### **Spanish Eyes**

Scanned by: Henri Naccache email: pinball@qais.com

Content::

Instruction Manual for Spanish Eyes Manual

Catalog Supplement "P-P" with new parts & units for Spanish Eyes

Schematic (you will have to print this out and do some 'cut-n-paste'ing to view this)

computer: home built 2x300MHz os: Redhat Linux 7.1 scanner: Epson Perfection 636U

software: xsane 0.79

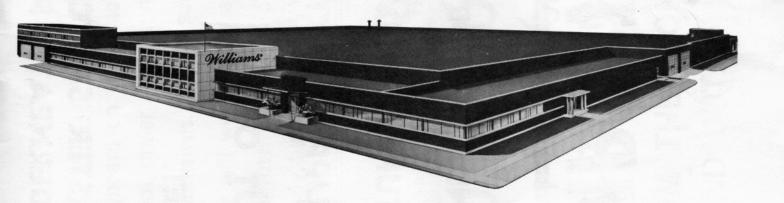
process: scanned each page at 150dpi, saved as a postscript file.

mpage -1 \*.ps > spanish\_eyes.ps ps2pdf spanish\_eyes.ps

## Instruction Manual

for

### SPANISH EYES





3401 N. California Ave. Phone 267-2240

Chicago, III. 60618, U.S.A.
Cable Address: Wilcoin

# IMPORTANT NOTICE

CAN TURN DISPLAY LIGHTS ON BY PRESSING KINDLY INFORM LOCATIONS THAT THEY LEFT FLIPPER BUTTON. MACHINE CAN STILL BE SHUT OFF BY TAPPING BOTTOM OF CABINET.

UNDERNEATH FRONT PART OF CABINET. MASTER SWITCH (ON-OFF) IS LOCATED

# CAUTION!

Water will weaken the adhering of the paint to the board and abrasives shorten tions or harsh abrasives. Avoid such things as steel wool, kitchen cleansers or abrasive properties. Do not under any circumstances clean the board with water, water soap soluthe board life by many thousand plays. A wax base cleaner with negligible abrasive The playboard on this machine has an improved finish with excellent wearing qualities used lightly, but frequently, will extend the board life to its full capabilities. hand soap.

# SERVICEMAN

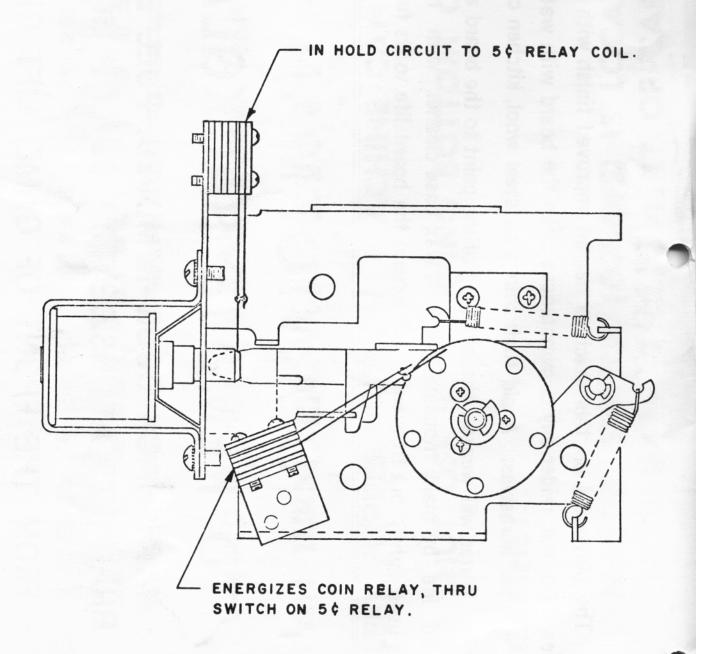
# TO REMOVE BACKGLASS:

- · WITH BACK DOOR REMOVED, PULL BACK ON BRACKETS AT INSIDE TOP OF LITE BOX.
- · FROM THE FRONT OF GAME, LIFT GLASS UP AND OUT.

### ALTERNATOR UNIT

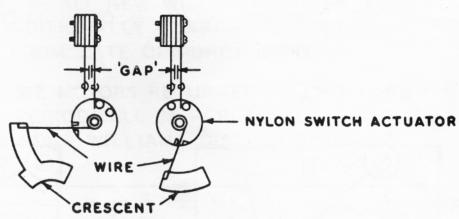
LOCATED ON MECHANISM PANEL .

USED IN CONJUNCTION WITH 5¢ RELAY FOR "2COINS-IPLAY" FEATURE.



### INSTRUCTIONS FOR COIN TRIP SWITCH ADJUSTMENT

WIRE SHOULD BE IN CONTACT WITH END OF CRESCENT OPENING WHEN BLADE ADJUSTMENT IS MADE.



Long blade should be in contact with nylon switch actuator and have a maximum overtravel of 1/32.

or

Using a gram gauge, tension of long blade should not exceed 10 grams.

### SWITCH ADJUSTMENT

- 1. For small coins, such as dimes, adjust short blade so that the 'gap' between the silver contacts is .045 to .055.
- 2. For larger  $\mathcal{G}$  heavier coins the 'gap' should be .045 to .060.
- 3. Do not adjust 'gap' closer than .040.

### POWER TRANSFORMER:

LOCATED ON MECHANISM PANEL, IT IS EQUIPPED WITH A SECONDARY TAP. IF YOUR GAME IS ON LOCATION WITH EXTREMELY LOW LINE VOLTAGE, REMOVE LEAD FROM LUG MARKED 24 VOLTS AND SOLDER TO ALTERNATE LUG MARKED "HIGH". THIS WILL BOOST SECONDARY VOLTAGE APPROXIMATELY 2-3 VOLTS.

#### LEG LEVELERS:

ARE PROVIDED FOR TWO PURPOSES - 1ST TO LEVEL GAME ON LOCATION, 2ND TO INCREASE PITCH FOR GAME PERCENTAGING. IF IT IS DESIRED TO SPEED UP PLAY AND DECREASE SCORES, RAISE REAR LEG LEVELERS TO INCREASE PITCH.

### INSTRUCTIONS FOR ALTERING COIN CHUTES EQUIPPED WITH A FLIP-OVER DEVICE.

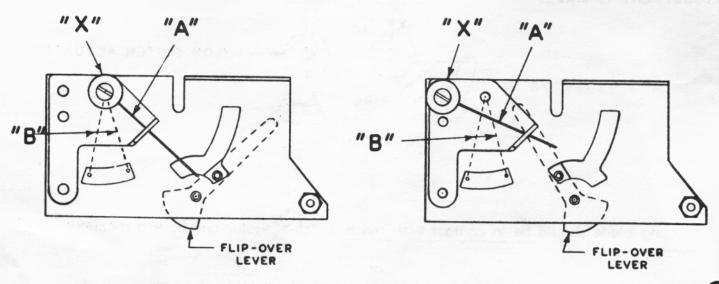
FOR 1 COIN-FOR 1 PLAY

OR

2 COINS - FOR 1 PLAY

FIGURE 1

FIGURE 2



### 1 COIN - FOR 1 PLAY (FIGURE 1):

Wire form "A" should be in position as shown in Figure 1. Flip-over lever should rebound from wire form "A" and return to position shown in Figure 1 everytime a coin is inserted. All coins pass over the coin trip switch wire "B".

### 2 COINS - FOR 1 PLAY (FIGURE 2):

Wire form "A" should be in position as shown in Figure 2 (see note). Flip-over lever should alternate from side to side. 1st coin should go to cash box without actuating coin trip switch wire "B", 2nd coin should pass the coin trip switch wire "B" and returns flip-over to position as shown in Figure 2.

#### NOTE:

To change from 1 coin play to 2 coin play or vice versa - loosen screw "X" and move screw, bushing & wire form "A" to position as required - shown in Figure 1 position as required - shown in Figure 1 or Figure 2.

When using 1 coin for 1 play, wire form "A" should not under any circumstances be allowed to enter the "Banana" slot and cause binding of flip-over lever.

### WARRANTY

THE MOTORS IN ALL NEW WILLIAMS PRODUCTS ARE UN-CONDITIONALLY GUARANTEED FOR 6 MONTHS FROM DATE OF PURCHASE.

ANY DEFECTIVE MOTORS RETURNED DURING THE WARRANTY PERIOD WILL BE REPLACED FREE OF CHARGE BY YOUR WILLIAMS DISTRIBUTOR.

