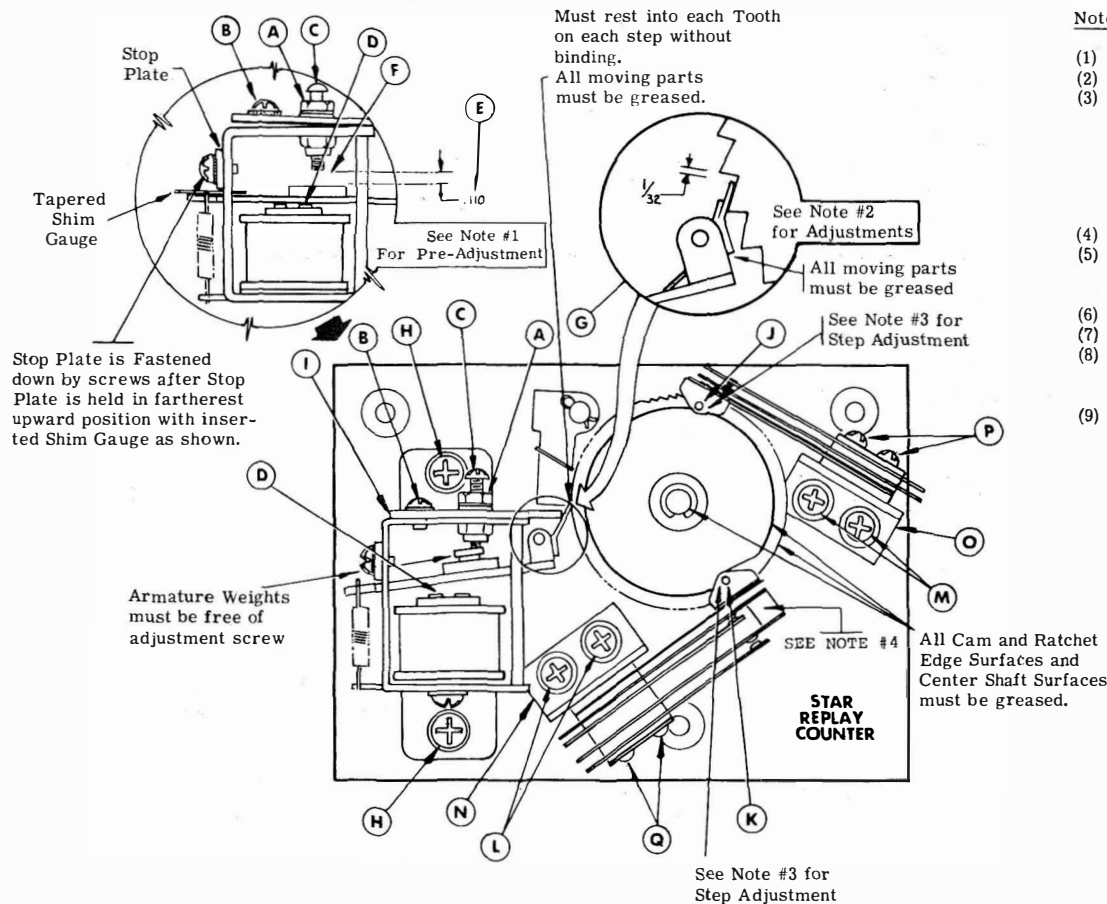
play of the Pawl at rest in the Ratchet Tooth will be visible when the ratchet is moved by Hand.

Note #3: Step Adjustment

- (1) Loosen all the Screws at (L) (Q) (M) and (P).
- (2) Pull back the Switch (J) and Switch Bracket (O) all the way away from the Ratchet Assy., and tighten down the Screws (M).
- (3) While holding the Armature down to the Coil (D), spin the Ratchet so that the Switch Roller (J) will be in the Cam Slot, or near as possible to the Cam Slot.
- (4) Move back the Switch (J) or Switch Bracket (O) toward the Ratchet (if need be) so that the Switch Roller (J) will just barely drop into the Cam Slot (but cleanly), and tighten down the Screws (P).
- (5) Adjust the Switch (J) (See Note #4).
- (6) Step the Ratchet 25 Steps.
- (7) Push the Switch (K) and Switch Bracket (N) all the way toward the Ratchet Assy., and tighten down the Screws (L).
- (8) Move the Switch (K) or Switch Bracket (N) (if need be) so that the Switch Roller (K) will just barely (but cleanly) drop into the Cam Slot, and tighten down the Screws (Q).
- (9) Adjust the Switch (K) (See Note #4).
- (10) Re-check all adjustments.

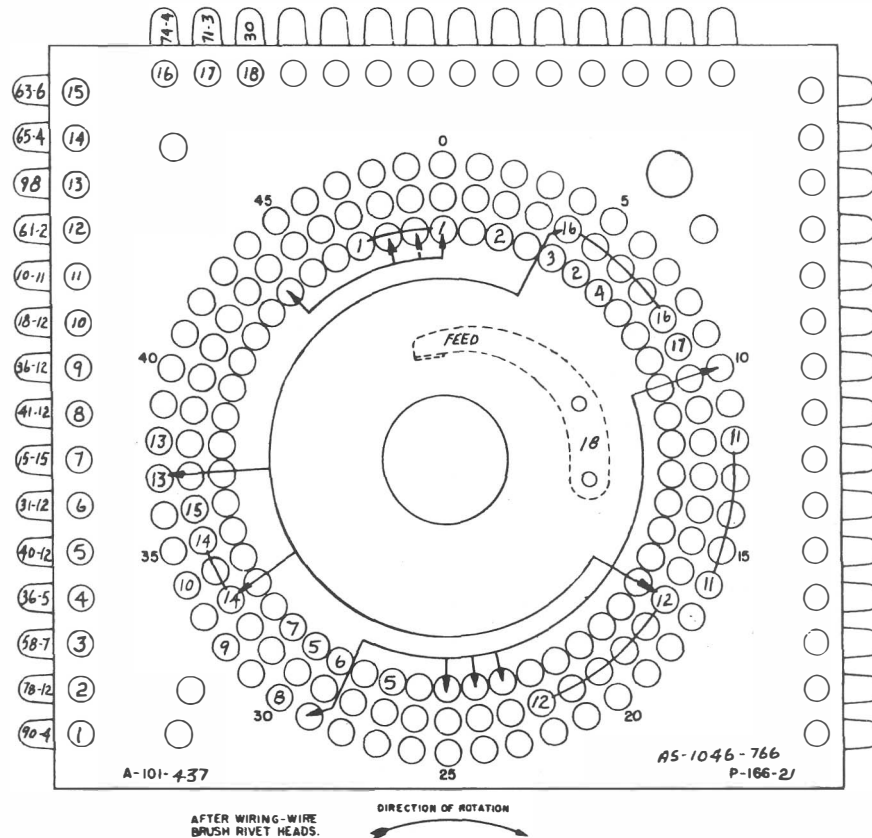
Note #4: Switch Adjustment

- (1) The lower switch leaf rollers must make at the bottom of the Cam Slot, and on the outer Cam edge without excess bowing of the Switch Leaf, and with the Cam at the Center of the Leaf Rollers.
- (2) The Switch Lifter must ride on the Lower Switch Leaf at all times without excess bowing of the Switch Leaf.
- (3) All Switches must make on the 3rd or 4th Step from the Starting Point in the Cam Slot.



MYSTIC LINES FEATURE DISC

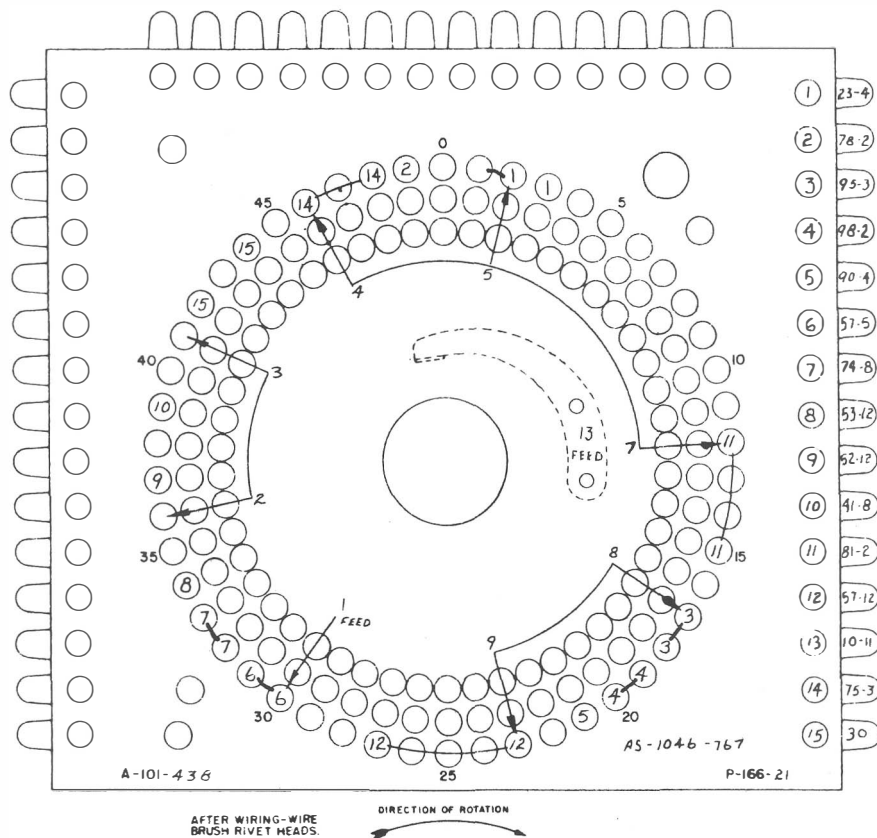
SWITCH/COIL	PART NO.	DIAGRAM LOCATION	WIRE NO.	WIRE COLOR	FUNCTION
Mystic Lines Step-Up Coil	B-25-925	F-25	70 58-2	Orange White-Black	Energized from Program Disc through Control Unit #6 Cam Switch
Reset Coil	C-28-1100	A-21	70 85-5	Orange Black-White	Energized from Shutter Motor Cam #3 Switch
End of Stroke Switch N.O.	ASW-U1-27	D-22	62-4 57-7	Brown-Blue White-Orange	Closes circuit to B-C Transfer Trip Coil via Reflex Factor Disc



- | | |
|---|--|
| (1) Wiper Fd. for A, B, & C Buttons | (12) Cir. to 16 Pulse Cam Sw. which Step-Up Mystic Lines |
| (2) Feed Cir. to "A" Button | (13) Cir. from Program Disc, "A" Fea. to Reflex Relay #1 |
| (3) Feed Cir. to "B" Button | (14) Cir. from Program Disc, "B" Fea. to Mystic Lines Fea. Disc. |
| (4) Feed Cir. to "C" Button | (15) Cir. from Program Disc, "B" Fea. to Reflex Relay #1 |
| (5) Feed Cir. to "A" Lite | (16) Cir. from Program Disc, "C" Fea. to Mystic Lines Fea. Disc. |
| (6) Feed Cir. to "B" Lite | (17) Cir. from Program Disc, "C" Fea. to Reflex Relay #1 |
| (7) Feed Cir. to "C" Lite | (18) Hot Feed to Disc, 6 Step Unit |
| (8) Feed Cir. to "A" Arrow Lite | |
| (9) Feed Cir. to "B" Arrow Lite | |
| (10) Feed Cir. to "C" Arrow Lite | |
| (11) Feed Cir. to Wiper On Sel. Fea. Disc | |

