

Instruction Manual for WILD CARD



Williams® ELECTRONICS

A SUBSIDIARY OF
THE SEEBURG CORPORATION OF DELAWARE

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1977

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

"WILD CARD"

GAME OPERATES AS FOLLOWS:

MAKING FOUR ACES OR FOUR DEUCES LIGHTS ADDITIONAL LIGHT IN TOP RIGHT SHOOTER LANE FOR EXTRA 10,000 POINTS AND EXTRA ADVANCE BONUS.

MAKING FOUR ACES AND FOUR DEUCES LIGHTS NO. 1 JOKER AND SPECIAL IN TOP RIGHT SHOOTER LANE AND RESETS ALL EIGHT CARDS.

TOP RIGHT SHOOTER LANE, WHEN LIT SPECIAL, SCORES EITHER EXTRA BALL (IN CREDIT AND EXTRA BALL POSITION) OR 100,000 POINTS (IN NOVELTY POSITION).

MAKING FOUR ACES AND FOUR DEUCES A SECOND TIME LIGHTS NO. 2 JOKER, SPECIAL IN TOP RIGHT SHOOTER LANE, AND, ALTERNATIVELY, TWO BOTTOM SPECIAL ROLLOVER LANES.

WHEN NO. 2 JOKER IS LIT, BOTTOM SPECIAL ROLLOVER LANES SCORE EITHER ONE CREDIT, IN CREDIT POSITION; ONE EXTRA BALL, IN EXTRA BALL POSITION, AND 100,000 POINTS IN NOVELTY POSITION.

WHEN BOTTOM SPECIAL IS MADE IT RESETS BOTH JOKERS.

THREE BALL - JET BUMPERS SCORE 1,000 POINTS. TWO TOP AND TWO SIDE STAND UP SWITCHES SCORE 500 POINTS. LEFT EJECT SPOTS BOTH ACE CARDS. RIGHT EJECT SPOTS BOTH DEUCE CARDS. LEFT TOP LANE SPOTS SPINNER FOR 1,000 POINTS AND GIVES DOUBLE BONUS AT SAME TIME.

FIVE BALL - JET BUMPERS SCORE 100 POINTS. TWO TOP AND TWO SIDE STAND UP SWITCHES SCORE 50 POINTS. LEFT EJECT SPOTS ONE ACE AT A TIME. RIGHT EJECT SPOTS ONE DEUCE AT A TIME. LEFT TOP LANE SPOTS SPINNER FOR 1,000 POINTS FIRST TIME, SPOTS DOUBLE BONUS SECOND TIME.

1. 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 adjustment 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.

2. FUSES

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

3. 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 into clutches causing them to slip.

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.

2

IMPORTANT NOTICE

**KINDLY INFORM LOCATIONS THAT THEY
CAN TURN DISPLAY LIGHTS ON BY FLIPPING
MASTER SWITCH ON.**

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

CAUTION!

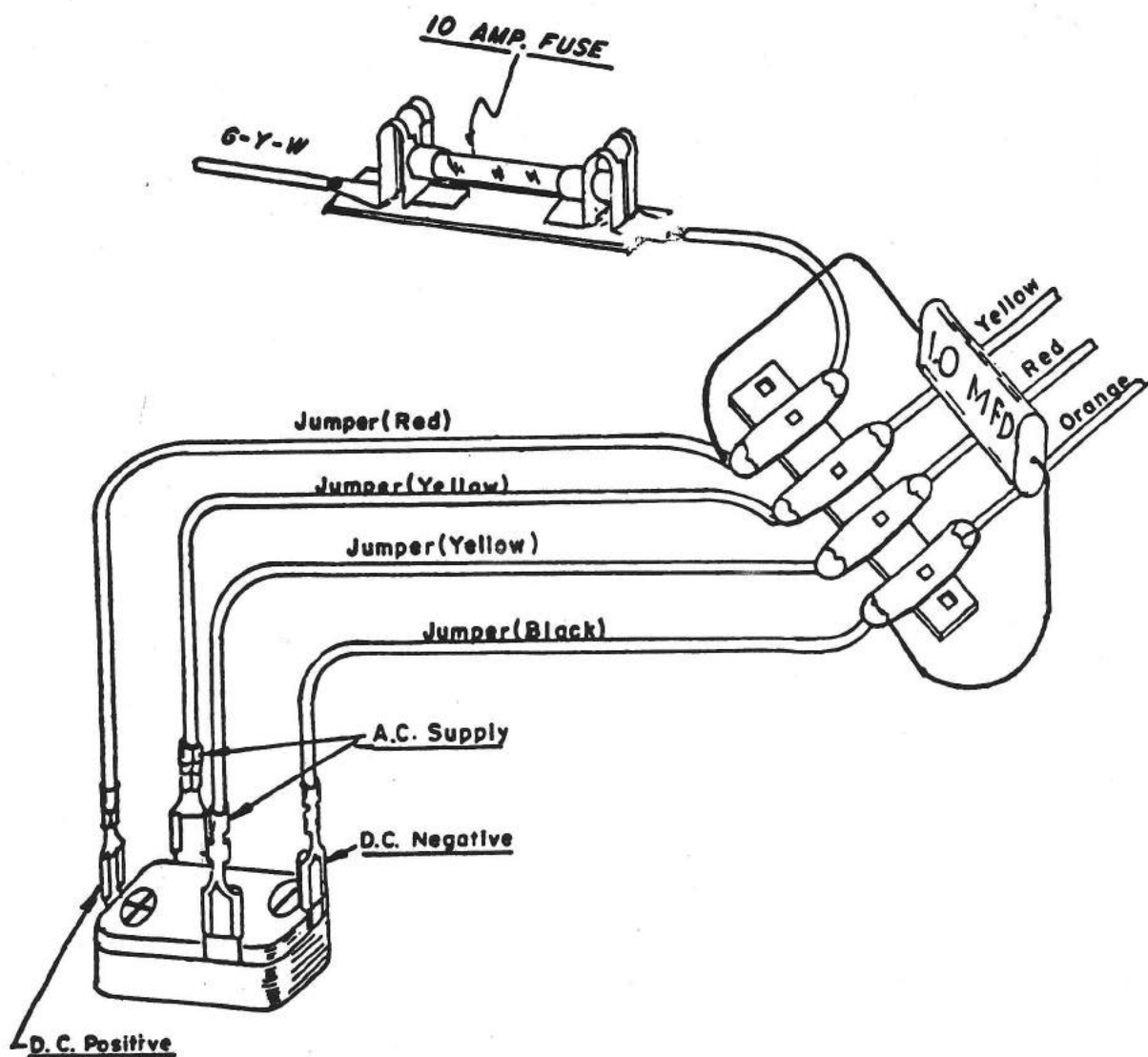
The playboard on this machine has an improved finish with excellent wearing properties. Do not under any circumstances clean the board with water, water soap solutions or harsh abrasives. Avoid such things as steel wool, kitchen cleansers or abrasive hand soap. Water will weaken the adhering of the paint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

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.

SILICON BRIDGE RECTIFIER



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.