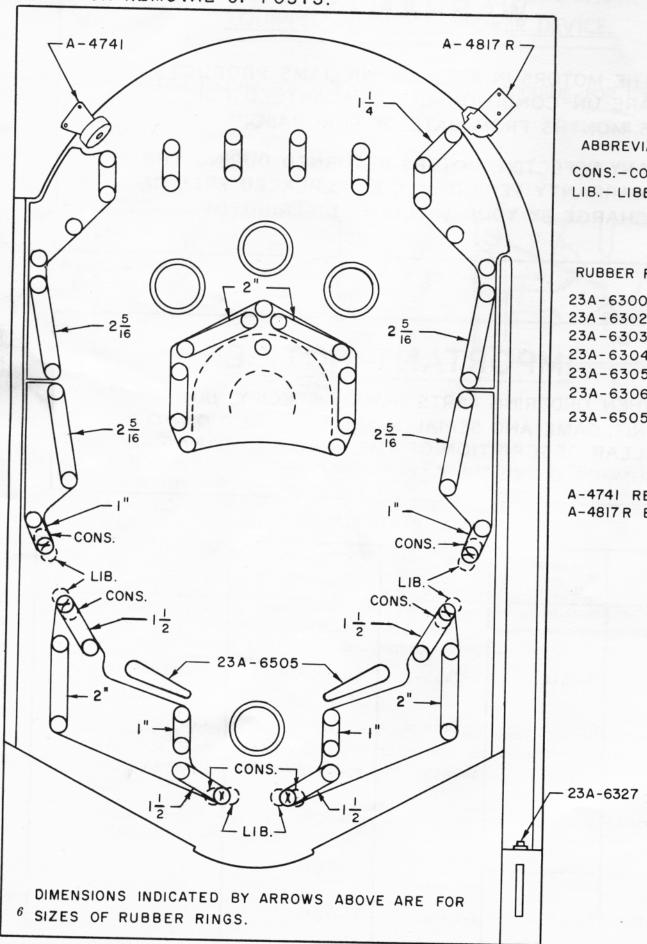
### IMPORTANT NOTICE

WHEN ORDERING PARTS ALWAYS SPECIFY NAME OF UNIT, GAME AND SERIAL NUMBER, IN ADDITION TO A CLEAR DESCRIPTION OF THE PART AND PART NUMBER IF POSSIBLE.

#### UNIT PARTS LIST

UNIT	CONTACT	WIPER ASSEMBLY	RATCHET GEAR ASSEMBLY	MOTORS
REPLAY			A-6400	
BALL COUNT	c-6414	в-7456-3	A-6402-10	SCORE MOTOR
NO. MATCH	c-6414	B-7456-2	A-6401	14A-7883 (60 CYCLE)
TENS	A-7195	A-6294	3C-7272	14A-7884 (50 CYCLE)
HUNDREDS			3C-7272	
THOUSANDS			3C-7272	
10 THOUSANDS	A-7195	A-6294	30 <b>-</b> 7272	AN BARRAN THE STATE

TO MAKE GAME MORE "CONSERVATIVE" OR "LIBERAL" - MOVE POST 3/16" AS SHOWN IN SKETCH BELOW. SPOTTING HOLES ARE PROVIDED AND CAN BE SEEN ON REMOVAL OF POSTS.



ABBREVIATIONS :

CONS.-CONSERVATIVE LIB. - LIBERAL

### RUBBER RING NUMBERS:

23A-6300 5/16" I. D. 23A-6302 I" I. D. 23A-6303 | 1/4" I. D. 23A-6304 11/2" I.D. 23A-6305 2" I.D. 23A-6306 25/16" I. D. 23A-6505 | 1/2" | I.D.

A-4741 REBOUND ASS'Y. A-4817 R BALL GATE ASS'Y.

-23A-6327 BALL SHOOTER RUBBER TIP

16A-408 PA

### "SPANISH EYES" COIL CHART

THIS GAME OPERATES ON 24 VOLTS. WHEN ORDERING REPLACEMENT TRANSFORMERS, MOTORS, COILS OR METERS .... MAKE SURE TO SPECIFY CORRECT PART NUMBER.

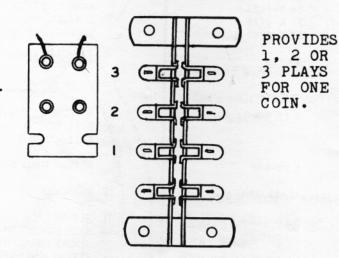
14 A-7883 14 A-7884 15 A-6771 15 A-6782-1 B 6396	SCORE MOTOR - 60 CYCLE SCORE MOTOR - 50 CYCLE TRANSFORMER - 60 CYCLE TRANSFORMER - 50 CYCLE	MECH. PANEL MECH. PANEL
14 A-7884 15 A-6771 15 A-6782-1	SCORE MOTOR - 50 CYCLE TRANSFORMER - 60 CYCLE	MECH . PANEL
15 A-6771 15 A-6782-1	SCORE MOTOR - 50 CYCLE TRANSFORMER - 60 CYCLE	MECH . PANEL
15 A-6782-1	TRANSFORMER - 60 CYCLE	
15 A-6782-1	TRANSFORMER - 60 CYCLE TRANSFORMER - 50 CYCLE	ACTION TO THE
	TRANSFORMER - 50 CYCLE	MECH. PANEL
B 6396		MECH. PANEL
	24 VOLT METER	MECH. PANEL
	SOLENOID COILS	
3 00 550	A REPORT OF THE PROPERTY OF TH	
A 22-550	MATCH UNIT STEP UP	INSERT
	BALL COUNT UNIT STEP UP	
	BALL RELEASE	INSERT
A 23-600		PLAYFIELD
A 23-000	REPLAY UNIT STEP UP	INSERT
A2-23-750	KNOCKER	CABINET
B 26-800	AT MEDIAN MODEL TO THE STATE OF	
	ALTERNATOR UNIT	MECH. PANEL
	BALL COUNT UNIT RESET	INSERT
	SCORE DRUM UNITS (4 req'd.)	
	REPLAY UNIT RESET	INSERT
C 2-26-800		INSERI
5 2 20 - 000	CHIME	INSERT
D1-24-1400	RELAY BANK RESET (2 req'd.)	
	REBEI (2 req'd.)	PLAYFIELD
G 23-750	EJECT COIL	DI MUNITE -
	JET BUMPERS (4 reg'd.)	PLAYFIELD
N 01 075 / 00		PLAYFIELD
FL 21-375/ 28-400	FLIPPERS (2 req'd.)	PLAYFIELD
	RELAY COILS	
M 1-31-1500		
7 1 - 31 - 1300	COIN LOCKOUT	DOOR
M 29-1000	GAME TRIP	
		MECH. PANEL
	GAME OVER TRIP	MECH. PANEL
M 29-1100		
1 23 1100	5¢ RELAY	MECH. PANEL
	10 ¢ RELAY	
	25 ¢ RELAY	MECH. PANEL
	10 POINT RELAY	MECH. PANEL
		INSERT
	100 POINT RELAY	INSERT
	1,000 POINT RELAY	INSERT
	'A' TO 'E' RELAY	
	'l' TO '6' RELAY	PLAYFIELD
the state of the s	5,000 RELAY	PLAYFIELD
	SCORE RESET RELAY	PLAYFIELD
1 30-1300		INSERT
	100,000 POINT RELAY	INSERT
27-500	RELAY BANK (11 req'd.)	PLAYFIELD
27-1000	GAME LATCH	
	GAME LATCH	MECH. PANEL
	EJECT RELAY	MECH. PANEL
	COIN RELAY	MECH. PANEL
	OUTHOLE RELAY	MECH. PANEL
	RESET RELAY	MECH. PANEL
	GAME OVER LATCH	MECH. PANEL
	THE OTHER PRIOR	MECH. PANEL
28-1150	BALL INDEX RELAY	MEGIT DIAM
		MECH. PANEL
29-1250	LOCK RELAY	MECH. PANEL
M 27-675	Manual Con-	LOII. FANEL
	METER COIL	B 6396
28-1200		

### ADJUSTMENTS ON MECHANISM PANEL

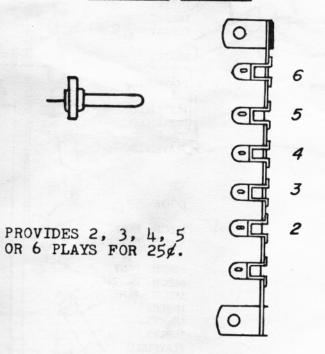
### 5¢ Adjustment

# IN "2 COINS FOR 1 PLAY", CIRCUIT TO COIN RELAY PASSES THRU SWITCH ON ALTERNATOR UNIT.

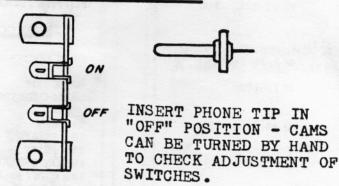
### 10¢ Adjustment



### 25¢ Adjustment



### Motor Service Jack

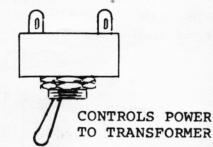


### SUGGESTED SCORE CARDS:

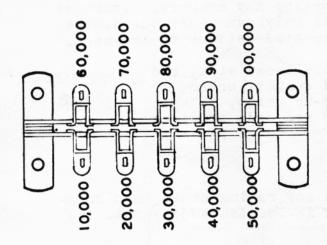
- 5 BALL PLAY----- 408-13
- 3 BALL PLAY----- 408-5

### MASTER ON-OFF SW.

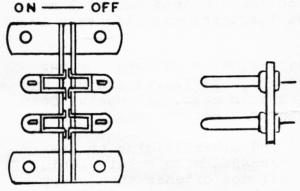
(Located under front of Cabinet)



#### AUJUSTMENTS IN BACKBUX



### NO. MATCH ADJ.



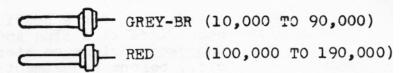
IN "ON" POSITION, A NUMBER MATCH LITE WILL APPEAR WHEN GAME IS OVER. TO AWARD REPLAYS, WHEN NUMBER IS MATCHED, "REPLAY-ADD A BALL-NOVELTY" ADJUSTMENT MUST BE IN REPLAY POSITION. IF IT IS IN "ADD A BALL" POSITION, NUMBER MATCH ADJUSTMENT MUST BE TURNED TO "OFF".