SELECTION FEATURE DISC

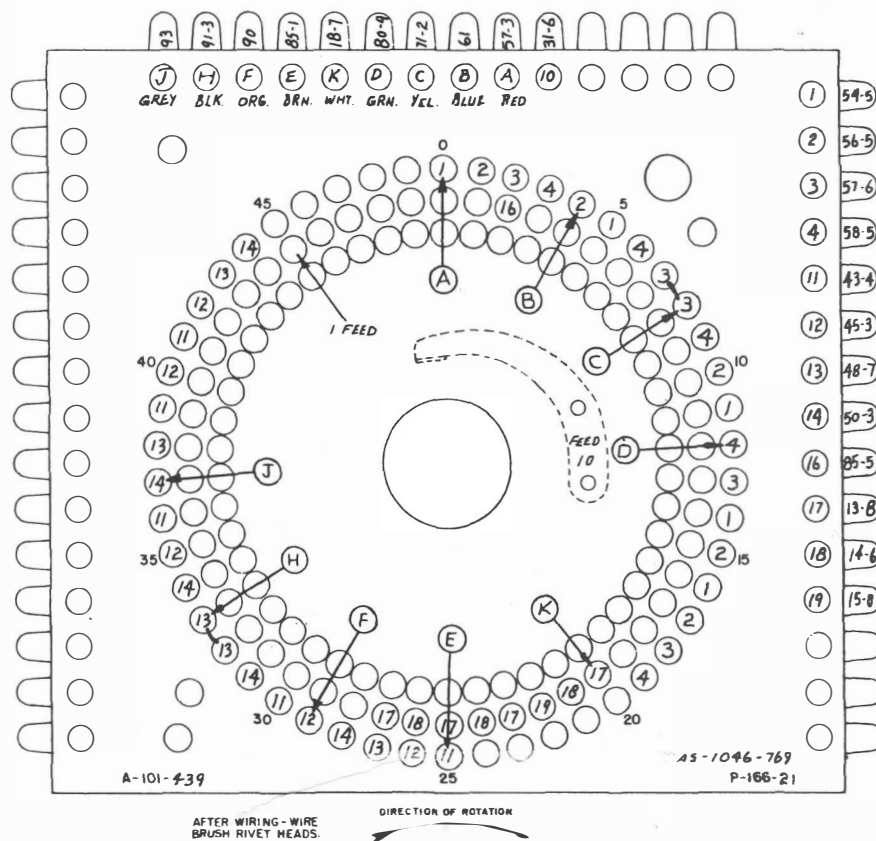
COIL	PART NO.	DIAGRAM LOCATION	WIRE NO.	WIRE COLOR	FUNCTION
Selection Feature Step-Up Coil	B-25-925	F-25	70 80-7	Orange Black	Energized from Control Unit #6 Cam Switch
Reset Coil	C-28-1100	A-21	70 85-5	Orange Black-White	Energized from Shutter Motor Cam #3 Switch



- | | |
|--|--------------------------------------|
| (1) Before 5th Ball Fea. available from Program Disc via Reflex Relay #1 | (8) Circuit to After 5th Lite |
| (2) After 5th Ball Fea. available from Program Disc via Reflex Relay #1 | (9) Cir. to 1st Arrow Lite |
| (3) Before 4th Fea., Cir. Feed to Mystic Lines Fea. Disc. | (10) Cir. to 2nd Arrow Lite |
| (4) Before 5th Fea., Cir. Feed to Mystic Lines Fea. Disc | (11) Cir. to Sel. Fea. Step-Up |
| (5) After 5th Fea., Cir. Feed to Mystic Lines Fea. Disc | (12) Feed Cir. from Search Wiper Cam |
| (6) Circuit to Before 4th Lite | (13) Feed Cir. for Fea. Lites |
| (7) Circuit to Before 5th Lite | (14) Cir. Feed 41-8 2nd Arrow Lite |
| | (15) Hot Feed to Disc, 4 Step Unit |

SCRAMBLER DISC

SWITCH/COIL	PART NO.	DIAGRAM LOCATION	WIRE NO.	WIRE COLOR	FUNCTION
Scrambler Step-Up Coil	B-25-925	A-25	70 81-7	Orange Black-Red	Energized from Shutter Motor 'Cam #7 Switch
Reset Coil	C-28-1100	A-22	70 31-6	Orange Yellow-Red	Energized from Scrambler Disc
Closed at "0" Reset Switch N.C.	ASW-U1	B-22	85-5 31-6	Black-White Yellow-Red	Closes circuit to Scrambler Reset Coil

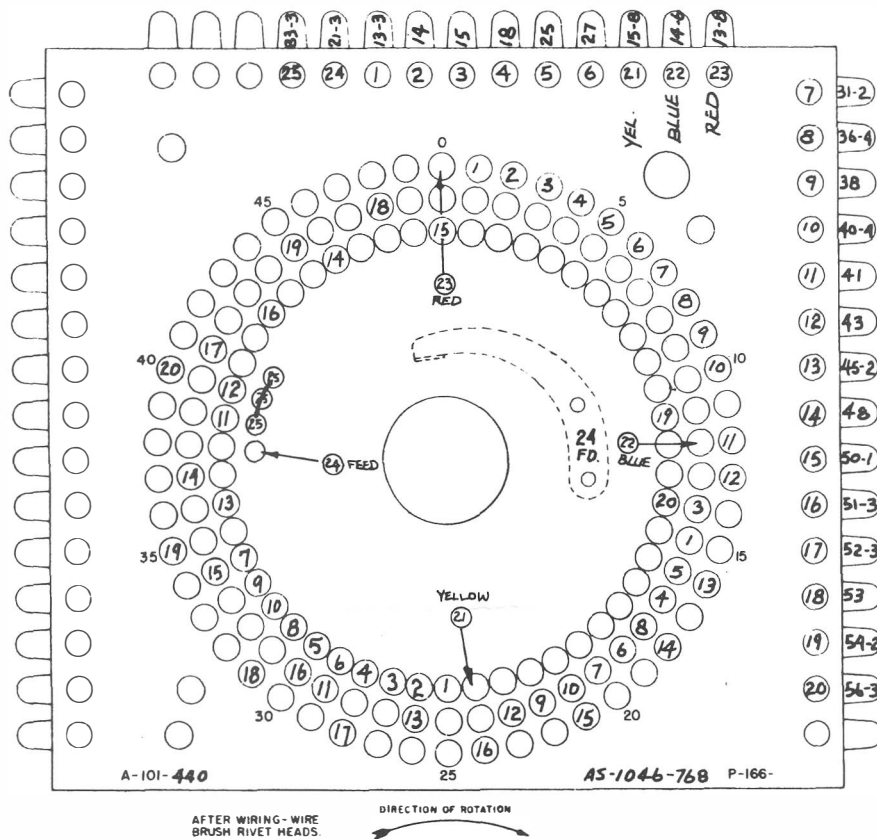


- 93 Double Blue, Wiper Feed from Program Disc to Reflex #2 Re. Switches
- 91-3 Double Green, Wiper Feed from Program Disc to Reflex #2 Re. Switches
- 90 Double Yellow, Wiper Feed from Program Disc to Reflex #2 Re. Switches
- 85-1 Double Red, Wiper Feed from Program Disc to Reflex #2 Re. Switches
- 18-7 Wiper Feed from before 4th Trip Sw. to Coin Counter Disc
- 80-4 Blue, Wiper Feed from Program Disc to Blue Score Relay, 1st Step
- 71-2 Green, Wiper Feed from Program Disc to Green Score Relay, 1st Step
- 61 Yellow, Wiper Feed from Program Disc to Yellow Score Relay, 1st Step

- 57-3 Red, Wiper Feed from Program Disc to Red Score Relay, 1st Step
- 31-6 Scrambler Reset
- 54-5 Circuit to Red Score Relay
- 56-5 Circuit to Yellow Score Relay
- 57-6 Circuit to Green Score Relay
- 58-5 Circuit to Blue Score Relay
- 43-4 Circuit to Double Red Trip Re.
- 45-3 Circuit to Double Yellow Trip Re.
- 48-7 Circuit to Double Green Trip Re.
- 50-3 Circuit to Double Blue Trip Re.
- 85-5 Reset Cir., Closed at Top
- 13-8 } Wiper Feeds to Coin Counter Disc
- 14-6 }
- 15-8 }

COIN COUNTER DISC

SWITCH/COIL	PART NO.	DIAGRAM LOCATION	WIRE NO.	WIRE COLOR	FUNCTION
Coin Counter Step-Up Coil	B-25-925	A-16	70 57-4	Orange White-Orange	Energized from Control Unit #5 Cam Switch
Reset Coil	C-28--1100	A-24	70 78-3	Orange Orange-Black	Energized from Shutter Motor Cam #6 Switch
Closed at Top A. N.O.	ASW-U1-8	J-16	84-2 30	Black-Green Yellow	Closes circuit to 40 Coin Lite via Shutter Motor Cam #1X Switch
Open at Top B. N.C.	ASW-U2-6	B-6	61-8 51-8	Brown-Red White-Red	Opens circuit to Start Relay Coil
Open at Top C. N.C.	ASW-U2-5	C-9	67 72-1	Brown-Orange Orange-Blue	Opens circuit to Coin Lockout Coil



COIN COUNTER

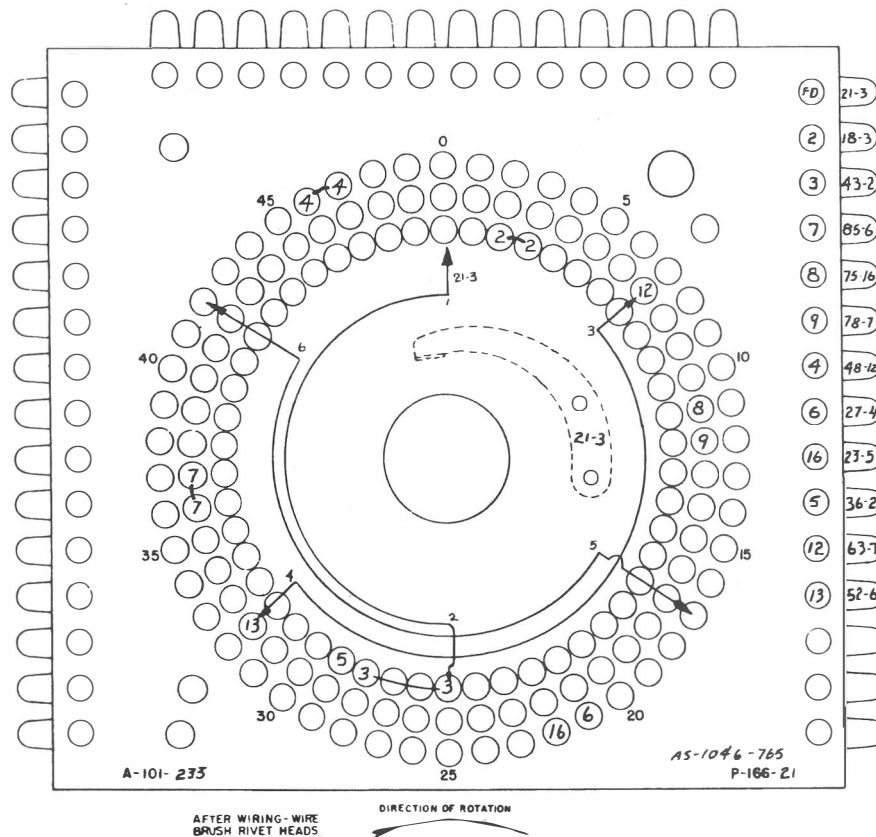
83-3 Circuit to C. U. Cam #6 Sw.
 21-3 Feed
 13-3 to 27 Circuits to Program Disc