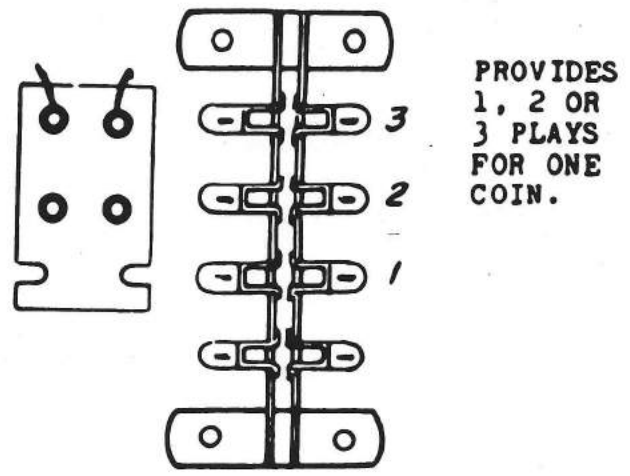
THE BRIDGE RECTIFIER SHOULD PRACTICALLY NEVER NEED REPLACING, AS IT IS RATED WELL OVER THE VOLTAGE AND CURRENT REQUIREMENTS OF THE COMPONENTS IT SUPPLIES.

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.

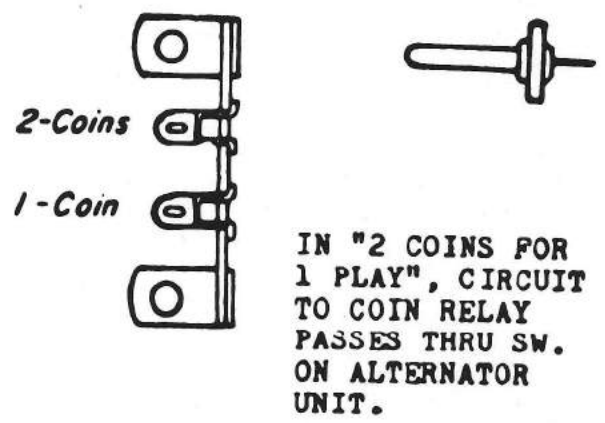
IF THE 10 AMP FUSE LOCATED NEXT TO THE RECTIFIER OPENS, CHECK ALL D.C. COMPONENTS I.E. BUMPERS, KICKERS ETC. FOR SHORTS.

ADJUSTMENTS ON MECHANISM PANEL

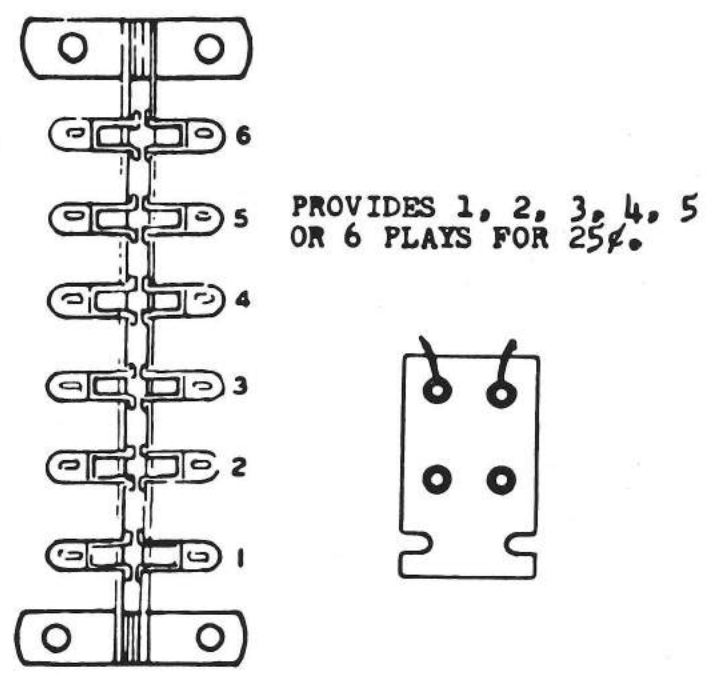
10¢ Adjustment



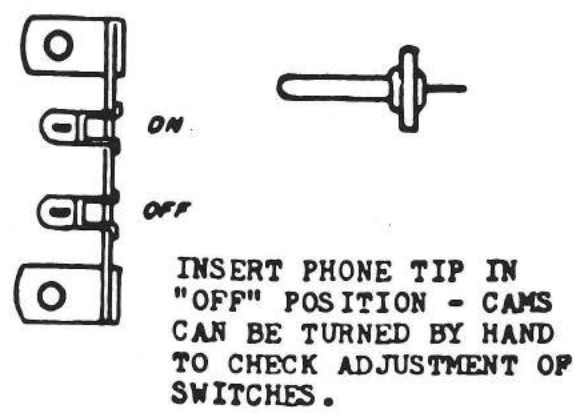
5¢ Adjustment



25¢ Adjustment

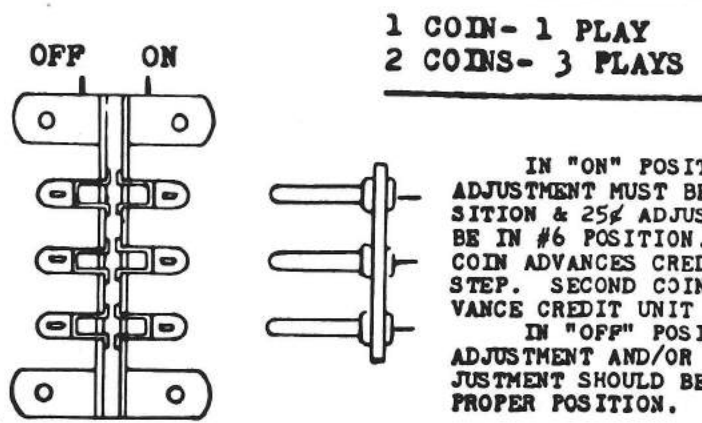


Motor Service Jack

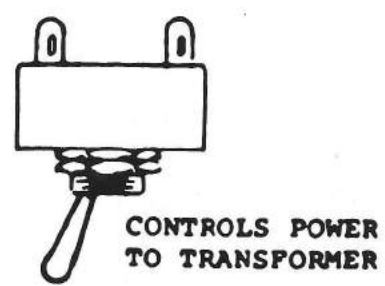


MASTER ON-OFF SW.

(Located under front of Cabinet)



IN "ON" POSITION, 10¢ ADJUSTMENT MUST BE IN #2 POSITION & 25¢ ADJUSTMENT MUST BE IN #6 POSITION. FIRST COIN ADVANCES CREDIT UNIT 1 STEP. SECOND COIN WILL ADVANCE CREDIT UNIT 2 STEPS.
IN "OFF" POSITION, 25¢ ADJUSTMENT AND/OR 10¢ ADJUSTMENT SHOULD BE PUT IN PROPER POSITION.