IN REPLAY POSITION, HI-SCORES AND NUMBER MATCH WILL ADVANCE REPLAY UNIT, WHILE "1 TO 6 RESET RELAY" AND "A TO E RESET RELAY" ADVANCE BALL COUNT UNIT.

IN ADD-A-BALL POSITION, HI-SCORES, "1 TO 6 RESET RELAY" AND "A TO E RESET RELAY" WILL ADVANCE BALL COUNT UNIT. NUMBER MATCH ADJUSTMENT SHOULD BE "OFF".

IN NOVELTY PLAY, "1 TO 6 RESET RELAY" AND "A TO E RESET RELAY" WILL ADVANCE 10,000 POINT DRUM UNIT.

### HI-Score Adjustment

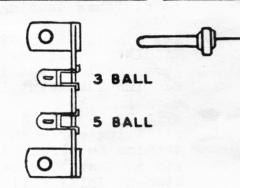


INSERT PLUGS INTO 10 POINT FEMALE AT DESIRED POSITIONS. EXAMPLES:

GREY-BR INTO 30,000 SCORES AT 30,000.
RED INTO 00,000 SCORES AT 100,000.
RED INTO 30,000 SCORES AT 130,000.

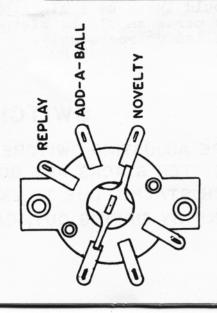
RED INTO 90,000 SCORES AT 190,000.

### No. of Balls Adjustmen



Plug changes 3 to 5 ball play or vice versa.

### GAME ADJUSTMENT



9

GENERAL NEVER EXPERIMENT with any of the mechanism. Locate any trouble with the aid of Wiring Diagrams or Operating & Servicing Information supplied with the machine, then check for proper adjust-

ment of the units involved before making any changes. Improper adjustment or make-shift repair will only cause serious damage

to other parts of the machine or repeated failure of the part. NOTE: Always look for a possible loose wire, bad connection at a plug and socket, broken or

> unhooked springs on step-up units, relays, etc., before adjustments are made or wires

reconnected.

to clutches causing them to slip.

#### 2. FUSES

IMPORTANT: Never replace fuses with any rating other than specified on the fuse block; this block is located adjacent to the transformer.

LUBRICATION Over-lubrication causes far more trouble in coin operated equipment than under-lubrication. Practically all cases of poor contact on switches and wiper discs are due to oil or grease, or oil vapor, which forms a film or residue on the contacts and will not allow current to pass through. Excess lubricant may also seep in-

IMPORTANT: NEVER USE VASELINE FOR LUBRICATION OF ANY PART OF THE MACHINE. Vaseline is not a true lubricant. It leaves a dirty and gummy residue and it becomes very thick when cold. A special Coin Machine Lubricant is supplied with each machine.

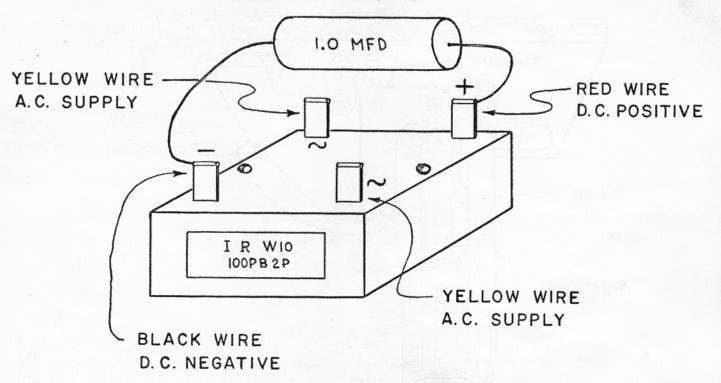
STEP-UP Levers, Ratchets, Cams, Shafts and other sliding or oscillating parts should be very lightly greased with special Coin Machine Lubricant (supplied with machine) not oftener than every six months. The bakelite discs (biscuits) on the Motor Units and Step-up Units will require lubrication with the special Coin Machine Lubricant only after the grease is completely evaporated (3 to 12 months, depending on climate) or when the film of grease becomes dirty. In either event, clean the parts thoroughly with a solvent, then apply an extremely thin coat of the special grease.

Solenoid Plungers should not have a lubricant of any kind. Should there be a sluggish tendency or if plungers are sticking, the parts should be cleaned with a solvent and flaked graphite applied on reassembly.

### SWITCH ADJUSTMENT

BEFORE ADJUSTING SWITCHES, MAKE CERTAIN THE SCREWS HOLDING THE SWITCH STACKS ARE DOWN TIGHTLY. BAKELITE SPACERS IN THE SWITCH STACKS, DUE TO EXCESSIVE MOISTURE, HAVE OCCASIONALLY SHRUNK BY DRYING OUT, CAUSING POOR ADJUSTMENT.

### SILICON BRIDGE RECTIFIER PART NO. 5A-8741



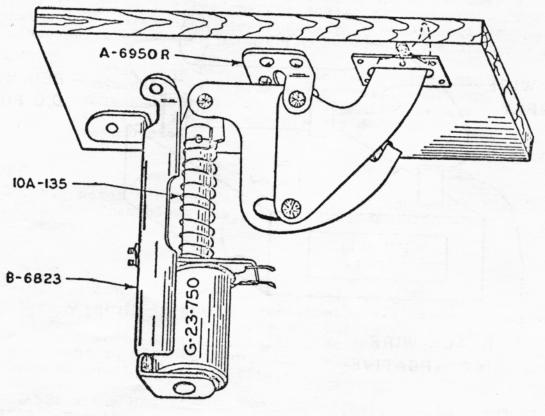
THE FUNCTION OF THE RECTIFIER AND CAPACITOR IS TO CONVERT THE ALTERNATING CURRENT (A.C.) TO DIRECT CURRENT (D.C.), SUPPLYING D.C. TO THE BUMPERS, KICKERS ETC.

THE BRIDGE RECTIFIER SHOULD PRACTICALLY NEVER NEED REPLACING, AS IT IS RATED WELL OVER THE VOLTAGE AND CURRENT REQUIREMENTS OF THE COMPONETS IT SUPPLIES.

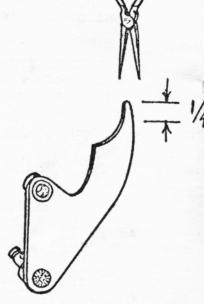
IF, HOWEVER, THE 15 AMP 24 VOLT FUSE ON THE MECHANISM PANEL OPENS, IT COULD BE DUE TO A FAULTY RECTIFIER. DISCONNECT THE A.C. INPUT TO RECTIFIER, REPLACE FUSE, AND RECHECK.

IF THE 10 AMP FUSE LOCATED NEXT TO THE RECTIFIER OPENS, CHECK ALL D.C. COMPONETS I.E. BUMPERS; KICKERS ETC. FOR SHORTS.

### BALL EJECT CAM UNIT



TO CHANGE DIRECTION OF BALL,
WHEN EJECTED, GRASP "BALL EJECT CAM"
WITH LONG-NOSED PLIERS (APPROXIMATELY)
1/4") AND BEND SLIGHTLY.
BENDING TO THE LEFT WILL CHANGE
DIRECTION OF EJECTED BALL SLIGHTLY
TO THE RIGHT, AND VICE-VERSA.