FEEDS

31-2 to 56-3 Circuits to Program Disc

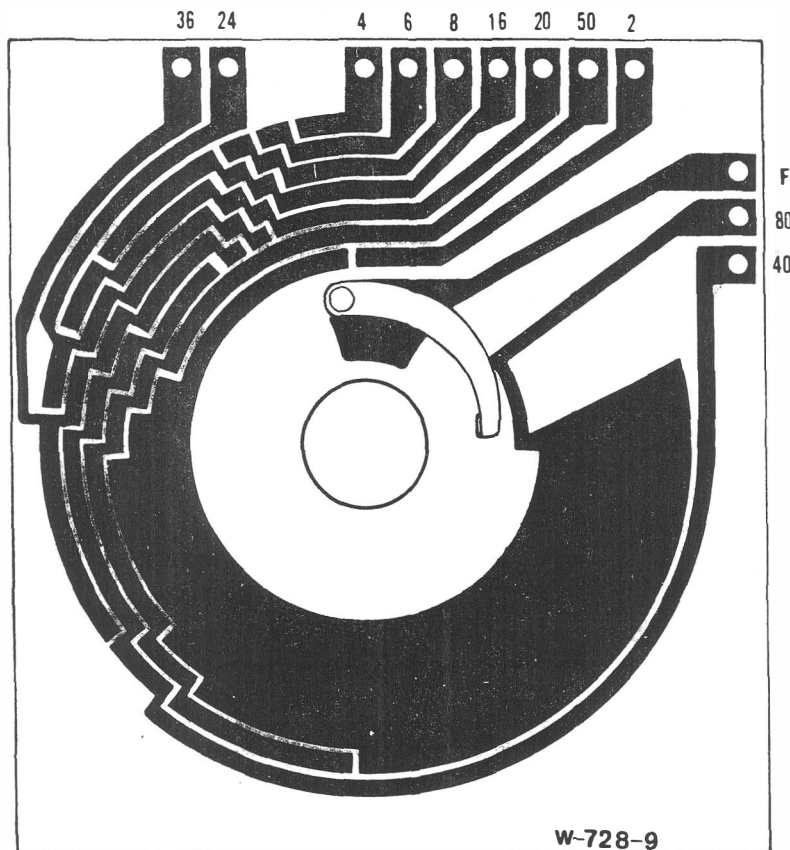
TIMER DISC

SWITCH/COIL	PART NO.	DIAGRAM LOCATION	WIRE NO.	WIRE COLOR	FUNCTION
Timer Step-Up Coil	B-25-925	A-13	70 81-7	Orange Black-Red	Energized from Timer Unit Disc
Reset Coil	C-28-1100	A-14	70 31-6	Orange Yellow-Red	Energized from "R" Button Switch
Open at "0" A. N.O.	ASW-U2	C-16	68 38-3	Brown-Black Yellow-Black	Closes circuit from Manual Lift Switch to Ball Lift Motor
Open at "0" B. N.O.	ASW-U2-2	E-18	47 30	Green-Orange Yellow	Closes circuit to Lifter Start Relay
Open at Top C. N.C.	ASW-U2-6	D-2	96-16 94-16	Grey-Brown Grey-Green	Opens circuit to Program Unit Motor via Tilt Trip Switch
Open at Top D. N.C.	ASW-U2-5	B-13	36-9 36J	Yellow-Brown Yellow-Brown	Opens circuit to Timer Step-Up Coil
Open at "0" Reset Switch N.C.	ASW-U2-13	B-14	71-8 71J	Orange-Red Orange-Red	Opens circuit to Timer Reset Coil



- | | |
|---|---|
| (2) Feed, 25 Step Unit | (6) Cir. to Select Before 4th Lite |
| (2) Directs Cir. to Shutter Motor Cam #4 Sw. Closed when Open | (16) Cir. to Select Before 5th Lite |
| (3) Cir. to Lifter Cam #2 Sw. | (5) Cir. to Before 4th Trip Sw. |
| (7) Cir. from Lifter Cam #1 Sw. | (12) Safety Circuit Lifts Ball Gate when Game is Coined |
| (8) Cir. to Ball Trough Sw. | (13) Cir. to Shutter Motor Cam Closed when Open |
| (9) Cir. to Ball Lift Relay Sw. | |
| (4) Cir. to 16 Pulse Cam | |
| Flashes Select Now" Lite | |

REPLAY COUNTERS RED, YEL., BLUE & GRN.



LUG	YELLOW REPLAY COUNTER	RED REPLAY COUNTER	BLUE REPLAY COUNTER	GREEN REPLAY COUNTER
50	57-2	40-3	54-6	60-9
80	50-6	27-8	61-6	61-9
F	23	71	91	54
36	51-2	23-3	74-3	90-8
24	41-2	20-3	65-3	13-1
20	40-2	10-3	63-3	27-6
16	23-2	85-2	60-3	45-12
8	93-1	83-2	48-3	40-9
6	81-1	74-2	43-3	36-14
4	78-1	60-2	41-3	41-9
40	52-2	25-3	80-3	57-9
2	60-6	21-16	75-11	63-12

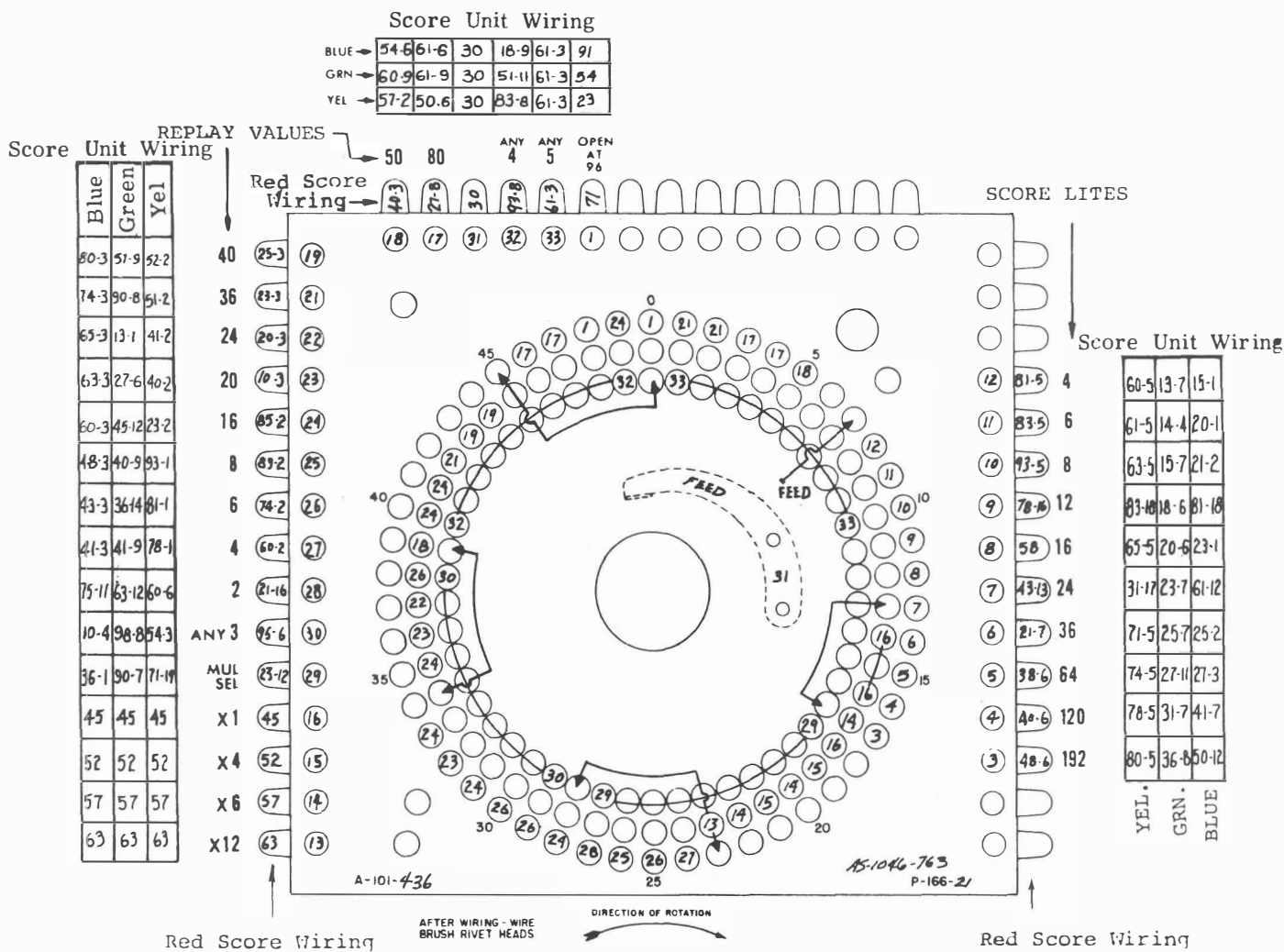
REPLAY COUNTER FUNCTION CHART

SWITCH/COIL	PART NO.	DIAGRAM LOCATION	WIRE NO.	WIRE COLOR	FUNCTION
Red Replay Step-Up Coil	B-25-925	F-17	83 23-12	Black-Yellow Blue-Yellow	Energized from Red Replay Counter Disc through Search Disc
Reset Coil	C-28-1100	A-20	70 85J	Orange Black-White	Energized from Shutter Motor Cam #3 Switch
Open at "0" Switch N.O.	ASW-U2	B-20	85-5 85J	Black-White Black-White	Closes circuit to Red Reset Coil
Open at "96" Switch N.C.	ASW-U1	G-16	31-8 71	Yellow-Red Orange-Red	Opens circuit to Red Replay Counter Disc
R - Step-Up Arm A. N.O.	ASW-U1-29	K-38	30 52-6	Yellow White-Blue	Closes circuit to Score Safety Delay Relay Coil
B. N.O.	ASW-U1-9	F-16	78-14 75-6	Orange-Black Orange-White	Closes circuit to Alternator Unit Coil
Yellow Replay Step-Up Coil	B-25-925	G-14	31 71-19	Yellow-Red Orange-Red	Energized from Yellow Replay Counter Disc through Search Disc
Reset Coil	C-28-1100	A-20	70 85J	Orange Black-White	Energized from Shutter Motor Cam #3 Switch
Open at "0" Switch N.O.	ASW-U2	B-20	85-5 85J	Black-White Black-White	Closes circuit to Yellow Reset Coil
Open at "96" Switch N.C.	ASW-U1	G-13	35-1 23	Yellow-White Blue-Yellow	Opens circuit to Yellow Replay Counter Disc
Y - Step-Up Arm A. N.O.	ASW-U1-29	K-37	30 52-6	Yellow White-Blue	Closes circuit to Score Safety Delay Relay Coil
B. N.O.	ASW-U1-9	F-12	78-14 75-6	Orange-Black Orange-White	Closes circuit to Alternator Unit Coil
Green Replay Step-Up Coil	B-25-925	F-23	13-2 32-2	Red-Yellow Yellow-Blue	Energized from Green Replay Counter Disc through Search Disc
Reset Coil	C-28-1100	A-20	70 85J	Orange Black-White	Energized from Shutter Motor Cam #3 Switch
Open at "0" Switch N.O.	ASW-U2	B-20	85-5 85J	Black-White Black-White	Closes circuit to Green Reset Coil
Open at "96" Switch N.C.	ASW-U1	G-22	50-4 54	White White-Green	Opens circuit to Green Replay Counter Disc
G - Step-Up Arm A. N.O.	ASW-U1-29	K-37	30 52-6	Yellow White-Blue	Closes circuit to Score Safety Delay Relay
B. N.O.	ASW-U1-9	F-23	78-14 75-6	Orange-Black Orange-White	Closes circuit to Alternator Unit Coil
Blue Replay Step-Up Coil	B-25-925	F-20	56 36-1	White-Brown Yellow-Brown	Energized from Blue Replay Counter Disc through Search Disc
Reset Coil	C-28-1100	A-19	70 85J	Orange Black-White	Energized from Shutter Motor Cam #3 Switch
Open at "0" Switch N.O.	ASW-U2	B-19	85-5 85J	Black-White Black-White	Closes circuit to Blue Reset Coil
Open at "96" Switch N.C.	ASW-U1	G-19	25-5 10-2	Blue-White Red	Opens circuit to Blue Replay Counter Disc
B - Step-Up Arm A. N.O.	ASW-U1-29	K-38	30 52-6	Yellow White-Blue	Closes circuit to Score Safety Delay Relay Coil
B. N.O.	ASW-U1-9	F-22	78-14 75-6	Orange-Black Orange-White	Closes circuit to Alternator Unit Coil
Replay Register Step-Up Coil	A-26-1100	F-7	70 80-19	Orange Black	Energized from Key Switch
Reset Coil	A-27-1100	A-6	70 45-9	Orange Green-White	Energized from Multiplay Relay Switch
Register Switches A. T.	ASW-U3-6	G-5	56-2 48-2 27-9	White-Brown Green-Black Blue-Orange	Closes circuit to either Start Relay Coil or Coin Lockout Coil
B. N.O.	ASW-U1-6	C-6	63-2 10-5	Brown-Yellow Red	Closes circuit to Start Relay Coil - Open at "0"