ADJUSTMENTS IN BACKBOX

Hi-Score Adjustment

PLUG IN RED
WIRE FOR SCORES
110,000 TO 200,000

PLUG IN BLUE
WIRE FOR SCORES
210,000 TO 300,000

PLUG IN YELLOW
WIRE FOR SCORES
310,000 TO 400,000

PLUG IN GREEN
WIRE FOR SCORES
410,000 TO 500,000

10,000 60,000

20,000 70,000

30,000 80,000

40,000 90,000

50,000 00,000

PLUG IN WHITE
WIRE FOR SCORES
510,000 TO 600,000

PLUG IN BROWN
WIRE FOR SCORES
610,000 TO 700,000

PLUG IN ORANGE
WIRE FOR SCORES
710,000 TO 800,000

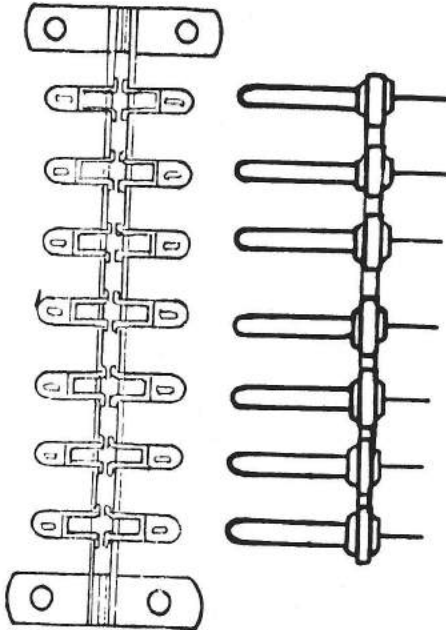
PLUG IN BLACK
WIRE FOR SCORES
810,000 TO 900,000

PLUG IN GRAY
WIRE FOR SCORES
910,000 TO 990,000

EXAMPLE: BLUE WIRE INTO 10,000 POSITION SCORES AT 210,000
OR BLUE WIRE INTO 00,000 POSITION SCORE AT 300,000.

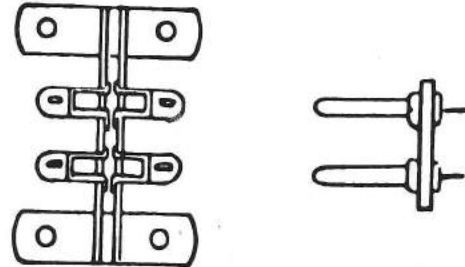
No. of Balls Adjustment

3 BALL ——— 5 BALL



NUMBER MATCH ADJUSTMENT

ON OFF



IN "ON" POSITION, A NUMBER MATCH LITE WILL APPEAR WHEN GAME IS OVER. TO AWARD CREDIT, WHEN NUMBER IS MATCHED, "PLAY" ADJUSTMENT MUST BE IN CREDIT POSITION.
IN "OFF" POSITION, NUMBER MATCH IS INOPERATIVE.

SUGGESTED SCORE CARDS

CREDIT

5 BALL...470-18

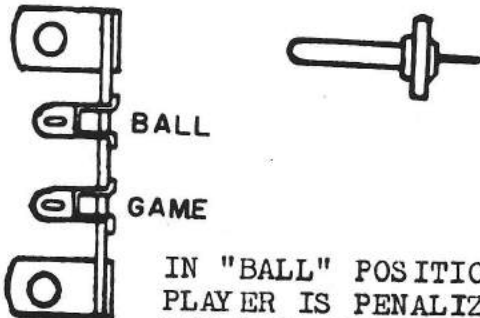
3 BALL...470-35 OF

EXTRA BALL

5 BALL...470-64

3 BALL...470-61

TILT ADJ.



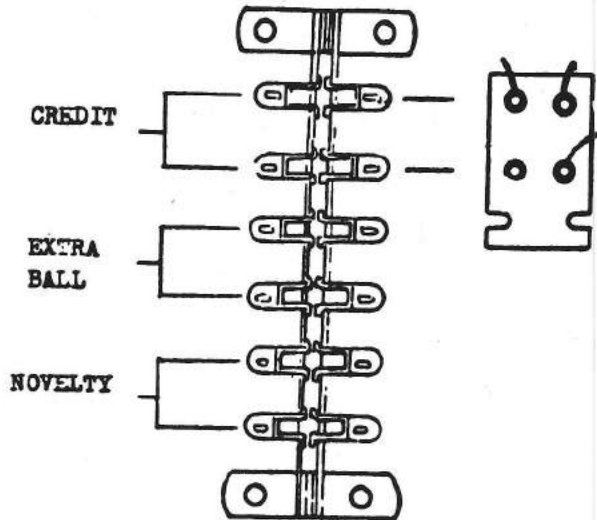
BALL

GAME

IN "BALL" POSITION,
PLAYER IS PENALIZED
ONE BALL WHEN TILTING.

IN "GAME" POSITION, PLAYER
IS PENALIZED THE ENTIRE GAME.

ADJUSTMENTS IN BACKBOX



PLAY ADJUSTMENT

IN CREDIT POSITION:
HI-SCORES & NUMBER MATCH SCORE A CREDIT. TOP RIGHT SHOOTER LANE, WHEN LIT "SPECIAL", SCORES ONE EXTRA BALL. BOTTOM OUTSIDE "SPECIAL" LANES, WHEN LIT, SCORE ONE CREDIT.

IN EXTRA BALL POSITION:
HI-SCORES AWARD EXTRA BALL. TOP RIGHT SHOOTER LANE, WHEN LIT "SPECIAL", SCORES ONE EXTRA BALL. BOTTOM OUTSIDE "SPECIAL" LANES, WHEN LIT, SCORES ONE EXTRA BALL.

IN NOVELTY POSITION:
TOP AND BOTTOM "SPECIALS", WHEN LIT, SCORE 100,000 POINTS.

SEQUENCE OF OPERATION

RESET CYCLE

COIN RELAY IS ENERGIZED AT SCORE MOTOR INDEX CAM SWITCH B, THRU SWITCH ON COIN RELAY, GAME RELAY, ZERO SWITCH ON CREDIT UNIT AND CREDIT BUTTON SWITCH.

SWITCHES ON COIN RELAY WILL ENERGIZE GAME-OVER RELAY, ENERGIZE RESET RELAY, ENERGIZE GAME RELAY LATCH COIL THRU WIPER ON BALL COUNT UNIT (AT ZERO POSITION), PULSE BALL COUNT RESET AND S.U. COILS THRU SWITCH D ON GAME RELAY, AND ENERGIZE RELAY BANK RESET COIL (115 V.) AT SCORE MOTOR CAM SWITCH '2A'.

SWITCHES ON RESET RELAY WILL RUN SCORE MOTOR, PULSE SCORE RESET RELAY, THRU SCORE MOTOR IMPULSE CAM SWITCH 'A' AND ENERGIZE BONUS RELAY THRU ZERO SWITCH ON BONUS UNIT.

SWITCHES ON SCORE RESET RELAY WILL PULSE 5 SCORE DRUM UNITS UNTIL THEY REACH ZERO.