CAUTION

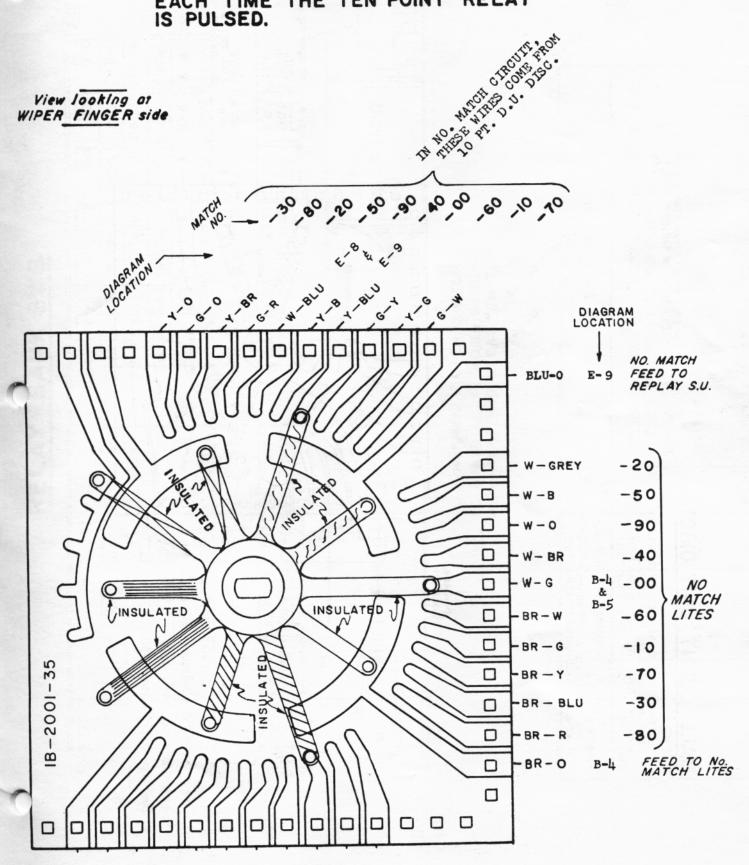
IF BEND IS TOO GREAT, IT MAY
CAUSE A BIND WHEN "BALL EJECT CAM"
IS RESTING IN PART #3A-6015G-6.



3A-6015G-6

### No. MATCH UNIT

THIS UNIT ADVANCES ONE STEP EACH TIME THE TEN POINT RELAY IS PULSED.

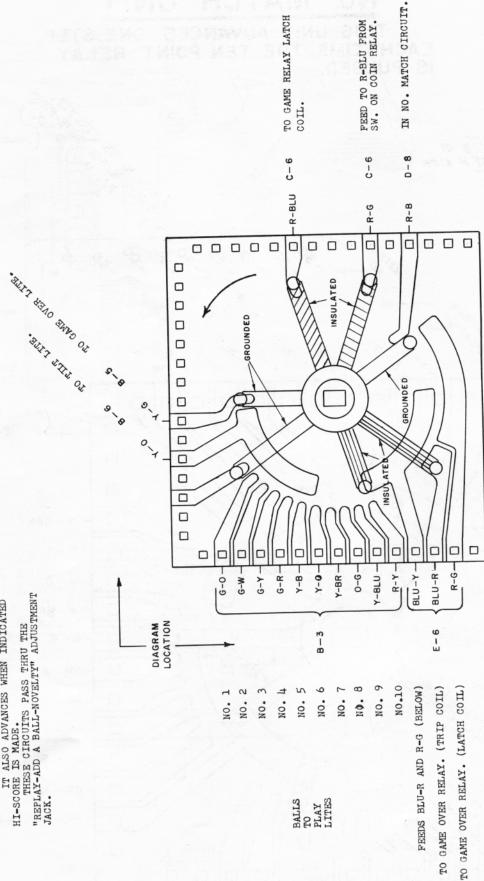


# BALL COUNT UNIT DISC

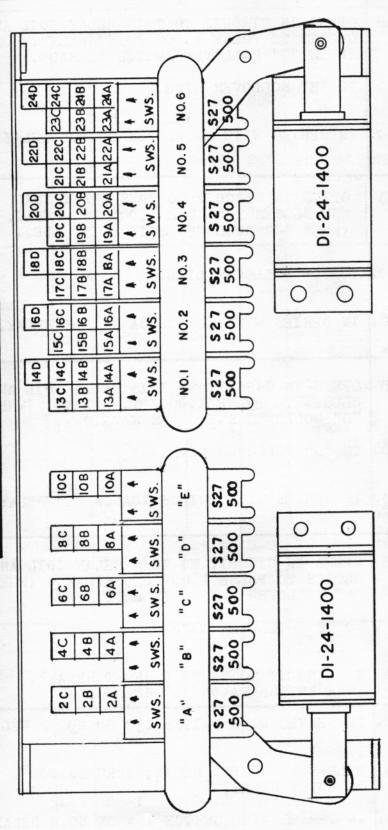
VIEW LOOKING AT WIPER FINGER SIDE WITH WIPERS IN ZERO POSITION.

DURING RESET CYCLE, THIS UNIT RESETS
TO ZERO AND THEN ADVANCES 5 STEPS.

DURING PLAY, IT ADVANCES ONE STEP
EACH TIME THE "1 TO 6 RESET RELAY" OR
"A TO E RESET RELAY" IS ENERGIZED.
IT ALSO ADVANCES WHEN INDICATED
HI-SCORE IS MADE.
THESE CIRCUITS PASS THRU THE
"REPLAY-ADD A BALL-NOVELTY" ADJUSTMENT



# RELAY BANK SWS.



N.O. -NORMALLY OPEN SWITCH
N.C. -NORMALLY CLOSED SWITCH
M&B - MAKE AND BREAK SWITCH

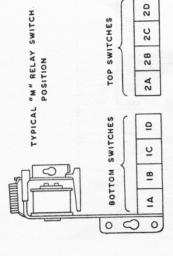
FRATION	HIS RELAY COIL AND POINT RELAY.	ITCH IS MADE.)		4A ON "B" RELAY.
SWITCH OPERATION	E-10 M&B OPENS IN CIRCUIT TO THIS RELAY COIL AND CLOSES TO PULSE 1.000 POINT RELAY.	(WHEN "A" ROLLOVER SWITCH IS MADE.)	B-6 N.O. TO "A" ROLLOVER LITE.	C-12 N.O. IN SERIES WITH SWITCH 4A ON "B" RELAY.
TYPE	M&B		N.O.	N.O.
DIAGRAM TYPE	E-10		B-6	G-12
WIRE	-J- R-RIII	BR-Y	-X- M-0	-7-
SW.	20		2B	2A
RELAY	"A"	RELAY	YA.19	

RELAY	sw.	WIRE COLORS	DIAGRAM	TYPE	SWITCH OPERATION
"B"	4C	-J- R-Y BR-Y	E-10	M&B	OPENS IN CIRCUIT TO THIS RELAY COIL AND CLOSES TO PULSE 1,000 POINT RELAY. (WHEN "B" ROLLOVER SWITCH IS MADE.)
RELAY	4B	0-B -Y-	B <b>-</b> 6	и.о.	TO "B" ROLLOVER LITE.
	4 A	-J- -J-	C-12	N.O.	IN SERIES WITH SWITCH 6A ON "C" RELAY.
	6c	-J- R-G BR-Y	E-10	М&В	OPENS IN CIRCUIT TO THIS RELAY COIL AND CLOSES TO PULSE 1,000 PT. RELAY. (WHEN "C" ROLLOVER SWITCH IS MADE).
"C"	6B	B-R -Y-	в6	N.O.	TO "C" ROLLOVER LITE.
	6A	-J- -J-	D-12	N.O.	IN SERIES WITH SWITCH 8A ON "D" RELAY.
"D"	8c	-J- R-BR BR-Y	E-10	M&B	OPENS IN CIRCUIT TO THIS RELAY COIL AND CLOSES TO PULSE 1,000 PT. RELAY. (WHEN "D" ROLLOVER SWITCH IS MADE.)
	8B 8A	B-BLU -Y- -J- -J-	B <b>-6</b>	N.O.	
"E"	100	-J- R-O BR-Y	E-11	M&B	OPENS IN CIRCUIT TO THIS RELAY COIL AND CLOSES TO PULSE 1,000 PT. RELAY. (WHEN "E" ROLLOVER SWITCH IS MADE.)
	10B	B-G -Y-	B <b>-</b> 6	N.O.	TO "E" ROLLOVER LITE.
	10A	-J- Y-G	E-12	N.O.	IN CIRCUIT TO "A TO E RESET RELAY". (SEE SWITCH 2A ON "A" RELAY).
NO. 1	13C	BR-R -J-	C-13	N.C.	IN SERIES WITH SWITCH 15C ON NO. 2 RELAY
RELAY	13B	W-G O-W	D <b>-1</b> 3	N.O.	PULSES 1,000 PT. RELAY, THRU SWITCH D ON EJECT RELAY.
	13A	-J- -Y-	B <b>-</b> 7	N.O.	IN SERIES WITH SWITCH 15A ON NO.2 RELAY.