SCORE UNIT DISCS

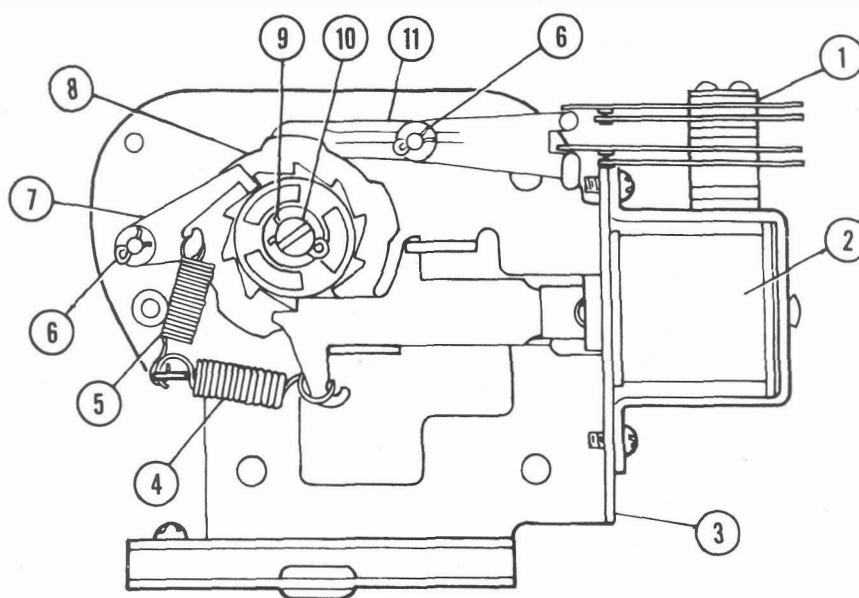
RED, YELLOW, GREEN & BLUE

SWITCH/COIL	PART NO.	DIAGRAM LOCATION	WIRE NO.	WIRE COLOR	FUNCTION
Red Step-Up Coil	B-25-925	F-34	70 15-6	Orange Red-White	Energized from Red Score Relay Switch
Reset Coil	C-28-1100	A-24	70 78-3	Orange Orange-Black	Energized from Shutter Motor Cam #6 Switch
Open at "0" Switch N.O.	ASW-U2	D-10	14-14 45-8	Red-Green Green-White	Closes circuit to Shutter Motor
Yellow Step-Up Coil	B-25-925	F-35	70 18-2	Orange Red-Black	Energized from Yellow Score Relay Switch
Reset Coil	C-28-1100	A-23	70 78-3	Orange Orange-Black	Energized from Shutter Motor #6 Cam Switch
Green Step-Up Coil	B-25-925	F-35	70 20-2	Orange Blue	Energized from Green Score Relay Switch
Reset Coil	C-28-1100	A-23	70 78-3	Orange Orange-Black	Energized from Shutter Motor Cam #6 Switch
Blue Step-Up Coil	B-25-925	F-35	70 23-6	Orange Blue-Yellow	Energized from Blue Score Relay Switch
Reset Coil	C-28-1100	A-23	70 78-3	Orange Orange-Black	Energized from Shutter Motor Cam #6 Switch



ALTERNATOR UNIT

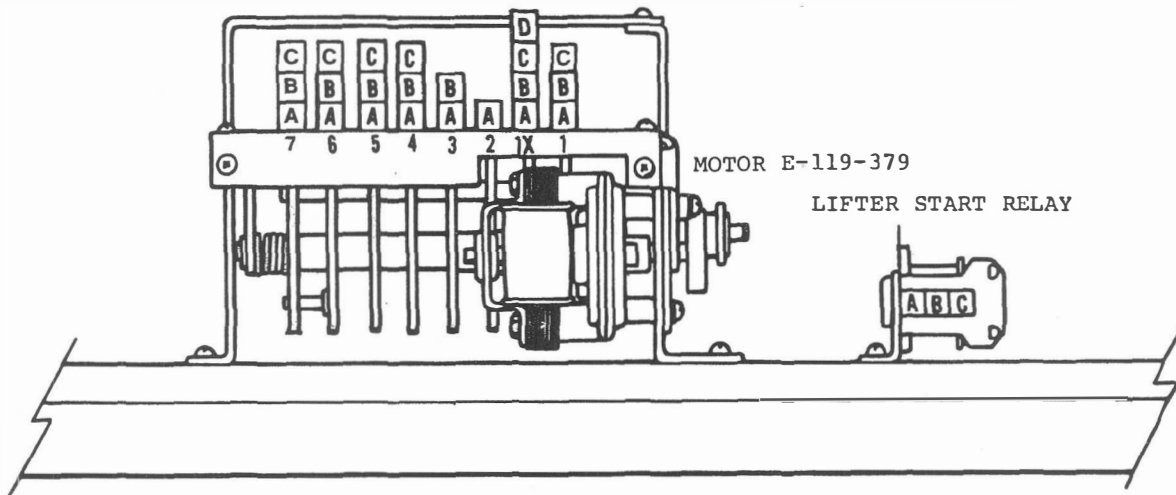
SWITCH/COIL	PART NO.	DIAGRAM LOCATION	WIRE NO.	WIRE COLOR	FUNCTION
Alternator Coil	CT-28-1100	F-12	70 75-6	Orange Orange-White	Energized from Search Disc Via Double Trip and Replay Step-Up Arm Switches
Homing Switch N.O.	ASW-M200-3	F-12	56-2 75-2	White-Brown Orange-White	Closes Alternator Coil circuit to reset cam
Segments Switch N.O.	(Dual Switch)	F-13	12-2 70	Red-Blue Orange	Bypasses Multiple Win #2 Relay Coil



ALTERNATOR PARTS LIST

Description	Part No.
1 Switch	ASW-M200-3
2 Coil	CT-28-1100
3 Base Plate	A-2214-30
4 Extension Spring	SP-100-80
5 Extension Spring	SP-100-276
6 Hair Pin	M-254
7 Holding Pawl	C-708
8 Ratchet - 10 Tooth - 5 Lobes	C-704-2
9 Hair Pin	M-254
10 Pin	S-2028
11 Rocker Arm	C-703-1

PANEL SHUTTER UNIT & LIFTER START RELAY

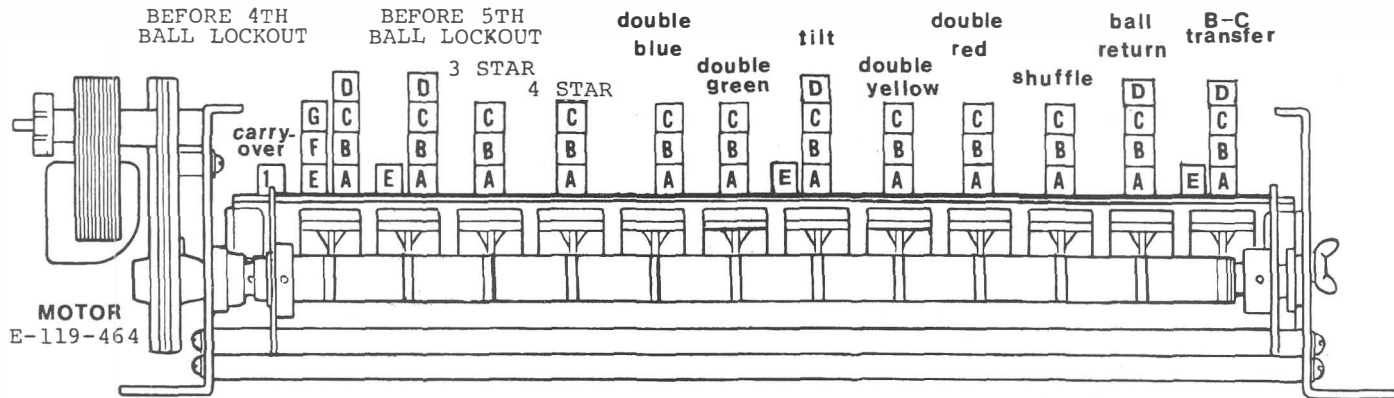


SWITCH/COIL	PART NO.	DIAGRAM LOCATION	WIRE NO.	WIRE COLOR	FUNCTION
Motor	E-119-379	A-10	70 53-5	Orange White-Yellow	Energized from Shutter Cam #1 switch
#1 Cam A.	N.O. ASW-C1-27	D-11	53J 80-11	White-Yellow Black	Closes circuit to Shutter Motor
B.	N.O. ASW-C1-8	D-10	30 53J	Yellow White-Yellow	Carryover switch to Shutter Motor
C.	N.C. ASW-C2-15	A-9	48-4 61-7	Green-Black Brown-Red	Opens circuit to Timer Cams Index coil
#1X Cam A.	N.O. ASW-C1-27	B-11	53-5 85-7	White-Yellow Black-White	Closes circuit to Shutter Motor from Ball Return switches - Open when Shutter is closed
B.	N.O. ASW-C1-8	K-16	52-13 84-2	White-Blue Black-Green	Pulses 40 coin limit lite - Open when Shutter is closed
C.	N.C. ASW-C2-15	D-14	50-5 21-3	White Blue-Red	Opens circuits to Timer step-up and reset coils - Open when Shutter is open
D.	N.C. ASW-C2-2	I-23	15-5 21	Green-White Blue-Red	Opens circuit to all Search Relays - Open when Shutter is open
#2 Cam	N.C. ASW-C1-27	D-16	31-3 36-3	Yellow-Red Yellow-Brown	Opens manual circuit to Ball Lift Motor - Closed when Shutter is open
#3 Cam A.	N.O. ASW-C10-1	C-19	85-5 67-2	Black-White Brown-Orange	Pulses Replay Counter coils - Open when Shutter is open
B.	N.O. ASW-C10-5	C-15	72 23-9	Orange-Blue Blue-Yellow	Pulses Trip Bank Motor - Open when Shutter is open
#4 Cam A.	N.C. ASW-C1-27	I-3	21-3 10-13	Blue-Red Red	Directs circuit to Before 4TH trip coil - Open when Shutter is open
B.	N.O. ASW-C2-15	D-10	53J 18-3	White-Yellow Red-Black	Directs circuit to Shutter Motor - Closed when Shutter is open
C.	N.O. ASW-C2-2	D-10	45-8 18J	Green-White Red-Black	Bypasses Timer Disc in Shutter Motor circuit - Closed when Shutter is open
#5 Cam A.	N.O. ASW-C2-6	D-18	31-4 47	Yellow-Red Green-Orange	Opens circuit to Lifter Start Relay coil - Closed when Shutter is open