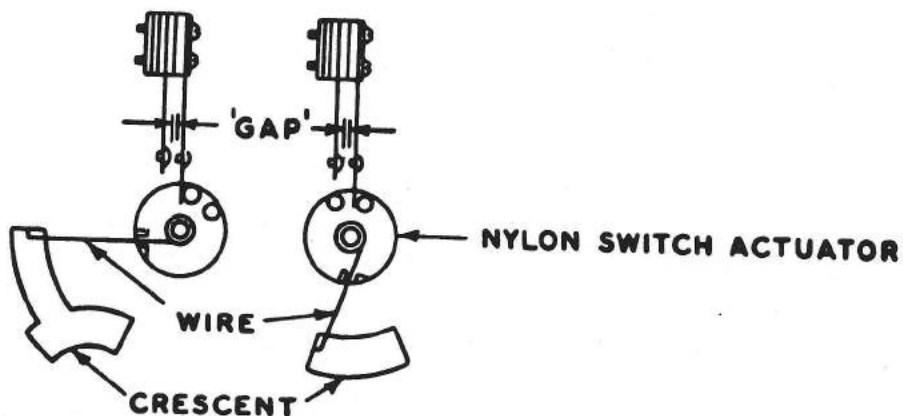
SWITCHES ON BONUS RELAY WILL RUN SCORE MOTOR, HOLD RESET RELAY IN, PULSE BONUS UNIT RESET COIL, AND OPEN CIRCUIT TO OUTHOLE RELAY. (BONUS RELAY IS HELD IN BY ZERO SWITCH ON BONUS UNIT).

WHEN BONUS RELAY DROPS OUT, OUTHOLE RELAY IS ENERGIZED THRU ANOTHER ZERO SWITCH ON BONUS UNIT.

SWITCHES ON OUTHOLE RELAY WILL RUN SCORE MOTOR, PULSE BONUS UNIT S.U. COIL, AND ENERGIZE BALL RELEASE COIL TO PROPEL BALL TOWARD PLUNGER.

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 & 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.

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

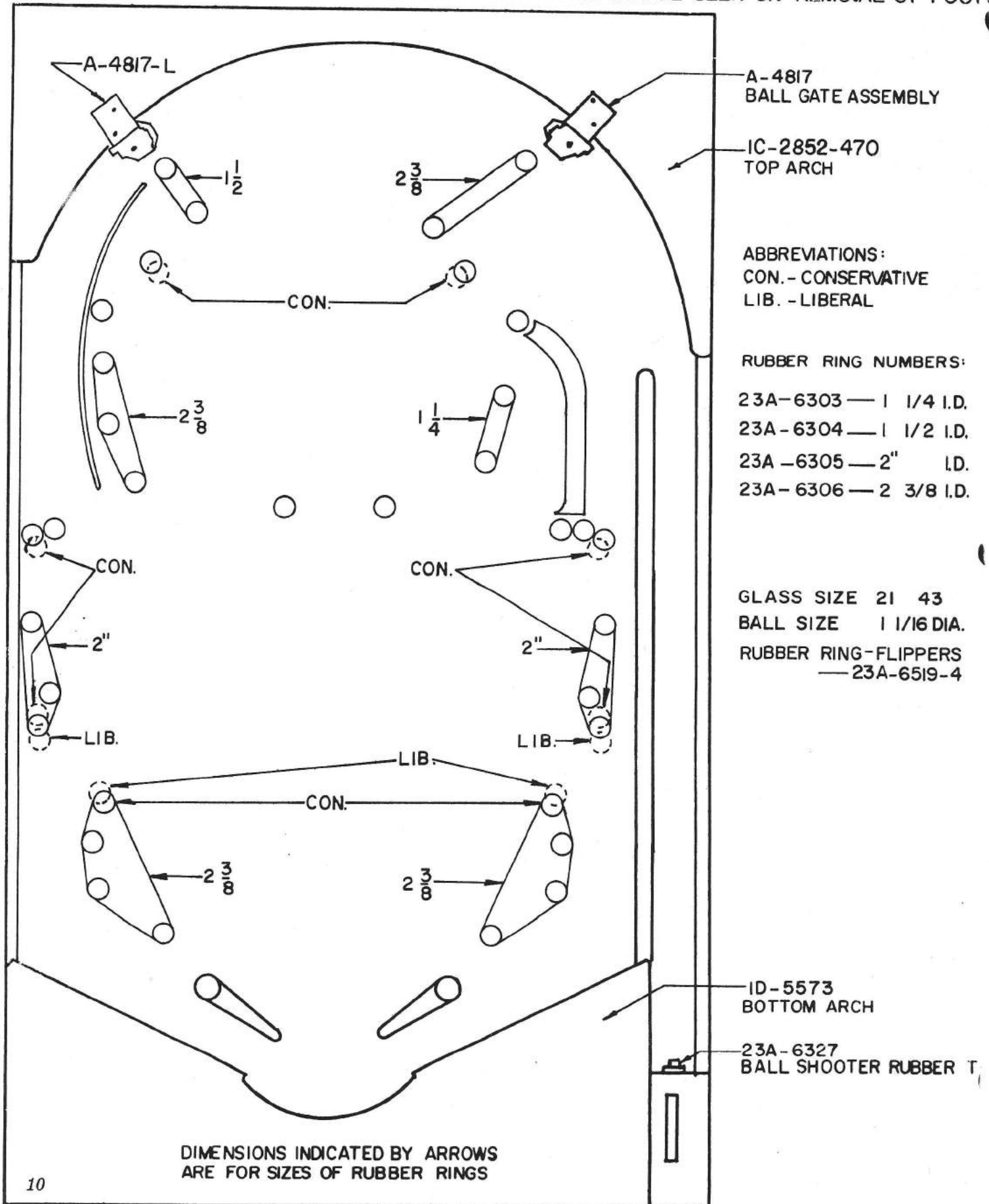
WHEN ORDERING PARTS ALWAYS SPECIFY NAME OF UNIT, GAME AND SERIAL NUMBER, IN ADDITION TO A CLEAR DESCRIPTION OF THE PART AND PART NUMBER IF POSSIBLE.

UNIT PARTS LIST

UNIT NAME	CONTACT DISC	WIPER ASSEMBLY	RATCHET GEAR ASSEMBLY	MOTORS
REPLAY	-----	-----	A-6400	
BALL COUNT	C-6414	B-7456-44	A-6402-10	
(RIGHT SIDE)	B-7568	A-7614		
NO. MATCH	B-7569	A-7615	A-7595	
(LEFT SIDE)				
BONUS	C-6417	B-7456-69	A-6402-10-35	SCORE MOTOR
10 POINT	B-7253	A-6294	30-7272	14A-7883 (60 CYCLE)
100 POINT	-----	-----	30-7272	14A-7884 (50 CYCLE)
1000 POINT	B-7253	A-6294	30-7272	
10000 POINT	B-7253	A-6294	30-7272	
ALTERNATOR	-----	-----	30-7272	

WILD CARD POST ADJUSTMENT SHEET

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



"WILD CARD" COIL CHART

NOTICE:

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

NUMBER	DESCRIPTION	LOCATION
<u>MOTORS & TRANSFORMERS</u>		
14 A-7883	CONTROL MOTOR - 60 CYCLE	MECH. PANEL
14 A-7884	CONTROL MOTOR - 50 CYCLE	MECH. PANEL
15 A-6771	TRANSFORMER - 60 CYCLE	MECH. PANEL
15 A-6782-1	TRANSFORMER - 50 CYCLE	MECH. PANEL
5 A-8867	24 VOLT METER	MECH. PANEL
<u>SOLENOID COILS</u>		
A 22-550	BONUS UNIT STEP UP BALL RELEASE COIL BALL COUNT UNIT STEP UP	PLAYFIELD PLAYFIELD INSERT
A 23-600	CREDIT UNIT STEP UP	INSERT
A2-23-750	KNOCKER	CABINET
A2-26-1300	TRIPLE CHIME COILS ... (3 req'd.)	CABINET
B1-26-800	SCORE DRUM UNITS ... (5 req'd.) BALL COUNT UNIT RESET CREDIT UNIT RESET BONUS UNIT RESET	INSERT INSERT INSERT PLAYFIELD
D1-24-1400	RELAY BANK RESET	PLAYFIELD
FL 20-300/ 28-400	FLIPPERS ... (2 req'd.)	PLAYFIELD
G 22-550	SHOOTER COIL	PLAYFIELD
G 23-650	L & R REJECT COIL ... (2 req'd.)	PLAYFIELD
G 23-750	TOP EJECT COIL	PLAYFIELD
G 23-750 D.C.	D.C. JET BUMPER COILS ... (2 req'd.) D.C. KICKER COILS ... (2 req'd.)	PLAYFIELD PLAYFIELD
M 29-1000	GAME RELAY TRIP	MECH. PANEL
M 29-1100	10¢ RELAY 25¢ RELAY 10 POINT RELAY 100 POINT RELAY 1,000 POINT RELAY 10,000 POINT RELAY SCORE RESET RELAY 50 POINT RELAY 5,000 POINT RELAY SHOOTER RELAY L & R EJECT RELAY TOP EJECT RELAY L & R BOTTOM SPECIAL RELAY BANK RESET RELAY X RELAY	MECH. PANEL MECH. PANEL INSERT INSERT INSERT INSERT INSERT PLAYFIELD PLAYFIELD PLAYFIELD PLAYFIELD PLAYFIELD PLAYFIELD PLAYFIELD PLAYFIELD PLAYFIELD
M 30-1300	LEFT TOP LANE CONTROL RELAY RIGHT TOP SPECIAL RELAY COIN SET UP RELAY	PLAYFIELD PLAYFIELD MECH. PANEL
M 30-1400	CHANGE RELAY	PLAYFIELD
MX 31-1500	COIN LOCKOUT	FRONT DOOR
XS 28-1000	ALTERNATOR UNIT NUMBER MATCH UNIT	MECH. PANEL INSERT
S 27-500	RELAY BANK COILS ... (10 req'd.)	PLAYFIELD
Z 27-1000	COIN RELAY RESET RELAY OUTHOLE RELAY GAME LATCH RELAY BONUS RELAY	MECH. PANEL MECH. PANEL MECH. PANEL MECH. PANEL PLAYFIELD
Z 28-1150	DOUBLE BONUS RELAY SPINNER 1,000 POINT RELAY BALL INDEX RELAY TILT RELAY GAME OVER RELAY	PLAYFIELD PLAYFIELD MECH. PANEL MECH. PANEL MECH. PANEL
Z 28-1200	#1 JOKER RELAY #2 JOKER RELAY	PLAYFIELD PLAYFIELD

JACK LAYOUT

GAME WILD CARD

POSITION PANEL TO PLAY F. SIZE 24.

JACK LAYOUT

GAME WILD CARD

POSITION PANEL TO PLAY F. SIZE 18

1	FEED	B/A	BONUS	GRY/Y-1 UNIT RESET	10.000PT.RE.	B/O-4
2	"	R/A	"	"	"	GRY/O-2
3	MOTOR	O/G	GRY/BLU BONUS RE.	"	"	GRY/Y-2
4	RESET RE.	BLU/BR-1	GRY/G-1 " "	"	"	GRY/BR
5	#1 JOKER & #2 JOKER RE.	Y/B-4	GRY/BR-2 " "	1.000PT.RE.	GRY/W	
6	EJECT COILS	O/R	B/O PLAY ADJ. JACK.	10.000PT.RE.	B/BLU	
7	EJECT RELAYS	R/BR	G/W-3 BONUS RE.	"	"	B/G
8	OUTHOLE RE.	BLU/Y-4	BLU/W-1 BALL RELEASE	"	"	BR/B-2
9	TILT RE.	Y/R-3	W/GRY-2 SET UP RE.	FEED	BLU-Y-W	
10	"	W/BR-2	B/BONUS UNIT			
11	10.000PT.RE.	BR/G	B/G-3 STEP UP			
12	FEED	Y/A	BR/O " "			

1	B/P BANK RESET	
2	W/P " "	
3	G/P " "	
4	B/W-5 A LIPPER	
5	BR/W-5 A R " "	
6	O/W-2 A ♡ RE.	
7	BR/G-2 A ♠ RE.	
8	BR/BLU-2 2 ♠ RE.	
9	O-1 2 ♠ RE.	

JACK LAYOUT

JACK LAYOUT

GAME WILD CARD

GAME WILD CARD

POSITION PANEL TO INSERT SIZE 20

POSITION PANEL TO INSERT SIZE 12

1	FEED Bⓐ	R/BLU CREDIT U. RESET
2	" Rⓐ	B/Y " "
3	COIN LOCKOUT W/GRY	GRY/B BALL COUNT UNIT STEP UP
4	" " W/O	O/R1 BALL COUNT UNIT RESET
5	" " B/R	GRY CREDIT UNIT STEP UP
6	COIN RE. R/O-1	BR/R GAME OVER RE.
7	" " W/B-1	-O- BALL INDEX RE.
8	RESET RE. BLU/BR-1	R/W COIN RE.
9	KNOCKER B/W	Yⓐ FEED
10	SCORE RESET RE. W/BR	—

1	BRⓐ FEED-LITES	L. CHIME B/G-2
2	GRY/O-1 PLAY ADJ. JACK	M. " 0-3
3	W/G " "	S. " O/R-5
4	R/B-2 " "	TILT LITE Y/BR-3
5	R/BR-2 " "	NO. MATCH FEED LITES W/O-3
6	—	—

JACK LAYOUT

JACK LAYOUT

GAME WILD CARD _____

GAME WILD CARD _____

POSITION PANEL-PLAYF. SIZE 12

POSITION PANEL-INSERT SIZE 22

FEED LITES B/R-3

|| || BLU⊙

|| || W⊙

3/5 BALL GRY/BLU-1
ADJ. LITES

L. 4 R. BOT. R/BLU-4
SPECIAL RE.

#1 JOKER RE. G

1
2
3
4
5
6

W/R-1 A ♠ RE.

BR-2 2 ♠ RE.

Y/BR BANK RESET
RE.

BLU/Y-1 5.000 RE.

BLU/R-4 DOUBLE
BONUS RE.

—

10.000 PT. RE. GRY/BR

1.000 PT. RE. BR/Y

100 PT. RE. W/R

10 PT. RE. G/B

A ♠ RE. BR/G-2

|| || 0/R-2

CHANGE RE. W/B-2

NO. MATCH UNIT BLU/O-2

PLAY ADJ. GRY/G-2
JACK

3/5 BALL ADJ. 0/BLU-1

|| || B/W-2

1
2
3
4
5
6
7
8
9
10
11

GRY/R-2 BALL IND. RE.