	RELAY	SW.	WIRE COLORS	DIAGRAM LOCATION	TYPE	SWITCH OPERATION
7	21011	<b>1</b> 4D	BR-Y G-Y -J-	C <b>-1</b> 2	M&B	OPENS IN CIRCUIT TO 1,000 PT. RELAY AND CLOSES IN SERIES CIRCUIT TO 5,000 PT. RELAY.
		ътС	Y-0 G-R -J-	C <b>-1</b> 2	М&В	OPENS IN CIRCUIT TO 5,000 RELAY, THRU HOOP ROLLOVER SWITCH, AND CLOSES IN SERIES CIRCUIT TO "1 TO 6 RESET RELAY".
		<b>1</b> 4B	-J- R-B	E-11	N.C.	TO THIS RELAY COIL, THRU NO. 1 TARGET SWITCH.
		14A	GRAY-R	B <b>-7</b>	N.O.	TO NO. 1 TARGET LITES.
	NO. 2	15c	-J- -J-	D <b>-1</b> 3	N.C.	IN SERIES WITH SWITCH 17C ON NO. 3 RELAY.
		15B	W-BR O-W	D <b>-1</b> 3	N.O.	PULSES 1,000 PT. RELAY, THRU SWITCH D ON EJECT RELAY.
		15A	-J- -J-	B <b>-</b> 7	N.O.	IN SERIES WITH SWITCH 17A ON NO. 3 RELAY.
1		16D	BR-Y -J- -J-	D-12	M&B	OPENS IN CIRCUIT TO 1,000 POINT RELAY AND CLOSES IN SERIES CIRCUIT TO 5,000 RELAY.
		16C	Y-0 -J- -J-	D-12	М&В	OPENS IN CIRCUIT TO 5,000 RELAY, THRU HOOP ROLLOVER SWITCH, AND CLOSES IN SERIES CIRCUIT TO "1 TO 6 RESET RELAY".
		16B	-J- BLU-Y	E-11	N.C.	TO THIS RELAY COIL, THRU NO. 2 TARGET SWITCH.
		16A	GRAY-BLU -Y-	B <b>-</b> 7	и.О.	TO NO. 2 TARGET LITES.
	NO. 3	17C	-J- -J-	D <b>-1</b> 3	N.C.	IN SERIES WITH SWITCH 19C ON NO. 4 RELAY.
	RELAY	<b>17</b> B	W-GRAY O-W	D-13	N.O.	PULSES 1,000 POINT RELAY, THRU SWITCH DON EJECT RELAY.
		17A	-J- -J-	B <b>-</b> 7	N.O.	IN SERIES WITH SWITCH 19A ON NO. 4
		18D	BR-Y -J- -J-	D <b>-1</b> 2	М&В	OPENS IN CIRCUIT TO 1,000 RELAY AND CLOSES IN SERIES CIRCUIT TO 5,000 RELAY.
1		180	Y-0 -J- -J-	D <b>-1</b> 2	М&В	OPENS IN CIRCUIT TO 5,000 RELAY, THRU HOOP ROLLOVER SWITCH, AND CLOSES IN SERIES CIRCUIT TO "1 TO 6 RESET RELAY".

RELAY	sw.	WIRE COLORS	DIAGRAM	TYPE	SWITCH OPERATION
	18B	-J- BLU-W	E-11	N.C.	TO THIS RELAY COIL, THRU NO. 3 TARGET SWITCH.
	18A-	GRAY-Y -Y-	B-7	N.O.	TO NO. 3 TARGET LITES.
NO. 4	190-	-J- -J-	D-13	N.C.	IN SERIES WITH SWITCH 21C ON NO. 5 RELAY.
RELAY	19B	BR-BLU O-W	D-13	N.O.	PULSES 1,000 POINT RELAY, THRU SWITCH DON EJECT RELAY.
	19A-	-J- -J-	B-7	N.O.	IN SERIES WITH SWITCH 21A ON NO. 5 RELAY.
	20D	BR-Y -J- -J-	D-12	M&B	OPENS CIRCUIT TO 1,000 RELAY AND CLOSES IN SERIES CIRCUIT TO 5,000 RELAY.
	200	Y-0 -J- -J-	D-12	M&B	OPENS IN CIRCUIT TO 5,000 RELAY, THRU HOOP ROLLOVER SWITCH, AND CLOSES IN SERIES CIRCUIT TO "1 TO 6 RESET RELAY.
	20B	-J- BLU-0	E-11	N.C.	TO THIS RELAY COIL, THRU NO. 4 TARGET SWITCH.
	20A	GRAY-G	B-7	N.O.	TO NO. 4 TARGET LITE.
NO. 5	210	-J- -J-	D-13	N.C.	IN SERIES WITH SWITCH 23C ON NO. 6 RELAY
RELAY	21B	BR-G O-W	D-13	N.O.	PULSES 1,000 POINT RELAY, THRU SWITCH DON EJECT RELAY.
	21A	-J- -J-	A-7	N.O.	IN SERIES WITH SWITCH 23A ON NO.6 RELAY.
	22D	BR-Y -J- -J-	D-12	М&В	OPENS IN CIRCUIT TO 1,000 RELAY AND CLOSE IN SERIES CIRCUIT TO 5,000 RELAY.
	220	Y-0 -J- -J-	D-12	М&В	OPENS IN CIRCUIT TO 5,000 RELAY, THRU HOOP ROLLOVER SWITCH, AND CLOSES IN SERIES CIRCUIT TO "1 TO 6 RESET RELAY.
	22B	-J- BLU-B	E-12	N.C.	TO THIS RELAY COIL, THRU NO. 5 TARGET SWITCH.
	22A	GRAY-W	B-7	N.O.	TO NO. 5 TARGET LITE.
				GE I S	KI SMENC SERVI RINC G-9 1-81

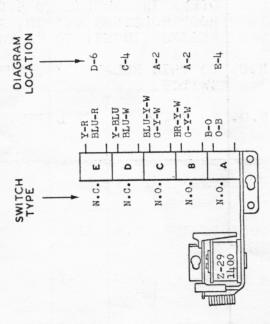
RELAY	sw.	WIRE COLORS	DIAGRAM LOCATION	TYPE	SWITCH OPERATION
NO. 6	230	W-R -J-	E <b>-1</b> 3	N.C.	CIRCUIT'TO 100 POINT RELAY, THRU SWITCH E ON EJECT RELAY. (SEE SWITCH 13C ON NO. 1 RELAY.)
	23B	BR-O O-W	D <b>-1</b> 3	N.O.	PULSES 1,000 POINT RELAY, THRU SWITCH DON EJECT RELAY.
	23A	-J- GRAY-O	A-7	N.O.	TO EXTRA BALL LITES AND LEFT AND RIGHT BOTTOM ROLLOVER LITES. (SEE SWITCH 13A ON NO. 1 RELAY.
	24D	BR-Y -J- Y-0	E-12	М&В	OPENS IN CIRCUIT TO 1,000 RELAY AND CLOSES IN SERIES CIRCUIT TO 5,000 RELAY
	24C	Y-0 -J- Y-BR			OPENS IN CIRCUIT TO 5,000 RELAY, THRU HOOP ROLLOVER SWITCH, AND CLOSES IN SERIES CIRCUIT TO "1 TO 6 RESET RELAY).
	24B	-J- Y-BLU	E-12	N.C.	TO THIS RELAY COIL, THRU NO. 6 TARGET SWITCH.
	24A	GRAY-BR -Y-	B <b>-</b> 7	N.O.	TO NO. 6 TARGET LITES.
				10.1	



## LOCK RELAY

IS ENERGIZED BY  $5\phi$ ,  $10\phi$ ,  $25\phi$  OR COIN RELAYS---ALSO BY LEFT FLIPPER SWITCH.





ENERGIZES GAME-OVER RELAY (TRIP COIL).

IN CIRCUIT TO RESET RELAY.

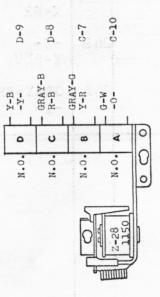
6 VOLTS FROM TRANSFORMER TO LITES.

6 VOLTS FROM TRANSFORMER TO LITES.

IN HOLD CIRCUIT TO THIS RELAY.

# BALL INDEX RELAY

IS ENERGIZED BY 100 POINT OR 1,000 POINT RELAY -- ALSO BY OUTHOLE RELAY WHEN GAME IS TILTED.



ENERGIZES GAME RELAY (TRIP COIL).

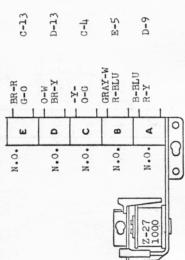
IN SERIES WITH SWITCH C ON OUTHOLE RELAY.

IN CIRCUIT TO BALL COUNT RESET COIL AND GAME-OVER RELAY (TRIP COIL).

IN HOLD GIRGUIT TO THIS RELAY.