PANEL SHUTTER UNIT & LIFTER START RELAY

SWITCH/COIL	PART NO.	DIAGRAM LOCATION	WIRE NO.	WIRE COLOR	FUNCTION
B. N.O.	ASW-C2-2	F-11	38-9 80-16	Yellow-Black Black	Opens Star Replay Counter Homing circuit - Closed when Shutter is open
C. T.	ASW-C3-2	B-9	53-5 48-14	White-Yellow Green-Black	Directs circuit to either Shutter Motor or Timer Cams Index coil
#6 Cam A. N.O.	ASW-C10-1	C-15	71-8 23-9	Orange-Red Blue-Yellow	Pulses Timer Unit Reset coil
B. N.O.	ASW-C10-5	C-20	78-3 67-2	Orange-Black Brown-Orange	Pulses Score Unit and Coil Counter coils
C. N.O.	ASW-C10-5	B-15	72 23J	Orange-Blue Blue-Yellow	Pulses Trip Bank Motor
#7 Cam A. N.O.	ASW-C1-27	C-18	65-8 83-14	Brown-White Black-Yellow	Pulses during closing - to Shuffle Trip coil circuit
B.	ASW-C0-15				Spacer assembly only
C. (side switch) N.O.	ASW-C1-27	C-20	81-7 67-2	Black-Red Brown-Orange	Pulses while opening - to Scrambler Unit Step-Up coil circuit
Shutter A. N.C.	ASW-C1-29	C-8	72-1 67	Orange-Blue Brown-Orange	Opens circuit to Coin Lockout coil - Open when Shutter is open
B. N.C.	ASW-C1-29	C-7	61-8 51-8	Brown-Red White-Red	Opens circuit to Start Relay coil - Open when Shutter is open
C. C.W.O.	ASW-C111-1	H-5 to H-7	74-6 27-15 83-11 57-14	Orange-Green Blue Orange Black-Yellow White-Orange	Energizes Mystic Lines Motors and cam relay coils through A, B, C homing discs, returning Mystic Lines to their home positions
Lifter Start Relay	G032-02500-N	A-18	70 38J	Orange Yellow-Black	Coil energized from Ball Runway switch
A. N.O.	ASW-R1-8	C-18	36 38-8	Yellow-Brown Yellow-Black	Closes holding circuit to Lifter Start Relay coil
B. N.C.	ASW-R2-5	I-4	10-13 65-13	Red Brown-White	Opens circuit to Before 4TH Trip coil
C. N.C.	ASW-R2-5	E-16	21-3 31-3	Blue-Red Yellow-Red	Opens circuit to Ball Lift Motor
Ball Runway N.O.	ASW-A1-30	D-18	38-8 30	Yellow-Black Yellow	Closes circuit to Lifter Start Relay coil
Resistor 4.7 K Ohm 1 W	E-105-15	D-18	38-8 30	Yellow-Black Yellow	Prevents open circuit hang-up of Lifter Start Relay coil by bleeding current
Ball Gate N.C.	ASW-A2-71	C-18	31-4 36	Yellow-Red Yellow-Brown	Opens circuit to Lifter Start Relay coil
Ball Lifter Motor	E-119-339	A-16	70 38-3	Orange Yellow-Black	Energized from 5TH Ball Trough switch
#1 Cam A. N.O.	ASW-C1X	D-16	68 30	Brown-Black Yellow	Closes Ball Lifter Motor carryover circuit
B. N.C.	ASW-C2-15	H-4	65-13 85-6	Brown-White Black-White	Opens circuit to Before 4TH Trip coil
C. N.C.	ASW-C2-2	B-14	35-2 71-8	Yellow-White Orange-Red	Opens circuit to Timer Unit Reset coil
#2 Cam N.O.	ASW-C1X	C-15	43-2 27-2	Green-Yellow Blue-Orange	Closes circuit to Timer Unit Step-Up coil

TRIP RELAY - 12 BANK



SWITCH/COIL	PART NO.	DIAGRAM LOCATION	WIRE NO.	WIRE COLOR	FUNCTION
B-C Transfer Trip Relay	Coil D-27-425	A-22	70 70J 43J	Orange Orange Green-Yellow	Coil energized by Mystic Lines Unit and Reflex Factor Disc
A. N.C.	ASW-B-2	B-22	43-6 43J	Green-Yellow Green-Yellow	Opens circuit to B-C Transfer Relay coil
B. T.	ASW-B-3	J-21	15-15 84-4 31-12	Red-White Black-Green Yellow-Red	Directs circuit to B and C Lites through 15J or 31J
C. T.	ASW-B-3	J-20	31J 72-5 15J	Yellow-Red Orange-Blue Red-White	Directs circuit to B and C Lites
D. T.	ASW-B-3	G-6	58-7 20-8 36-5	White-Black Blue Yellow-Brown	Directs circuit to B and C Button switches and cam Relay coils through 58J or 36J
E. T.	ASW-B-3	G-7	36J 51-5 58J	Yellow-Brown White-Red White-Black	Directs circuit to B and C Button switches and cam Relay coils
Ball Return Trip Relay	Coil D-27-425	F-24	70J 31J	Orange Yellow-Red	Coil energized through Spotting Disc
A. N.C.	ASW-B-2	F-24	31-5 31J	Yellow-Red Yellow-Red	Opens circuit to Ball Return Relay coil
B. N.O.	ASW-B-1	K-16	71-4 38-2	Orange-Red Yellow-Black	Activates "Ball Return - Select Now" lite circuit
C. N.O.	ASW-B-1	J-22	84 30	Black-Green Yellow	Activates "Ball Return" lite circuit
D. N.O.	ASW-B-1	D-17	47-5 61-4	Green-Orange Brown-Red	Feeds left and right Ball Return Relay coil circuits
Shuffle Trip Relay	Coil D-27-425	A-17	70J 65-8	Orange Brown-White	Coil energized through Shutter cam switch #7 (350°)

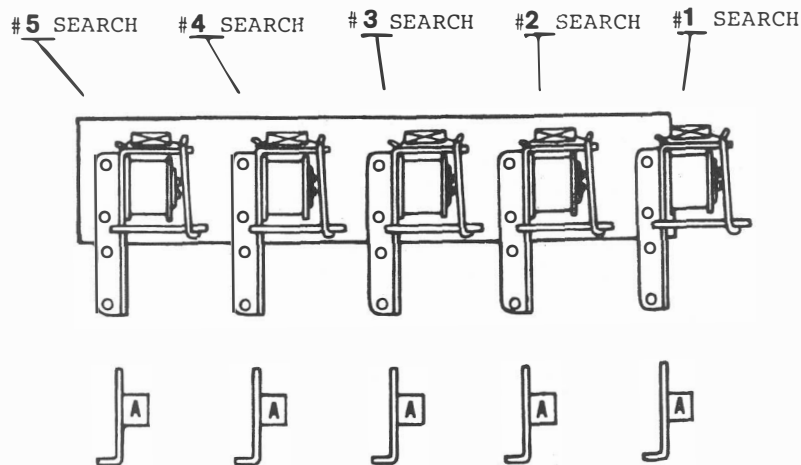
TRIP RELAY - 12 BANK

SWITCH/COIL	PART NO.		WIRE NO.	WIRE COLOR	FUNCTION
A. N.C.	ASW-B-2	C-17	83-4 62-2	Black-Yellow Brown-Blue	Opens circuit to left and right Ball Return Relay and Shuffle Relay coils
B. N.C.	ASW-B-2	K-16	58-4 72-4	White-Black Orange-Blue	Opens circuit to "Ball Return - Select Now" lite
C. N.O.	ASW-B-1	K-24	30 34-5	Yellow Yellow-Green	Closes circuit to "Shuffle Played" lite
Double Red Trip Relay	Coil D-27-425	F-27	70J 51J	Orange White-Yellow	Coil energized from #11 position of Scrambler Unit Disc
A. N.C.	ASW-B-2	F-27	51-4 51J	White-Red White-Red	Opens circuit to Double Red Relay coil
B. N.O.	ASW-B-1	J-22	14-17 30	Red-Green Yellow	Closes circuit to "Double Red" lite
C. N.O.	ASW-B-1	G-16	43-9 78-14	Green-Yellow Orange-Black	Feeds Red Replay step-up circuit
Double Yellow Trip Relay	Coil D-27-425	F-28	70J 53J	Orange White-Yellow	Coil energized from #12 position of Scrambler Unit Disc
A. N.C.	ASW-B-2	F-28	53-2 53J	White-Yellow White-Yellow	Opens circuit to Double Yellow Relay coil
B. N.O.	ASW-B-1	J-23	38-14 30	Yellow-Black Yellow	Closes circuit to "Double Yellow" lite
C. N.O.	ASW-B-1	G-12	80-6 78-14	Black Orange-Black	Feeds Yellow Replay step-up circuit
Double Green Trip Relay	Coil D-27-425	F-28	70J 54J	Orange White-Green	Coil energized from #13 position of Scrambler Unit Disc
A. N.C.	ASW-B-2	F-28	54-4 54J	White-Green White-Green	Opens circuit to Double Green Relay coil
B. N.O.	ASW-B-1	J-23	45-13 30	Green-White Yellow	Closes circuit to Double Green lite
C. N.O.	ASW-B-1	G-22	65-9 78-14	Brown-White Orange-Black	Feeds Green Replay step-up circuit
Tilt Trip Relay	Coil D-27-425	A-11	70J 14-5	Orange Red-Green	Coil energized from "All Tilts" switches
A. N.C.	ASW-B-2	L-27	10-1 51-7	Red White-Red	Opens 17 V.A.C. circuit from Anti-Cheat Relay to Mystic Lines lites
B. N.C.	ASW-B-2	C-2	98-16 96-16	Grey-Black Grey-Brown	Opens circuit to Control Unit and Program Motor via Timer (open at top) switch
C. T.	ASW-B-3	E-10	21-3 30 45-8	Blue-Red Yellow Green-White	Opens circuit to sub-ground (21-3)
D. T.	ASW-B-3	L-26	36-17 18-15 85	Yellow-Brown Red-Black Black-White	Opens 6 V.A.C. circuit to score lites
E. N.O.	ASW-B-1	B-7	61-8 13-16	Brown-Red Red-Yellow	Closes circuit to coils of Start Relay and Timing Cams Index
Double Blue Trip Relay	Coil D-27-425	F-28	70J 56J	Orange White-Brown	Coil energized from #14 position of Scrambler Unit Disc
A. N.C.	ASW-B-2	F-28	56-4 56J	White-Brown White-Brown	Opens circuit to Double Blue Relay coil
B. N.O.	ASW-B-1	J-23	74-11 30	Orange-Green Yellow	Closes circuit to Double Blue lite
C. N.O.	ASW-B-1	G-19	52-8 78-14	White-Blue Orange-Black	Feeds Blue Replay step-up circuit
4 Star - 100 Trip Relay	Coil D-27-425	F-25	70J 41J	Orange Green-Red	Coil energized from "W-100" position of Program Unit Disc

TRIP RELAY - 12 BANK

SWITCH/COIL	PART NO.	DIAGRAM LOCATION	WIRE NO.	WIRE COLOR	FUNCTION
A. N.C.	ASW-B-2	F-25	41-1 41J	Green-Red Green-Red	Opens circuit to 4 Star - 100 Relay coil
B. N.O.	ASW-B-1	J-22	61-19 30	Brown-Red Yellow	Closes circuit to 4 Star lite
C. N.O.	ASW-B-1	H-11	23-8 58-3	Blue-Yellow White-Black	Completes circuit to "open at 25" Star Replay Counter switch and Search Disc
3 Star - 25 Trip Relay	Coil D-27-425	F-25	70J 40J	Orange Green	Coil energized from "W-25" position of Program Unit Disc
A. N.C.	ASW-B-2	F-25	40-5 40J	Green Green	Opens circuit to 3 Star - 25 Relay coil
B. N.O.	ASW-B-1	J-22	50-8 30	White Yellow	Closes circuit to 3 Star lite
C. N.O.	ASW-B-1	I-10	74 57-1	Orange-Green White-Orange	Completes circuit to "open at 25" Star Replay Counter switch and Search Disc
Select Before 5TH Trip Relay	Coil D-27-425	F-4	70J 75J	Orange Orange-White	Coil energized from #9 position of Timer Unit Disc
A. N.C.	ASW-B-2	F-4	75-5 75J	Orange-White Orange-White	Opens circuit to Select Before 5TH Relay coil
B. N.C.	ASW-B-2	H-5	47-1 64	Green-Orange Brown-Green	Opens circuit to Mystic Lines Unit Disc feeds for motors and cam relays
C. N.C.	ASW-B-2	J-18	23-5 74-8	Blue-Yellow Orange-Green	Opens circuit to "Mystic Lines - Select Now" lite
D. N.C.	ASW-B-2	C-12	25-8 14-3	Blue-White Red-Green	Opens circuit to Program Index coil
E. N.O.	ASW-B-1	C-14	50-5 85-8	White Black-White	Closes circuit to Timer Reset and Timer Step-Up coils
F. N.O.	ASW-B-1	K-18	48-12 53-12	Green-Black White-Yellow	Closes circuit to "Mystic Lines - Select Now" lite
Select Before 4TH Trip Relay	Coil D-27-425	F-4	70J 83J	Orange Black-Yellow	Coil energized from #8 position of Timer Unit Disc
A. N.C.	ASW-B-2	F-4	83-6 83J	Black-Yellow Black-Yellow	Opens circuit to Select Before 4TH Relay Coil
B. N.C.	ASW-B-2	J-18	27-4 57-5	Blue-Orange White-Orange	Opens circuit to "Mystic Lines - Select Now" lite
C. N.C.	ASW-B-2	I-26	60-8 18-7	Brown Red-Black	Opens circuit to Scrambler Unit Disc and feature trip coils
D. N.C.	ASW-B-2	H-5	32-1 64	Yellow-Blue Brown-Green	Opens circuit to Mystic Lines Unit Disc feeds for motors and cam relays
E. N.C.	ASW-B-2	K-16	38-2 58-4	Yellow-Black White-Black	Opens circuit to "Ball Return - Select Now" lite
F. N.C.	ASW-B-2	C-17	62-2 47-5	Brown-Blue Green-Orange	Opens circuit to Ball Return "L" and "R" Relay coils
G. N.O.	ASW-B-1	H-5	10-13 53-18	Red White-Yellow	Closes circuit to Search Lock Magnet
H. N.O.	ASW-B-1	D-14	36-2 43-3	Yellow-Brown Green-Yellow	Closes circuit to Timer Unit step-up coil
I. N.O.	ASW-B-1	D-12	21-3 25-8	Blue-Red Blue-White	Closes circuit to Program Index coil
Carryover Cam N.O.	ASW-B-20-1	B-15	72 23-9	Orange-Blue Blue-Yellow	Closes circuit to Trip Bank Motor
Trip Bank Motor	E-119-464	A-15	70 72	Orange Orange-Blue	Operates Trip Bank cam switches