BR/BLU DOUBLE
BONUS RE.

B/R-2 || ||

GRY/W-2 L. TOP PLANE
CONTROL RE.

R/Y-4 PLAY ADJ.
JACK

0-1 2 ♠ RE.

BR/R-1 || ||

G/Y-3 3/5 BALL ADJ.
-LITE-

BR/W-3 || ||

GRY/BLU-1 || ||

R/B-1 CREDIT LITE

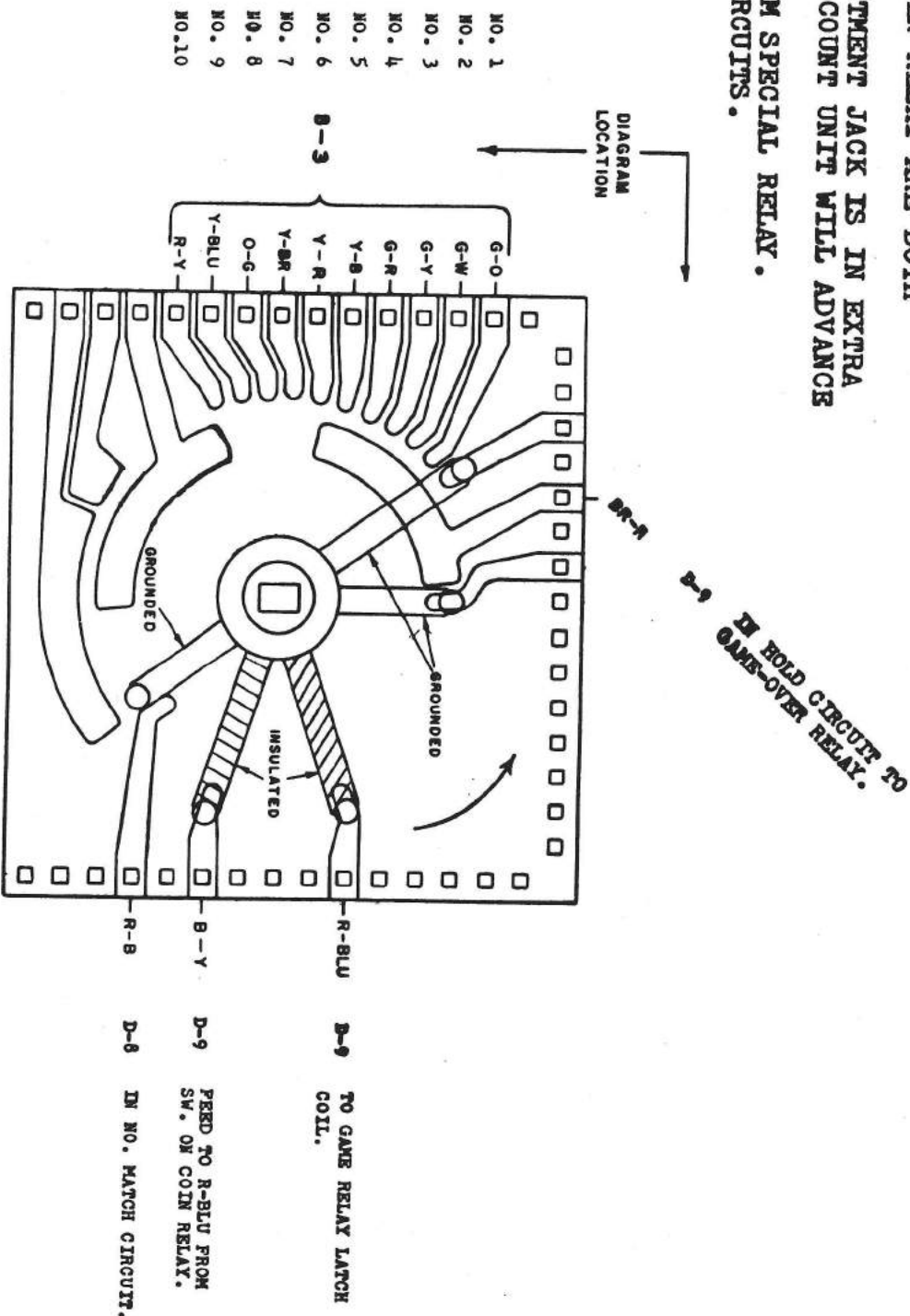
BALL COUNT UNIT DISC

VIEW LOOKING AT WIPER FINGERS, WITH WIPER IN RESET POSITION.

DURING RESET CYCLE, THIS UNIT RESETS TO ZERO AND THEN ADVANCES 3 OR 5 STEPS. DURING PLAY, IT RESETS ONE STEP EACH TIME THE BALL MAKES OUTHOLE SWITCH. IF THE 'PLAY' ADJUSTMENT JACK IS IN CREDIT OR EXTRA BALL POSITION, THE BALL COUNT UNIT WILL ADVANCE WHEN R. TOP SPECIAL RELAY AND SHOOTER RELAY ARE BOTH ENERGIZED.

IF 'PLAY' ADJUSTMENT JACK IS IN EXTRA BALL POSITION, BALL COUNT UNIT WILL ADVANCE BY:

1. L & R BOTTOM SPECIAL RELAY.
2. HI-SCORE CIRCUITS.



BALLS TO PLAY LITES

- NO. 1
- NO. 2
- NO. 3
- NO. 4
- NO. 5
- NO. 6
- NO. 7
- NO. 8
- NO. 9
- NO. 10

BONUS UNIT

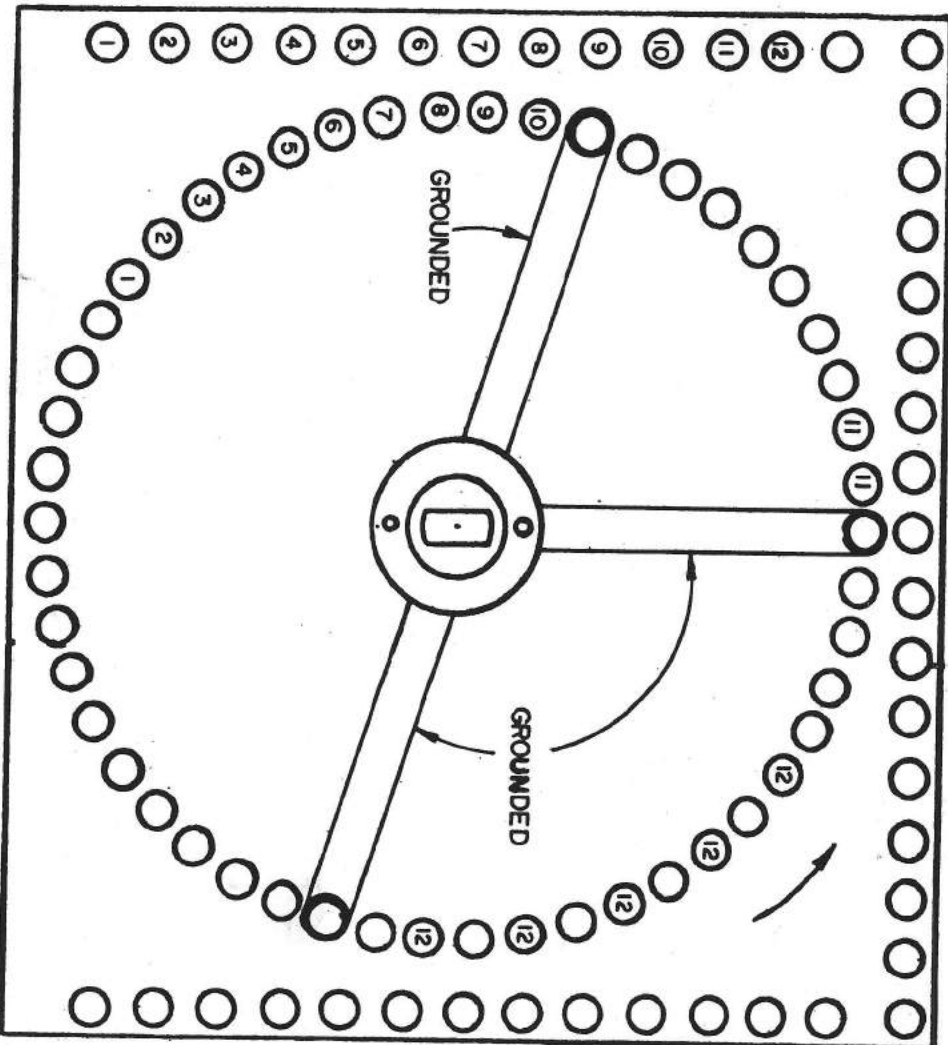
THE S.U. COIL IS ENERGIZED BY SHOOTER RELAY, TOP EJECT RELAY, L & R EJECT RELAY OR OUTHOLE RELAY.