# EJECT RELAY

ENERGIZED BY EJECT POCKET SWITCH. SI



	N.0.		E BR-R	c <b>-1</b> 3	PULSES 100 POINT RELAY, THRU SWITCHES ON #1 THRU #6 RELAYS.
	N.0.	٥	O-W BR-Y	D-13	CIRCUIT TO 1000 POINT RELAY, THRU SWITCH ON #1, 2, 3, 4, 5 OR 6 RELAYS.
	N.0.	N.O. C	-K-0	η <b>-</b> ο	RUNS SCORE MOTOR.
50	N.0	N.O. B	GRAY-W R-BLU	N-3	ENERGIZES EJECT COIL AT SCORE MOTOR CAM SWITCH 4C.
2-27	N.O.	N.0.N	B-BLU R-Y	6-0	HOLD CIRCUIT TO THIS RELAY, THRU SCORE MOTOR CAM SWITCH 6A.
	0	0			

# OPENS HI-SCORE CIRCUIT AND CLOSES TO RUN SCORE MOTOR.

G-8 F-9

M&B

OPENS CIRCUITS TO PLAYFIELD SWITCHES

TO BOTH RELAY BANK RESET COILS

C-1

BLU-G-

O

N.O.

٥

N.C.

ENERGIZED BY SWITCH D ON COIN RELAY.

IS

RESET RELAY

PULSES SCORE RESET RELAY, THRU IMPULSE CAM SWITCH B.

D-7

BR-R W-BR

N.0.

IN HOLD CIRCUIT TO THIS RELAY.

4-0

BLU-BR BLU-W

4

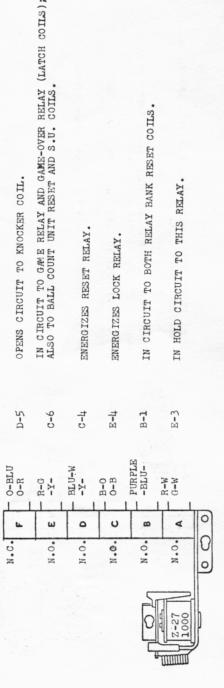
0

0

N.0.

### COIN RELAY

IS ENERGIZED BY COIN SWITCH---ALSO BY REPLAY BUTTON, THRU ZERO SWITCH ON REPLAY UNIT.



### RELAY GAME

TO

AND CLOSES

OPENS IN CIRCUIT TO BALL COUNT S.U. COIL BALL COUNT RESET COIL.

SWITCH

BUTTON

REPLAY

THRY

COIN RELAY,

CIRCUIT TO

GAME.

BALL

N

ZI

RELAY,

COIN

HOLD CIRCUIT TO

ZI

3 BALL GAME.

Z

RELAY,

COIN

TO

HOLD CIRCUIT

Z

RESET RELAY.

D ON

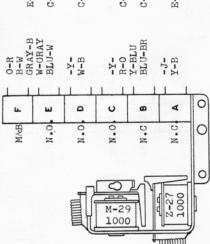
SERIES WITH SWITCH

NI

GAME RELAY (TRIP GOIL).

TO

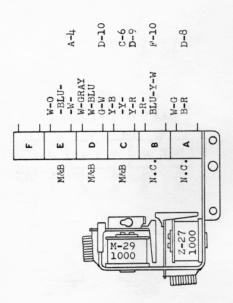
LATCH COIL IS ENERGIZED BY COIN RELAY, WHEN BALL COUNT UNIT IS IN RESET POSITION. TRIP COIL IS ENERGIZED BY BALL INDEX RELAY OR GAME-OVER RELAY.



### G-3 E-9 E-7 C-3 G-3 C-4

# GAME OVER RELAY

TRIP COIL IS ENERGIZED BY COIN RELAY.
AND BALL INDEX RELAY, THRU BALL COUNT UNIT DISC.
TRIP COIL IS ALSO ENERGIZED BY LOCK RELAY OR TILT SWITCHES.



TO GAME-OPENS IN CIRCUIT TO PLAYFIELD LITES AND CLOSES OVER, TILT AND NO. MATCH LITES. BALL INDE TO OPENS IN CIRCUIT TO OUTHOLE RELAY AND CLOSES RELAY.

OPENS IN CIRCUIT TO TRIP GOIL ON THIS RELAY AND CLOSES TRIP GOIL ON GAME RELAY.

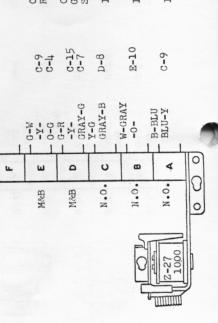
Ţ

RELAY, SERIES WITH SWITCH D ON RESET Z

HI-SCORE AND NO. MATCH CIRCUITS. IN

# **OUTHOLE RELAY**

IS ENERGIZED BY OUTHOLE SWITCH, THRU BALL COUNT UNIT ZERO SWITCH.



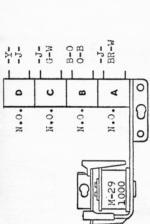
TO "ON BUMPER" RELAY AND CLOSES TO BALL COUNT RESET AND BALL RELEASE To TO BALL INDEX RELAY AND CLOSES OPENS IN HOLD CIRCUIT T GAME-OVER RELAY COILS, SOLENOIDS. OPENS IN HOLD CIRCUIT RUN SCORE MOTOR.

IN NUMBER MATCH CIRCUIT TO REPLAY UNIT S.U. COIL.

BALL INDEX RELAY. TO CIRCUIT ZI

HOLD CIRCUIT TO THIS RELAY. Z

### 5¢ RELAY



## G-2 ENERGI

ENERGIZES ALTERNATOR UNIT COIL.

ENERGIZES COIN RELAY, THRU SWITCH ON ALTERNATOR UNIT.

ENERGIZES LOCK RELAY.

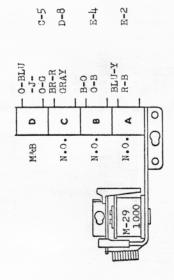
7-B

IN HOLD CIRCUIT TO THIS RELAY.

D-3

### 10¢ RELAY

IS ENERGIZED BY GOIN SWITCH, IF 10¢ AD-JUSTMENT JACK IS IN "2 PLAYS" OR "3 PLAYS" POSITION.



# OPENS IN CIRCUIT TO KNOCKER COIL AND CLOSES MOTOR.

TO RUN SCORE

PULSES REPLAY S.U. COIL, THRU IMPULSE CAM SWITCH

m

ENERGIZES LOCK RELAY.

IN HOLD CIRCUIT TO THIS RELAY.

OPENS IN CIRCUIT TO KNOCKER COIL AND CLOSES TO RUN SCORE MOTOR.
PULSES REPLAY S.U. COIL, THRU IMPULSE CAM SWITCH R.

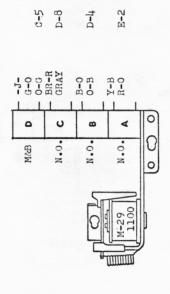
TO THIS RELAY.

IN HOLD CIRCUIT

ENERGIZES LOCK RELAY.

### 25¢ RELAY

IS ENERGIZED BY 25¢ COIN SWITCH.



# LOCATED ON PLAYFIELD

G-4	2-7	B-1	D-12	
- V-G	GRAY-0 BLU-R	PURPLE -BLU-	Y-B	1
۵	U	8	4	0
N.0.	N.O.	N.O.	N.O.	0
		0	M-29	

IS ENERGIZED BY HOOP ROLLOVER SWITCH (HORSESHOE), WHEN NO. 1 THRU NO. 6 RELAYS ARE TRIPPED.

I TO 6 RESET

RELAY

### RUNS SCORE MOTOR.

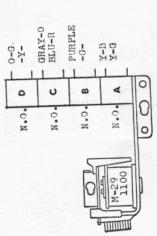
PULSES BALL COUNT S.U. OR 10,000 POINT D.U. THRU SCORE MOTOR CAM SWITCH 2B.

ENERGIZES 1-6 RELAY BANK RESET COLL---ALSO IN SERIES WITH SWITCH C ON RESET RELAY.

HOLD CIRCUIT TO THIS RELAY, THRU SCORE MOTOR CAM SWITCH 5B.

# A TO E RESET RELAY

凶 To A IS ENERGIZED WHEN ALL FIVE (5) RELAYS ARE TRIPPED.



2-2

PULSES BALL GOUNT S.U. OR 10,000 POINT D.U. THRU SCORE MOTOR CAM SWITCH 2B.

RUNS SCORE MOTOR.

G-4

B-1

SERIES

H

CAM

D-12

ENERGIZES A TO E RELAY BANK RESET COIL---ALSO WITH SWITCH 3 ON RESET RELAY. HOLD CIRCUIT TO THIS RELAY, THRU SCORE MOTOR SWITCH 58.

4-5

D-13

BR-Y

8

.0.N

-X-

O

N.0.

0

RUNS SCORE MOTOR.

PULSES 1,000 POINT RELAY, THRU IMPULSE CAM SWITCH HOLD CIRCUIT TO THIS RELAY, THRU SCORE MOTOR CAM SWITCH 5B.

D-12

Y-0

4

.O.N

M-29

IS ENERGIZED BY HOOP ROLLOVER SWITCH (HORSESHOE) --- ALSO BY LEFT OR RIGHT BOTTOM ROLLOVER SWITCH WHEN NO. 1 THRU NO. 6 RELAYS ARE TRIPPED.