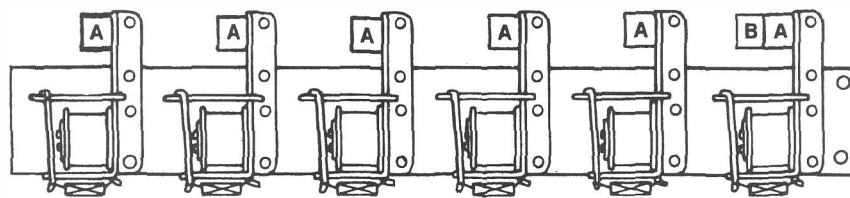
SEARCH RELAY - 5 BANK



NOTE: One 100 Ohm 5 Watt resistor (E-104-93) is wired in parallel with each coil to bleed residual current and prevent hang-up after circuit opens

SWITCH/COIL	PART NO.	DIAGRAM LOCATION	WIRE NO.	WIRE COLOR	FUNCTION
#1 Search Relay	Coil G0-28-750-N	J-35	50-9 20-5	White Blue	Coil energized by Panel switches through Search Disc
A. N.O.	ASW-R1-8	H-23	15-5 38-11	Red-White Yellow-Black	Feeds #2 Search Relay switch to seek possible 3-in-line replay circuit
#2 Search Relay	Coil G0-28-750-N	J-36	50J 65-7	Silver Brown-White	Coil energized by Panel switches through Search Disc
A. N.O.	ASW-R1-8	H-23	38-11 36-11	Yellow-Black Yellow-Brown	Feeds #3 Search Relay switch to seek possible 3-in-line replay circuit
#3 Search Relay	Coil G0-28-750-N	J-37	50J 60-4	Silver Brown	Coil energized by Panel switches through Search Disc
A. N.O.	ASW-R1-8	G-23	31-11 36-11	Yellow-Red Yellow-Brown	Feeds Search Disc for 3-in-line replay and #4 Search Relay switch to seek 4-in-line or 5-in-line replay circuit
#4 Search Relay	Coil G0-28-750-N	J-37	50J 15-3	Silver Red-White	Coil energized by Panel switches through Search Disc
A. N.O.	ASW-R1-8	I-23	74 23-8	Orange-Green Blue-Yellow	Feeds Search Disc for 4-in-line replay and #5 Search relay switch to seek possible 5-in-line replay circuit
#5 Search Relay	Coil G0-28-750-N	J-37	50J 18-5	Silver Red-Black	Coil energized by Panel switches through Search Disc
A. N.O.	ASW-R1-8	I-22	61-3 23-8	Brown-Red Blue-Yellow	Direct feed to all score Discs for 5-in-line replay circuit

SCORE & STEPPING RELAYS - 6 BANK



RED
SCORE

YELLOW
SCORE

GREEN
SCORE

BLUE
SCORE

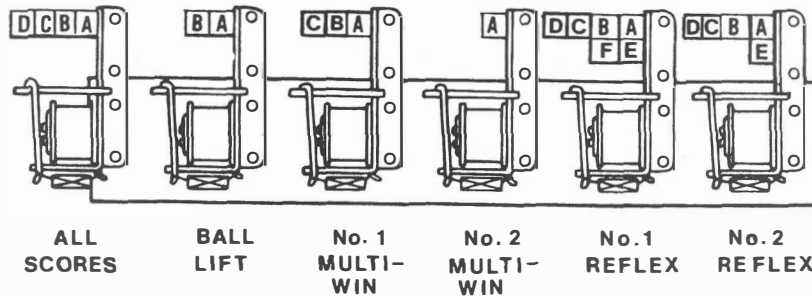
No. 2
STEP

No. 3
STEP

SWITCH/COIL	PART NO.	DIAGRAM LOCATION	WIRE NO.	WIRE COLOR	FUNCTION
Red Score Relay	Coil G032-02500-N	F-30	70 54-5	Orange White-Green	Coil energized from #1 position of Scrambler Unit Disc
A. N.O.	ASW-R1-7	H-34	82-2 21-3	Black-Blue Blue-Red	Closes circuit to step-up coil of Red Score Unit
Resistor 4.7 K Ohm 1 W	E-105-15	G-30	54-5 21-3	White-Green Blue-Red	Prevents open circuit hang-up of Red Score Relay coil by bleeding current
Yellow Score Relay	Coil G032-02500-N	F-31	70J 56-5	Silver White-Brown	Coil energized from #2 position of Scrambler Unit Disc
A. N.O.	ASW-R1-7	H-34	82-2 18-2	Black-Blue Red-Black	Closes circuit to step-up coil of Yellow Score Unit
Resistor 4.7 K Ohm 1 W	E-105-15	G-31	56-5 21-3	White-Brown Blue-Red	Prevents open circuit hang-up of Yellow Score Relay coil by bleeding current
Green Score Relay	Coil G032-02500-N	F-31	70J 57-6	Silver White-Orange	Coil energized from #3 position of Scrambler Unit Disc
A. N.O.	ASW-R1-7	H-35	82-2 20-2	Black-Blue Blue	Closes circuit to step-up coil of Green Score Unit
Resistor 4.7 K Ohm 1 W	E-105-15	G-31	57-6 21-3	White-Orange Blue-Red	Prevents open circuit hang-up of Green Score Relay Coil by bleeding current
Blue Score Relay	Coil G032-02500-N	F-32	70J 58-5	Silver White-Black	Coil energized from #3 position of Scrambler Unit Disc
A. N.O.	ASW-R1-7	H-35	82-2 23-6	Black-Blue Blue-Yellow	Closes circuit to step-up coil of Blue Score Unit
Resistor 4.7 K Ohm 1 W	E-105-15	G-31	58-5 21-3	White-Black Blue-Red	Prevents open circuit hang-up of Blue Score Relay coil by bleeding current
#2 Step Relay	Coil G032-02500-N	F-32	70J 52-4	Silver White-Blue	Coil energized from #2B position of Program Unit Disc via diode matrix
A. N.O.	ASW-R1-7	I-34	21-3 32-3	Blue-Red Yellow-Blue	Feeds Control Unit cam switch #8, regular score relay switches and step-up coils
Resistor 4.7 K Ohm 1 W	E-105-15	G-32	52-4 21-3	White-Blue Blue-Red	Prevents open circuit hang-up of #2 Step Relay coil by bleeding current
Jumper		See note below *	83-7 21-3	Black-Yellow Blue-Red	Bypasses Reflex Unit Disc
#3 Step Relay	Coil G032-02500-N	F-33	70J 53-3	Silver White-Yellow	Coil energized from #3B position of Program Unit Disc via diode matrix
A. N.O.	ASW-R1-7	I-35	65-2 21-3	Brown-White Blue-Red	Feeds Control Unit cam switch #9, regular score relay switches and step-up coils
B. N.O.	ASW-R1-3	I-35	32-3 21-3	Yellow-Blue Blue-Red	Feeds Control Unit cam switch #8, regular score relay switches and step-up coils
Resistor 4.7 K Ohm 1 W	E-105-15	G-33	53-3 21-3	White-Yellow Blue-Red	Prevents open circuit hang-up of #3 Step Relay coil by bleeding current

* Jumper and associated wiring not shown on diagram. When jumper is removed, the bypassed Reflex Unit Disc Circuits are incorporated into the #2 and #3 Step Relay circuits

6 RELAY BANK - MULTI - WIN ETC.

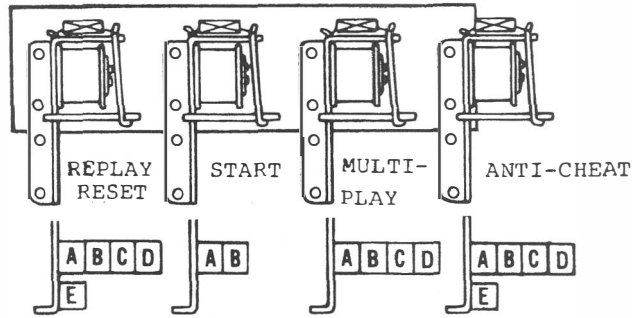


SWITCH/COIL	PART NO.	DIAGRAM LOCATION	WIRE NO.	WIRE COLOR	FUNCTION
All Scores Relay	Coil G030-01500-N	F-33	70 85-4	Orange Black-White	Coil energized from Coin Counter Disc through #6 Control Unit cam switch
A. N.O.	ASW-R1X-6	G-33	15-6 68-2	Red-White Brown-Black	Energizes Red Score Unit step-up coil
B. N.O.	ASW-R1X-1	G-34	18-2 68J	Red-Black Brown-Black	Energizes Yellow Score Unit step-up coil
C. N.O.	ASW-R1X-1	H-33	20-2 68J	Blue Brown-Black	Energizes Green Score Unit step-up coil
D. N.O.	ASW-R1X-1	H-34	23-6 68J	Blue-Yellow Brown-Black	Energizes Blue Score Unit step-up coil
Resistor 4.7 K Ohm 1 W	E-105-15	G-33	85-4 21-3	Black-White Blue-Red	Prevents open circuit hang-up of All Scores Relay coil by bleeding current
Ball Lift Relay	Coil G032-02500-N	A-13	70J 81-3	Silver Black-Red	Coil energized through Ball Lifting switch
Resistor 4.7 K Ohm 1 W	E-105-15	E-13	81-3 21-3	Black-Red Blue-Red	Prevents open circuit hang-up of Ball Lift Relay coil by bleeding current