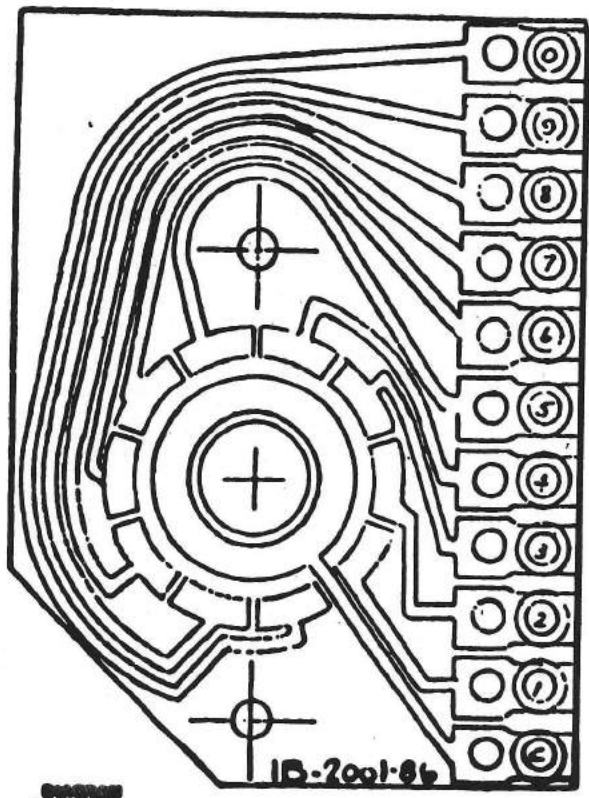
THE RESET COIL IS ENERGIZED BY BONUS RELAY, THRU DOUBLE BONUS RELAY AND SCORE MOTOR CAM SWITCH 6C OR IMPULSE CAM SWITCH B.

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

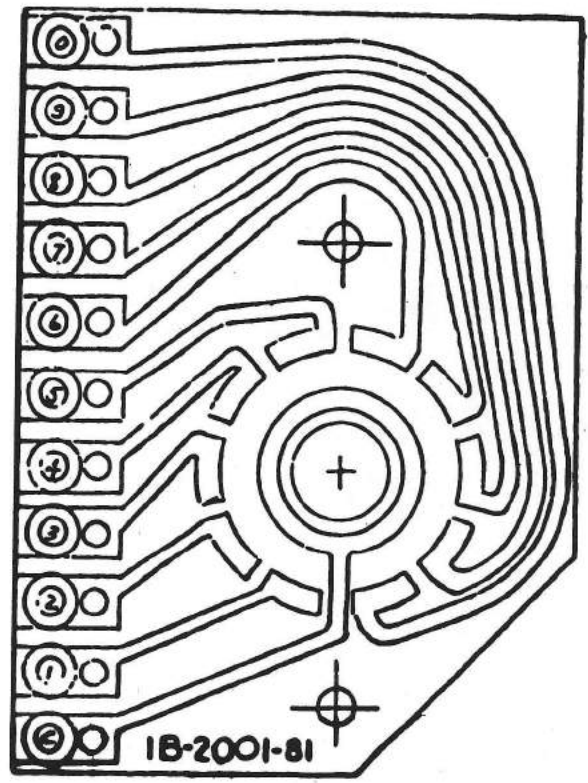
IN CIRCUIT TO 'X' RELAY D-11 0-B
 IN CIRCUIT TO BALL INDEX RELAY C-13 GRAY-R

BONUS	5,000	B-6	W-G
	10,000		W-BR
	15,000		W-B
	20,000		R-G
	25,000		R-W
	30,000		R-BR
	35,000		R-O
	40,000		R-B
	45,000		BLU-
	50,000	B-6	BLU-R
LITRES			





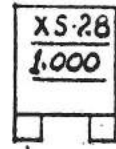
No. MATCH UNIT



SCREEN

B-5

00LITE	W-G-1	0
60 "	BR-W-1	9
10 "	BR-G-1	8
70 "	BR-Y-1	7
30 "	BR-BLU-1	6
80 "	GRY-W-1	5
20 "	W-GRY-1	4
50 "	R-W-1	3
90 "	W-O-1	2
40 "	W-BR-1	1
FEED	BR-O-1	C
		A