5000 RELAY

0

0

0

TO 100 POINT

OPENS IN CIRCUIT TO 10 POINT RELAY AND CLOSES RELAY.

D-14 B-8

G-B Y-G W-R Y-BLU

M&B

HOLD GIRCUIT TO THIS RELAY, THRU SWITCH ON OUTHOLE RELAY. TO LEFT, RIGHT AND BOTTOM BUMPER LITES

D-15

G-R -BR-

4

.O.N

Z-28

IS ENERGIZED BY TOP ROLLOVER BUTTON SWITCH.

ON BUMPER RELAY

N.0.

PULSES 10,000 POINT DRUM UNIT, THRU ZERO SWITCH ON PULSES 1,000 POINT DRUM UNIT. UNIT.

LOCATED IN BACKBOX

0

۵

.0.N

THAT

ON THAT

UNIT, THRU ZERO SWITCH

THAT

NO

PULSES 100 POINT DRUM UNIT, THRU ZERO SWITCH

D-5 9-0

B-G

D-5 R-BR B-Y-

IS PULSED BY IMPULSE CAM SWITCH B, THRU SWITCH ON RESET RELAY.

SCORE RESET RELAY

B-R 4 O 8 .C.N N.0. 6. N

0 0 0

THAT UNIT.

PULSES 10 POINT DRUM UNIT, THRU ZERO SWITCH ON

M-29

D-5

GRAY-BR B-BLU O .0.N M&B

4 .0.N M-30

IS ENERGIZED BY 10,000 POINT DRUM UNIT E.O.S. SWITCH, THRU 10,000 POINT DRUM UNIT 9TH POSITION SWITCH.

100,000 RELAY

0

D-8 B-2

D-10

TO 100,000 LITE.

HI-SCORE CIRCUIT, THRU HI-SCORE ADJUSTMENT JACK.

NI

HOLD CIRCUIT TO THIS RELAY.

# 1000 POINT RELAY

HOLD CIRCUIT TO THIS RELAY, THRU END-OF-STROKE SWITCH ON 1,000 POINT DRUM UNIT.

THRU 9TH POSITION SWITCH

DRUM UNIT, UNIT.

PULSES 10,000 POINT ON 1,000 POINT DRUM

UNIT.

PULSES 1,000 POINT DRUM

ENERGIZES CHIME COIL

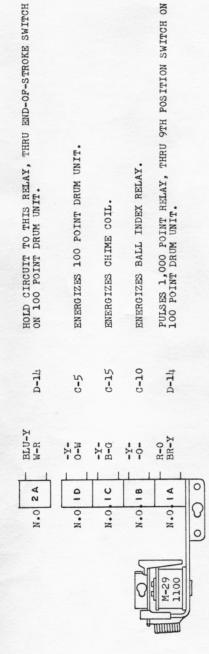
ENERGIZES BALL INDEX RELAY

(6) TARGET SWITCHES.
A TO E ROLLOVER SWITCHES.
LEFT & RIGHT BOTTOM ROLLOVER SWITCHES.
5,000 RELAY.
EJECT RELAY. MEWNIE

ր-1կ	9-0	0-15	0-5	01-0	
BLU-BR, BR-Y	-Y- W-BLU	-Y- B-G	-Y- 0-B	-0-4	
N.0 & A	N.0 10	N.O.1C	81 O.N	N.O. I.A	0
			50	M-29	

# 100 POINT RELAY

BUMPER "ON BUMPER" 9 I. nin



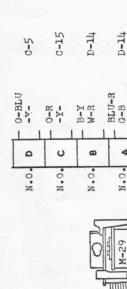
BALL INDEX RELAY.

CHIME COIL

# IO POINT RELAY

PULSED BY: STANDUP SWITCHES. ROLLOVER BUTTON SWITCHES, AS INDICATED ON PLAYFIELD. 5:18

LEFT, RIGHT AND BOTTOM JET BUMPER SWITCHES, THRU SWITCH C ON "ON BUMPER" RELAY. 3



PULSES 10 POINT DRUM UNIT

ENERGIZES NUMBER MATCH UNIT S.U. COIL.

SWITCH ON 10 POINT THRU 9TH POSITION PULSES 100 POINT RELAY, DRUM UNIT.

NO HOLD CIRCUIT TO THIS RELAY, THRU END-OF-STROKE SWITCH 10 POINT DR'IM UNIT.

D-14

4

.0.N

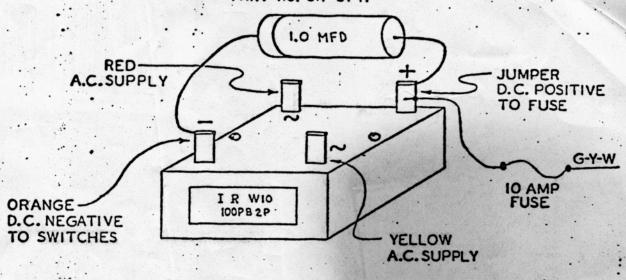
M-29

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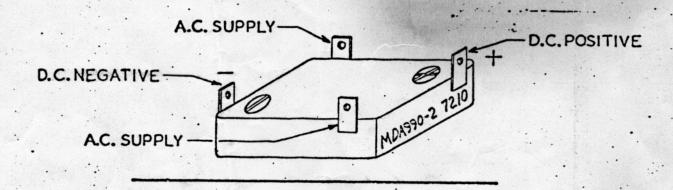
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### SILICON BRIDGE RECTIFIER PART NO. 5A-8741



### SILICON BRIDGE RECTIFIER 5A-8749



THE FUNCTION OF THE RECTIFIER AND CAPACITOR IS TO CONVERT THE ALTERNATING CURRENT (A.C.) TO DIRECT CURRENT (D.C.), SUPPLYING D.C. TO THE BUMPERS, KICKERS ETC.

THE BRIDGE RECTIFIER SHOULD PRACTICALLY NEVER NEED REPLACING, AS IT IS RATED WELL OVER THE VOLTAGE AND CURRENT REQUIREMENTS OF THE COMPONETS IT SUPPLIES.

IF, HOWEVER, THE 15 AMP 24 VOLT FUSE ON THE MECHANISM PANEL OPENS, IT COULD BE DUE TO A FAULTY RECTIFIER. DISCONNECT THE A.C. INPUT TO RECTIFIER, REPLACE FUSE, AND RECHECK.

IF THE 10 AMP FUSE LOCATED NEXT TO THE RECTIFIER OPENS, CHECK ALL D.C. COMPONETS I.E. BUMPERS, KICKERS ETC. FOR SHORTS.

EITHER ONE OF THE ABOVE RECTIFIERS MAY BE USED.