6 RELAY BANK - MULTI - WIN ETC.

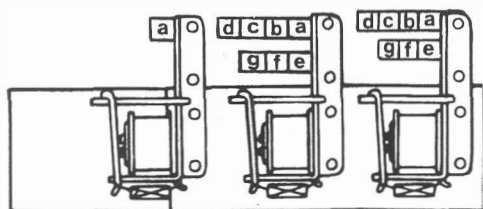
SWITCH/COIL	PART NO.	DIAGRAM LOCATION	WIRE NO.	WIRE COLOR	FUNCTION
A. N.O.	ASW-R1-7	D-16	36-3 68	Yellow-Brown Brown-Black	Closes circuit to Ball Lift Motor
B. N.C.	ASW-R2-5	G-4	78-7 75-5	Orange-Black Orange-White	Opens circuit to "Before 5TH" trip coil
#1 Multiple Win Relay	Coil G032-02500-N	E-11	70J 78-14	Silver Orange-Black	Coil energized from Search Disc through Double Yellow Trip switch
A. N.C.	ASW-R2-5	F-14	12-2 70	Red-Blue Orange	Bypasses #2 Multiple Win Relay coil
B. N.C.	ASW-R2-5	F-15	12-2 70J	Red-Blue Silver	Bypasses #2 Multiple Win Relay coil
C. N.C.	ASW-R2-5	G-11	80-16 43-15	Black Green-Yellow	Opens circuit to Alternator homing switch
#2 Multiple Win Relay	Coil G032-02500-N	F-13	70J 12-2	Silver Red-Blue	Coil energized by Control Unit Multiplier cam switches
A. N.O.	ASW-R1-3	F-12	78-14 75-5	Orange-Black Orange-White	Energizes Alternator Unit coil
#1 Reflex Relay	Coil G032-02500-N	A-4	70J 52-11	Silver White-Blue	Coil energized from Reflex Factor Disc via Control Unit cam switch #4
A. N.O.	ASW-R1-3	H-27	65-4 63-6	Brown-White Brown-Yellow	Closes circuit from "B" feature on Program Disc to Mystic Lines Disc and step-up coil
B. N.O.	ASW-R1-3	H-27	74-4 71-3	Orange-Green Orange-Red	Closes circuit from "C" feature on Program Disc to Mystic Lines Disc and step-up coil
C. N.O.	ASW-R1-3	H-29	75-3 78-2	Orange-White Orange-Black	Closes circuit to Selection Feature Unit Disc and step-up coil
D. T.	ASW-R3-6	I-34	32-3 21-3 20-7	Yellow-Blue Blue-Red Blue	Selects either #7 or #8 Control Unit cam switch circuit to Score Relay switches and step-up coils
E. T.	ASW-R3-6	H-26	53-4 13 84-1	White-Yellow Red-Yellow Black-Green	Directs Program Disc feed through either Control Unit cam switch #6 or Mystic Lines Disc to Mystic Lines step-up coil
F. T.	ASW-R3-6	H-29	18-1 25-4 23-4	Red-Black Blue-White Blue-Yellow	Directs Program Disc feed through either Control Unit cam switch #6 or Selection Feature Disc to Selection Feature step-up coil
#2 Reflex Relay	Coil G032-02500-N	A-5	70J 52J	Silver White-Blue	Coil energized from Reflex Factor Disc via Control Unit cam switch #4
A. T.	ASW-R3-6	G-27	58-2 43-4 51-4	White-Black Green-Yellow White-Red	Directs circuit from Scrambler Disc to either Double Red Trip coil or Mystic Lines step-up coil
B. T.	ASW-R3-6	G-28	18-1 45-3 53-2	Red-Black Green-White White-Yellow	Directs circuit from Scrambler Disc to either Double Yellow Trip coil or Ball Return trip coil
C. T.	ASW-R3-6	G-28	18J 48-7 54-4	Red-Black Green-Black White-Green	Directs circuit from Scrambler Disc to either Double Green Trip coil or Ball Return trip coil
D. T.	ASW-R3-6	G-28	18J 50-3 56-4	Red-Black White White-Brown	Directs circuit from Scrambler Disc to either Double Blue Trip coil or Ball Return trip coil
E. T.	ASW-R3-6	G-24	18J 36-6 31-5	Red-Black Yellow-Brown Yellow-Red	Directs either Scrambler Disc circuit or Program Disc circuit to Ball Return trip coil

4 RELAY BANK - ANTI-CHEAT ETC.



SWITCH/COIL	PART NO.	DIAGRAM LOCATION	WIRE NO.	WIRE COLOR	FUNCTION
Replay Reset Relay	Coil G030-01500-N	A-6	70 75-2	Orange Orange-White	Coil energized from Play Button switch through Anti-Cheat Relay switch
A. N.O.	ASW-R1-3	D-6	56-2 75-2	White-Brown Orange-White	Closes circuit to Replay Reset Relay coil and Replay Reset Register coil
B. N.O.	ASW-R1-3	C-1	98-16 94-16	Grey-Black Grey-Green	Energizes Control Unit Motor and Program Unit Motor
C. N.C.	ASW-R2-5	I-8	30 50-11	Yellow White	Opens Key Meter and Replay Register step-up coil circuits
D. N.C.	ASW-R2-5	C-6	10-5 61-8	Red Brown-Red	Opens circuit to Start Relay coil
E. T.	ASW-R3-6	B-6	80-9 34 53-7	Black Yellow-Green White-Yellow	Pulses Replay Register Reset coil from either Control Unit or Program Unit switches
Start Relay	Coil G032-02500-N	A-6	70J 68-3	Silver Brown-Black	Coil energized from Coin switch or Play Button switch circuits
A. N.O.	ASW-R1X-1	D-9	13-16 48-2	Red-Yellow Green-Black	Closes Start Relay coil holding circuit
B. N.O.	ASW-R1X-1	B-9	13J 12	Red-Yellow Red-Blue	Energizes Timing cams Index coil or Shutter Motor through Shutter cam switches
Multiplay Relay	Coil G032-02500-N	A-8	70J 15-13	Silver Red-White	Coil energized from Control Unit cam switch #3
A. N.O.	ASW-R1-8	C-8	25-9 15J	Blue-White Red-White	Closes Multiplay Relay coil holding circuit
B. N.O.	ASW-R1-3	C-7	10-5 47-4	Red Green-Orange	Closes Start Relay coil holding circuit
C. N.C.	ASW-R2-5	B-6	45-9 34	Green-White Yellow-Green	Opens circuit to Replay Register Reset coil
D. T.	ASW-R3-6	H-7	41-4 75-9 36-13	Green-White Orange-White Yellow-Brown	Closes circuit to Replay Register step-up coil
Anti-Cheat Relay	Coil -GN32- 01250-1250	A-3	70J 53J 78-4	Silver White-Yellow Orange-Black	Coil energized from Control Unit cam switch #5
A. N.O.	ASW-R1-8	D-4	30 78J	Red Orange-Black	Closes Anti-Cheat Relay coil holding circuit
B. N.O.	ASW-R1-3	K-26	51-7 80-1	White-Red Black	Energizes circuits, from 17 VAC power supply
C. N.C.	ASW-R2-5	A-4	70J 53J	Silver White-Yellow	Bypasses half of Anti-Cheat Relay coil
D. N.C.	ASW-R2-5	E-10	14-14 30J	Red - Green Silver	Opens circuit to Shutter Motor after Shutter closes as game starts
E. T.	ASW-R3-6	D-7	75-2 56-2 50-2	Orange-White White-Brown White	Energizes either Play Button switch in start circuit or Replay Register Reset coil
F. T.	ASW-R3-6	L-25	85 36-17 40	Black-White Yellow-Brown Green	Closes circuit to Tilt lite

3 RELAY BANK - BALL RETURN ETC.



SHUTTER GUIDE RETURN "L" RETURN "R"

SWITCH/COIL	PART NO.	DIAGRAM LOCATION	WIRE NO.	WIRE COLOR	FUNCTION
Shutter Guide Relay	Coil G032-02500-N	A-18	70 27-5	Orange Blue-Orange	Coil energized from "R" or "L" Ball Return Relay switches via "R" or "L" carryover switches
A. N.C.	ASW-R2-5	C-11	85-7 47-3	Black-White Green-Orange	Opens circuit from "L" or "R" Ball Return Relay switches to Shutter Motor
"L" Ball Return Relay	Coil G030-01500-N	A-17	70J 15-11	Silver Red-White	Coil energized from "L" Button switch via "R" Ball Return Relay switch
A. N.O.	ASW-R1-8	B-17	83-4 15-11	Black-Yellow Red-White	Closes "L" Ball Return Relay holding circuit
B. N.C.	ASW-R2-5	D-15	23-9 35-3	Blue-Yellow Yellow-White	Opens circuit to Trip Bank Motor
C. N.C.	ASW-R2-5	D-20	67-2 12-5	Brown-Orange Red-Blue	Opens all reset coil circuits
D. N.C.	ASW-R2-5	B-16	64-1 32-4	Brown-Green Yellow-Blue	Opens circuit to "R" Ball Return Relay coil
E. N.C.	ASW-R2-5	I-6	74-6 34-3	Orange-Green Yellow-Green	Opens all Mystic Lines Motor Homing circuits
F. T.	ASW-R3-6	C-11	80-11 50-7 47-3	Black White Green-Orange	Directs circuit to Shutter Motor
G. T.	ASW-R3-6	B-19	82-3 60-7 56-7	Black-Blue Brown White-Brown	Directs circuit to Shutter Guide Motor and Shutter Guide Relay coil
"R" Ball Return Relay	Coil G030-01500-N	A-16	70J 64-1	Silver Brown-Green	Coil energized from "R" Button switch
A. N.O.	ASW-R1-8	B-17	83-4 64J	Black-Yellow Brown-Green	Closes "R" Ball Return Relay holding circuit
B. N.C.	ASW-R2-5	D-20	12-5 30	Red-Blue Yellow	Opens all reset coil circuits
C. N.C.	ASW-R2-5	D-15	35-3 30J	Yellow-White Yellow	Opens circuit to Trip Bank Motor
D. N.C.	ASW-R2-5	I-6	34-3 21-3	Yellow-Green Blue-Red	Opens all Mystic Lines Motor homing circuits
E. N.C.	ASW-R2-5	B-7	15-11 53-6	Red-White White-Yellow	Opens "L" Ball Return Relay holding circuits
F. T.	ASW-R3-6	D-11	50-7 30J 47-3	White Yellow Green-Orange	Directs circuit to Shutter Motor
G. T.	ASW-R3-6	B-19	60-7 30J 72-3	Brown Yellow Orange-Blue	Directs circuit to Shutter Guide Motor and Shutter Guide Relay coil

FRONT CABINET - SWITCH & COIL FUNCTION CHART

SWITCH/COIL	PART NO.	DIAGRAM LOCATION	WIRE NO.	WIRE COLOR	FUNCTION
Cabinet Toggle Switch N.O.	E-108-57	B-1	90-16 93-16	Grey Green-Yellow	Energizes Transformer and power supply circuit through 115 V. 10 A. fuse
Trough Switches #1 N.C.	ASW-A2-62	G-3	75-16 83-6	Orange-White Black-Yellow	Opens circuit to "Before 4th" Trip coil - Closed when 4th ball is up
#5 N.O.	ASW-A1-20	B-16	68 38-3	Brown-Black Yellow-Black	Closes circuit to Ball Lifter Motor
Ball Lifter Switch N.O.	ASW-A1-7	D-13	21-3 81-3	Blue-Red Black-Red	Closes circuit to Ball Lifter Relay
"A" Button Switch N.O.	ASW-A1-24	G-5	45-5 78-12	Green-White Orange-Black	Closes circuit to Mystic Lines "A" Motor
"B" Button Switch N.O.	ASW-A1-24	F-6	40-5 58-7	Green-Black White-Black	Closes circuit to "B" Cam Relay Coil
"C" Button Switch N.O.	ASW-A1-24	F-7	25-6 36-5	Blue-White Yellow-Brown	Closes circuit to "C" Cam Relay Coil
"Left" Button Switch N.O.	ASW-A1-24	B-17	56-3 12-3	White-Brown Red-Blue	Closes circuit to "Return Left" Relay Coil
"Right" Button Switch T.	ASW-A21-2	C-17	12-3 83-4 32-4	Red-Blue Black-Yellow Yellow-Blue	Button depressed - Closes circuit to "Return Right" Relay Coil. Button up - continues circuit to "Return Left" Relay Coil
"R" Button Switches A. (Bottom) N.O.	ASW-A11-4	G-4	53-18 52-9	White-Yellow White-Blue	Closes circuit to Search Lock Magnet Coil
B. (Top) N.O.	(Dual Switch)	C-14	85-8 35-2	Black-White Yellow-White	Closes circuit to Timer Reset Unit Coil
Coin Lockout Magnet	Coil M-37-2700	A-9	70 72-1	Orange Orange-Blue	Coil energized from Coin Counter Switch
Man. Lift Button Switch A. N.O.	ASW-A2-9	D-16	68 36-3	Brown-Black Yellow-Brown	Closes circuit to Ball Lifter Motor through Timer (open at "0") Switch
B. N.C.	ASW-A1-26	D-18	31-4 30	Yellow-Red Yellow	Opens circuit to Lifter Start Relay Coil
Coin Switch T.	E-108-86	D-7	27-9 13-9 47-4	Blue-Orange Red-Yellow Green-Orange	Closes circuit to either Control Unit #3 Cam Switch or Multiplay Relay Switch and energizes Start Relay Coil
Front Door Lite Switch N.O.	ASW-M2-6	J-25	12-1 30	Red-Blue Yellow	Energizes Meter Lite when door is opened
Meter Lite	E-125-5	J-25	81-4 12-1	Black-Red Red-Blue	Energized by Front Door Lite Switch
Tilt Switches Front Door N.O. Front Cabinet N.O. Back Door N.O. Plumb Bob. N.O.	ASW-A1-27 ASW-A1-25 ASW-A1-25 E-138-3	B-11	14-5 21-3	Red-Green Blue-Red	These switches close a circuit to the Tilt Trip Coil
Play Button Switch N.O.	ASW-A1-37	D-7	50-2 63-2	White Brown-Yellow	Closes circuit to Replay Register (open at 0) Switch and Start Relay Coil
Key Switches A. N.C.	ASW-B-1	A-7	68-3 13-16	Brown-Black Red-Yellow	Opens circuit to Start Relay Coil
B. N.O.	ASW-B-2	F-8	63-10 80-19	Brown-Yellow Black	Energizes Key Meter
C. N.O.	ASW-B-2	D-4	78-4 30	Orange-Black Yellow	Closes circuit to Anti-Cheat Relay Coil
D. N.O.	ASW-B-2	C-12	14-5 21-3	Red-Green Blue-Red	Closes circuit to Tilt Trip Coil

FRONT CABINET-SWITCH & COIL FUNCTION CHART

SWITCH/COIL	PART NO.	DIAGRAM LOCATION	WIRE NO.	WIRE COLOR	FUNCTION
E. N.O.	ASW-B-2	H-8	34-1 50-11	Yellow-Green White	Closes circuit to Watch Switch and Replay Register Step-Up Coil
F. T.	ASW-C3-6	G-8	75-9 80-19 34-1	Orange-White Black Yellow-Green	Pulses Replay Register Step-Up Coil at end of key stroke
Key Meter	E-130-29	F-8	70 63-10	Orange Brown-Yellow	Energized from Key Switch
Coin Meter	E-130-29	A-8	70 80-2	Orange Black	Energized from Control Unit #4 Cam Switch
Gong	Coil CB-30-2000	E-35	70 84-3	Orange Black-Green	Coil energized from Diode Plug
* Front Door Meter Switch N.C.	ASW-A1-15	F-9	40-7 70	Green Orange	Opens circuit to Total Replay Meter, in series with Back Door Meter Switch
* Back Door Meter Switch N.C.	ASW-A1-16	F-9	60-1 40-7	Brown Green	Opens circuit to Total Replay Meter, in series with Front Door Meter Switch
* Total Replay Meter	E-130-10	G-9	62-1 41-4	Brown-Blue Green-Red	Energized from Control Unit #2 Cam Switch
* Total Play Meter	E-130-10	F-9	80-9 47-2	Black Green-Orange	Energized from Control Unit #2 Cam Switch

* These items are optional accessories and must be ordered separately.

TAHITI PARTS LIST

FRONT CABINET ASSEMBLY

PART NO.	DESCRIPTION
A-1533	Coin Slide Assy.
AS-186-11	Ball Lifter Assy.
AS-187-20	Ball Shooter Assy.
A-100-7	Knob & Shooter Rod Assy.
R-108-3	Shooter Tip
SP-262	Compression Spring, 1"
SP-200-24	Compression Spring, 6"
P-2891-8	Retaining Ring
M-281-58	Lock Replay Switch
E-108-57	On-Off Toggle Switch
A-2790-59	Cash Box Assembly
P-3089-55	Cash Box Cover
P-921-39	Left Side Molding
P-921-40	Right Side Molding
G-424	Top Glass
ASW-A11-4	Replay Switch
AS-1305-70	Front Molding Assy. (complete)
A-1272-23	"A" Button & Pin Assy.
A-1272-24	"B" Button & Pin Assy.
A-1272-25	"C" Button & Pin Assy.
A-1272-29	"R" Button & Pin Assy.
A-1272-70	"Left" Button & Pin Assy.
A-1272-71	"Right" Button & Pin Assy.
SP-200-111	Compression Spring, Button
P-801-214	Washer, Button
P-448-6	Snap Washer, Button
P-2210-8	Coin Drop Plate (5¢, unmarked)
P-2210-9	Coin Drop Plate (10¢, unmarked)
P-2210-12	Coin Drop Plate (Blank, no slot)
P-2210-150	Coin Drop Plate (5¢)
P-2210-151	Coin Drop Plate (10¢)
P-2210-152	Coin Drop Plate (25¢)
P-2210-188	Coin Drop Plate (1 Kr.)
P-2210-187	Coin Drop Plate (1 Fr.)
CA-439-27	Ball Return Panel
CA-119-65	Front Cabinet
P-4052	Leg
M-106-1	Bolt, Leg
M-163-4	Adjuster, Leg
N-37516-2112	Nut, Leg Adjuster

AS-2041-82 FRONT DOOR ASSEMBLY (COMPLETE)

PART NO.	DESCRIPTION
M-281-54	Lock
A-254-117	Hinge Assy.
M-1400-Series	Slug Rejector (Specify Coin)
P-6431-Series	Coin Guide Spacer (Specify Coin)
P-6694-Series	Coin Guide (Specify Coin)
AS-2517-14	Coin Lockout Assy.
AS-2744	Coin Switch & Wire Assy.
A-1729-16	Push Button Assy. (Play)
P-800-2	Washer
P-2891-7	Retaining Ring
ASW-A1-37	Play Switch
ASW-A1-27	Tilt Switch

AS-2042-208 PANEL ASSEMBLY (COMPLETE)

PART NO.	DESCRIPTION
C-326-10	Light Shield Post, White (8)
E-125-2	#47 Light Bulb (9)
M-170	Rebound Spring (8)
SP-112-1	Short Panel Spring (2)
SP-112	Long Panel Spring (10)
S-1071-84	Panel Pins (44)
AS-1315-8	Ball Gate & Switch Assy.
C-153	Ball Lift Cover
C-119-23	Bumper Post, Yellow (27)
C-119-21	Bumper Post, Red (2)
R-243	Bumper Rubber, White (23)
R-243-2	Bumper Rubber, White (2)
R-521-1	Bumper Rubber, White (2)
R-115-4	Rebound Rubber - Top
CA-638-113	Panel
CA-1100-11	Arch Bottom
CA-1103	Arch Guide Strip
CA-1104	Arch Top
CA-529-19	Shutter

AS-2043-195 BACK CABINET ASSY. (COMPLETE)

PART NO.	DESCRIPTION
A-1511-34	Back Door Hinge - Top
A-1511-33	Back Door Hinge - Bottom
A-1450-1	Hinge & Stud Insert (2)
AS-3400-262	Wood Insert & Light Socket Assy.
E-125-5	#55 Light Bulb (91)
E-125-2	#47 Light Bulb (6)
E-125-44	#455 Light Bulb (4)
G-292-51	Back Glass
A-3841	Glass Retainer & Plate Assy.
P-6242-90	Glass Retainer
P-6242-92	Glass Retainer (2)
M-281-74	Lock
P-3473-16	Lock Retainer
E-126-63	Power Cord, 14 ft. (Domestic)
CA-1120-77	Back Cabinet

BACK DOOR PARTS

PART NO.	DESCRIPTION
P-2335-48	Hinge (2)
M-281-24	2 Lock Set
P-758-31	Lock Cam (2)
R-201-6	Door Bumpers (2)
CA-1120-76	Back Door

TAHITI MOTORS

E-119--462 Program Unit Motor (Domestic)

E-119--370 Program Unit Motor (Belgium)

E-119-462 Control Unit Motor (Domestic)

E-119-370 Control Unit Motor (Belgium)

E-119-464 Trip Relay Bank Motor

E-119-379 Panel Shutter Motor

E-119-467 Panel Shifter Motor

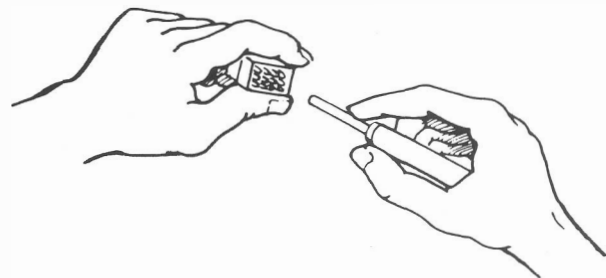
E-119-339 Ball Lifter Motor

E-119-457 Mystic Lines Motor (A)

E-119-353 Mystic Lines Motor (B & C)

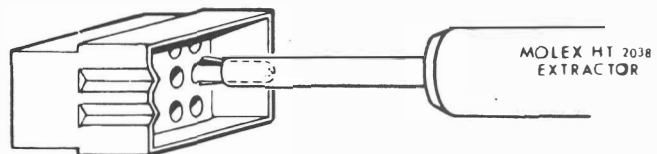
MOLEX HT 2038 EXTRACTOR & PIN

NOTE: The Molex Pin Extractor Tool enables easy service of the Molex Plug, Pins both male and female are removable. Holding Extractor Tool as shown in Illustration, placing Forefinger over shaft as to hold it from turning (as shown), push Shaft over Pin giving Tool a slight twist allowing the Pin Fins to compress easily, thus enabling the Pin to be pushed through Nylon Housing.

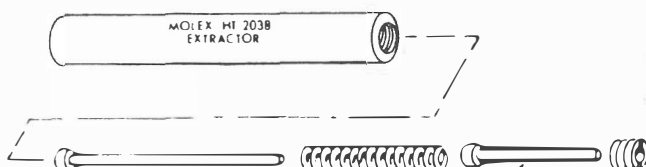


Female BALLY NO.	MOLEX NO.	TYPE
FEMALE E-663-2	02-09-1104	1190
FEMALE E-663-4	02-09-1119	1381
MALE E-661-2	02-09-2103	1189
MALE E-661-4	02-09-2118	1380

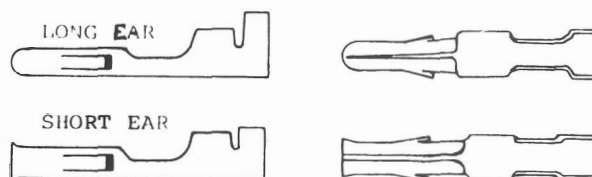
TYPE 1189-90 LONG EAR
TYPE 1380-81 SHORT EAR
HAND CRIMPING TOOL HT-1031



NOTE: REPLACEMENT ITEMS CAN BE ORDERED THRU BALLY DIST. OR NEAREST MOLEX REP. IN COUNTRY OF USE.



REPLACEMENT PART HT 1010-232



ALWAYS GIVE MODEL AND PART NO. WHEN ORDERING SERVICE PARTS

REPLACEMENT SCORE CARDS

SHOOT TO LIGHT NUMBERS IN COLOR ZONES

Red, Green, Yellow and Blue Score Separately

4 in same color zone 80 80 96 96 96 144 216 320 480 600

PLUS ONE IN MATCHING STAR ZONE

4 in same color zone 16 20 24 36 50 64 96 144 240 480

3 in same color zone 4 6 8 12 16 24 36 64 120 192

Scores are indicated at bottom of backglass
and match colors of zones
in which scoring numbers are lit

ONLY HIGHEST SCORE PER COLOR REGISTERS

TO PLAY
BALL RETURN FEATURE
SEE CARD AT LEFT

TA-1

If BALL RETURN Feature is lit
press "Left" Button to
Return Balls in "B" Section

OR

Press "Right" Button to Return Balls
in "C" Section.

Press Buttons before shooting 4th ball.

PRESS R-BUTTON
TO REGISTER REPLAYS
(Press after shooting 4th ball)

TO PLAY REPLAYS
PRESS RED BUTTON
WITHOUT DEPOSITING COINS

TA 2