# CATALOG SUPPLEMENT "P-P"

WITH

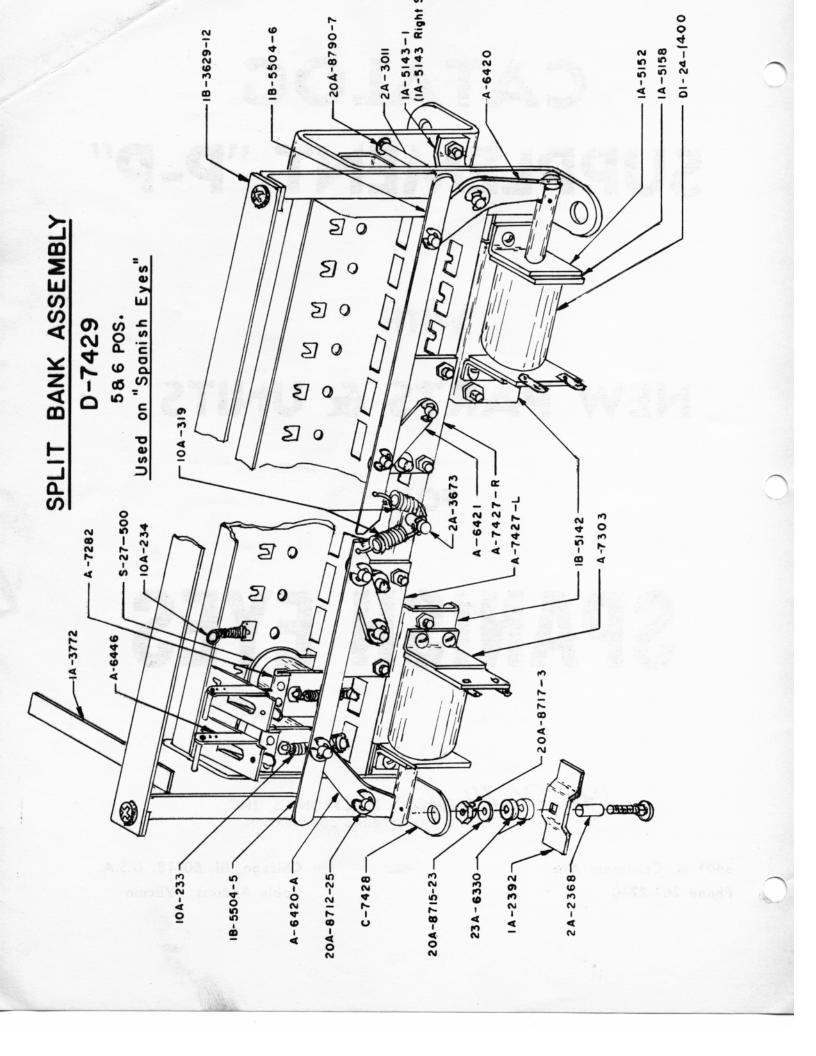
### **NEW PARTS & UNITS**

**FOR** 

### SPANISH EYES



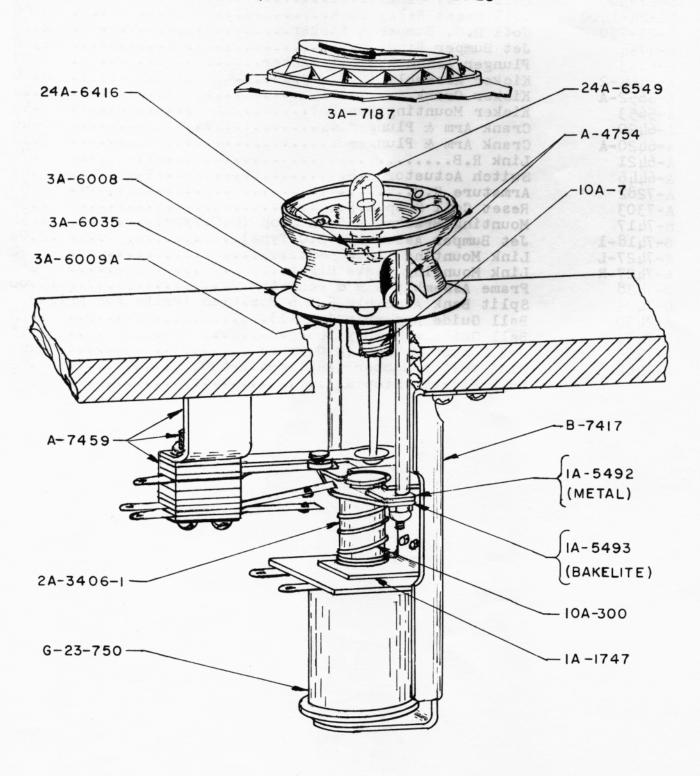
3401 N. California Ave. Phone 267-2240 Chicago, III. 60618, U.S.A. Cable Address: Wilcoin

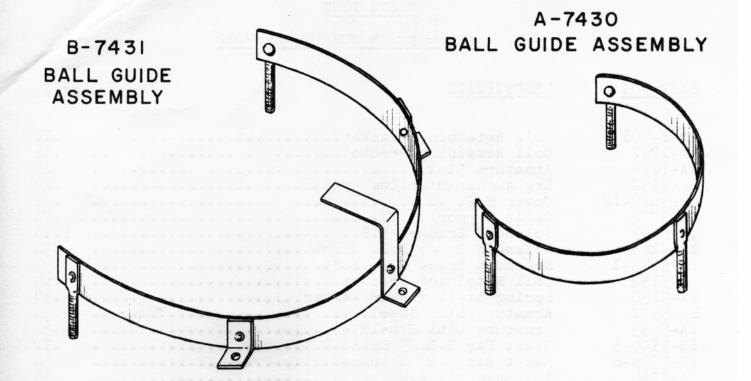


### B-7418-I JET BUMPER ASSEMBLY D. C. TYPE

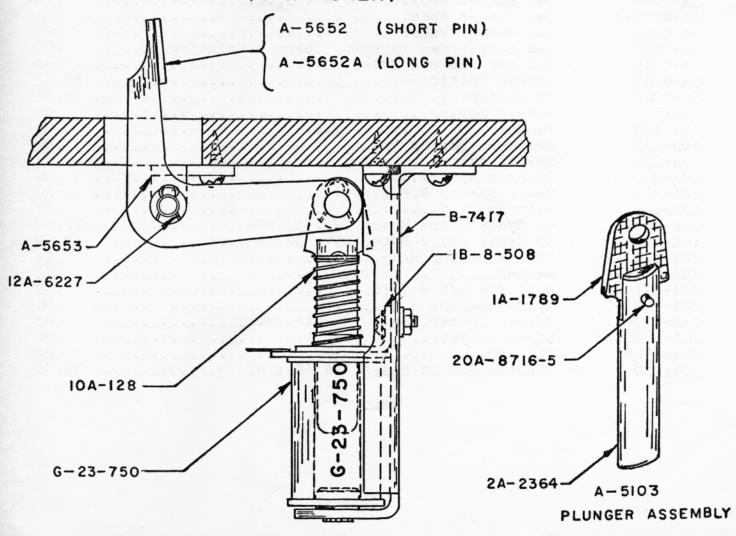
SPECIFY STAMPING AND COLOR ON ALL BUMPER CAPS

181 USED ON" SPANISH EYES"





### B-5104-2 BALL KICKER ASSEMBLY (D.C. KICKER)



### PRICE LIST

### ARRANGED IN NUMERICAL ORDER

PART NO.	DESCRIPTION	PRICE
1B-8-508	Coil Retaining Bracket	.10
1A-1747	Coil Retaining Bracket	• 34
1A-1789	Armature Link	.14
1A-2392	Leg Anchor-Mounting Bracket	.10
1B-3629-12	Cover R.B	.82
1A-3772 1B-5142	Cable Support	.26
1A-5143	Solenoid Brace R.B. Right	1.46
1A-5143-1	Solenoid Brace R.B. Left	• 34
1A-5152	Coil Retaining Bracket	• 34
1A-5158	Spring Steel Curved Washer	•64 •38
1A-5492	Armature Link Steel	.14
1A-5493	Armature Link Bakelite	.32
1B-5504-5	Reset Bar R.B. 5 Space	.70
1B-5504-6	Reset Bar R.B. 6 Space	.74
2A-2364	Solenoid Plunger	.38
2A-2368	Shock Mount Bushing	.06
2A-3011	Pivot Pin	.14
2A-3406-1	Solenoid Plunger	.22
2A-3673	Spring Post	•36
3A-6008	Jet Bumper Body	.28
3A-6009-A	Jet Bumper Base	.14
3A-6035	Jet Bumper Wafer	.28
3A-7187	Jet Bumper Cap (Specify Color & Printing	.60
5A-8714	1.6 Amp Slo Blo Fuse	.60
5A-8741	Bridge Rectifier	15.12
5A-8742	Capacitor	1.06
10A-7	Bumper Spring	.02
10A-128	Plunger Spring	.04
10A-233	Armature Spring R.B	.04
10A-234	Switch Actuator Spring R.B	.04
10A-300	Plunger Spring	.04
10A-319	Reset Spring R.B	.20
12A-6227	Hairpin Clip	
14A-7883	60 Cycle Score Motor 27V. 32 RPM	12.50
14A-7884 20A-8712-25	50 Cycle Score Motor 27V. 32 RPM	12.50
20A-8715-23	"E" Retaining Ring	.02
20A-8716-5	Washer Roll Pin 1/8 x 7/16	.02
20A-8790-7	Nylon Bearing R.B	.02
23A-6330	Rubber Spacer (Shock Mount)	.04 .02
24A-6416	Light Socket	.20
24A-6549	#44 Lamp	•22
30C-408	Plastic Shield Playfield (Set of 7)	

#### PRICE LIST

### ARRANGED IN NUMERICAL ORDER

PART NO.	DESCRIPTION	PRICE
2940		
S-27-500 D1-24-1400	Coil Relay Bank	1.24
G-23-750	Coil D.C. Bumper & Kicker	3.80
A-4754	Jet Bumper Ring	1.68
A-5103 A-5104-2	Plunger Assembly Ball Kicker	.78
A-5652-A	Kicker Crank	8.00
A-5653 A-6420	Kicker Mounting Bracket	•54
A-6420-A	Crank Arm & Plunger	3.46 2.10
A-6421	Link R.B	.72
A-6446 A-7282	Switch Actuator R.B	•60
A-7303	Reset Coil Stop R.B	.90 1.36
B-7417 B-7418-1	Mounting Bracket & Coil Stop (D.C. Type)	1.56
A-7427-L	Jet Bumper Assembly (D.C.Type) Link Mounting Plate Left	.92
A-7427-R C-7428	Link Mounting Plate Right	. 92
D-7429	Frame Assembly 5 & 6 Position	15.00
A-7430	Ball Guide Assembly (Small)	1.22
B-7431 A-7459	Ball Guide Assembly (Large).  Jet Bumper Switch (D.C.Type)	2.18
A-7462	Mini Post & Rubber (Replaces A-6304)	-82
	6-32 Elastic Stop Nut	•08