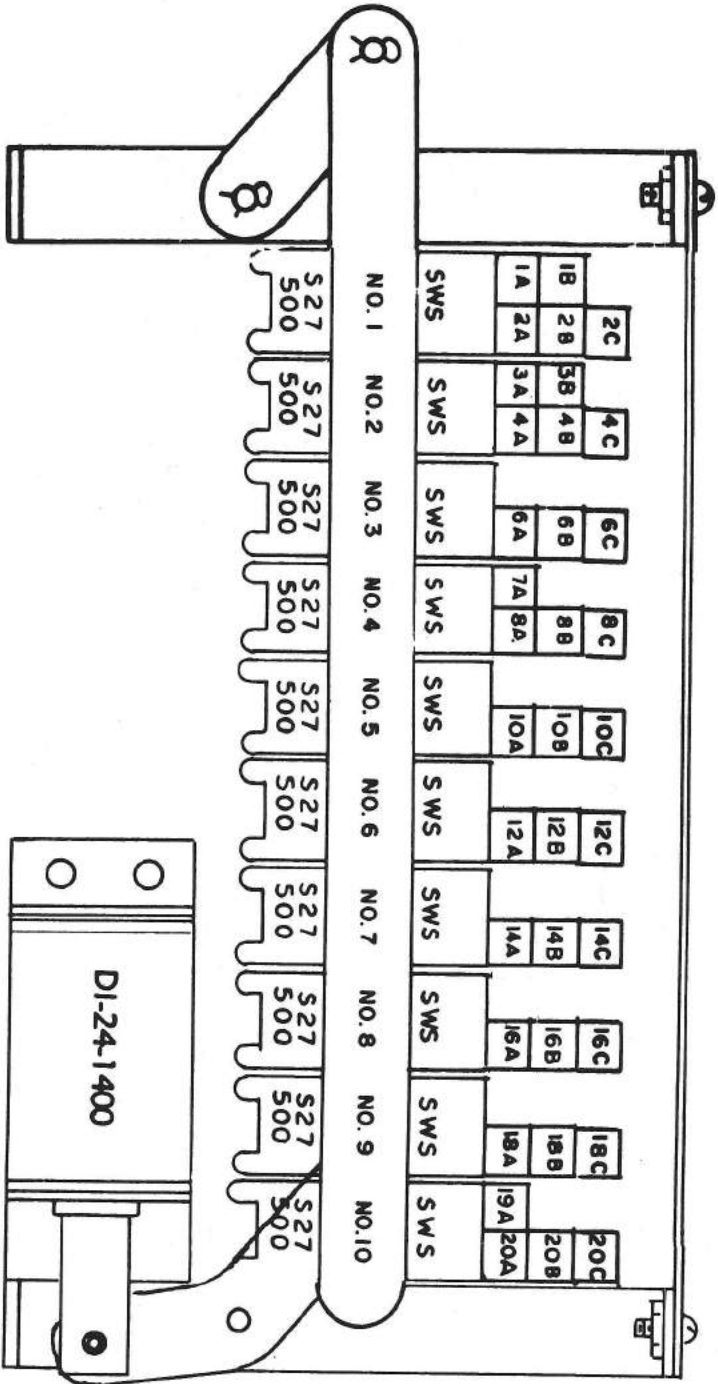
-R-
B-BLU-

DRIVE SPRING 10A-324-1

0	Y-BLU-1	00-MATCH
9	G-Y-1	60 "
8	Y-G-1	10 "
7	G-W-1	70 "
6	GRY-B-1	30 "
5	G-O-1	80 "
4	Y-BR-1	20 "
3	G-R-1	50 "
2	W-BLU-1	90 "
1	Y-B-1	40 "
C	BLU-O	FEED
B		

E-8

RELAY BANK SWS.

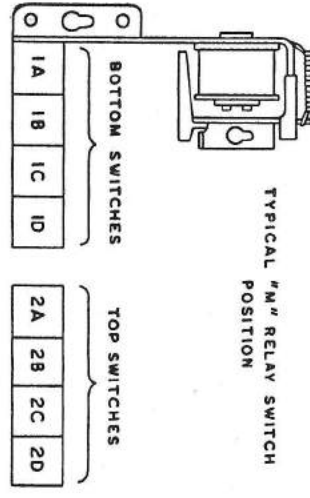


RELAY	SW.	WIRE COLORS	DIAG. LOC.	TYPE	SWITCH OPERATION
4 DEUCES RELAY	1B	W-BLU -J-	D-15	N.O.	IN CIRCUIT TO BANK RESET RELAY
	1A	GRAY-Y B-0	C-16	N.O.	IN CIRCUIT TO 10,000 POINT RELAY AND BONUS UNIT S.U. COIL.
	2C	BLU-B -J-	E-13	N.O.	IN CIRCUIT TO ENERGIZE #2 JOKER RELAY.
	2B	-J- -J-	E-20	N.C.	IN CIRCUIT TO COIL ON THIS RELAY. (CIRCUIT ORIGINATES AT SWITCH '12A' ON 2 OF HEARTS RELAY).
	2A	GRAY-B B-R	B-9	N.O.	TO 3RD RIGHT TOP LANE LITE.
4 ACES RELAY	3B	Y-BR -J-	D-15	N.O.	IN SERIES WITH SWITCH '1B' ON 4 DEUCES RELAY.
	3A	BR-G B-R	B-9	N.O.	TO 2ND RIGHT TOP LANE LITE.
	4C	O-G -J-	D-13	N.O.	IN SERIES WITH SWITCH '2C' ON 4 DEUCES RELAY.
	4B	-W- -J-	E-20	N.C.	IN CIRCUIT TO COIL ON THIS RELAY. (ORIGINATES AT SWITCH '20A' ON ACE OF HEARTS RELAY).
	4A	GRAY-O B-0	C-16	N.O.	IN CIRCUIT TO 10,000 POINT RELAY AND BONUS UNIT S.U. COIL.
2 OF SPADES RELAY	6C	B-BLU -Y- O-B	B-9	M&B	TO 2 OF SPADES LITES.
	6B	BR-R -J-	E-20	N.C.	IN CIRCUIT TO COIL ON THIS RELAY.
	6A	-J- -J-	D-20	N.O.	IN SERIES WITH SWITCH '2B' ON 4 DEUCES RELAY.
2 OF DIAMONDS RELAY	7A	BR-R -O-	D-20	N.O.	IN SERIES WITH SWITCH '6B' ON 2 OF SPADES RELAY.
	8C	O-W -Y- O-BLU	B-8	M&B	TO 2 OF DIAMONDS LITES.

RELAY	SW.	WIRE COLORS	DIAG. LOC.	TYPE	SWITCH OPERATION
2 OF DIAMONDS RELAY	8B	BR-BLU -J-	E-20	N.C.	IN CIRCUIT TO COIL ON THIS RELAY.
	8A	-J- -J-	D-20	N.O.	IN SERIES WITH SWITCH '6A' ON 2 OF SPADES RELAY.
2 OF CLUBS	10C	BR-B -Y- BR-O	B-8	M&B	TO 2 OF CLUBS LITES.
	10B	BR-Y -J-	E-20	N.C.	IN CIRCUIT TO COIL ON THIS RELAY.
	10A	-J- -J-	C-20	N.O.	IN SERIES WITH SWITCH '8A' ON 2 OF DIAMONDS RELAY.
2 OF HEARTS	12C	GRAY-W -Y- BR-R	B-8	M&B	TO 2 OF HEARTS LITES.
	12B	BR-W -J-	E-19	N.C.	IN CIRCUIT TO COIL ON THIS RELAY.
	12A	-Y- -J-	C-20	N.O.	IN SERIES WITH SWITCH '10A' ON 2 OF CLUBS RELAY.
ACE OF SPADES	14C	G-B -Y- G-R	B-8	M&B	TO ACE OF SPADES LITES.
	14B	O-G -J-	E-19	N.C.	IN CIRCUIT TO COIL ON THIS RELAY.
	14A	-J- -W-	D-20	N.O.	IN SERIES WITH SWITCH '4B' ON 4 ACES RELAY.
ACE OF DIAMONDS	16C	BLU-O -Y- BLU-W	B-7	M&B	TO ACE OF DIAMONDS LITES.
	16B	-O- -J-	E-19	N.C.	IN CIRCUIT TO COIL ON THIS RELAY.
	16A	-J- -J-	D-20	N.O.	IN SERIES WITH '14A' ON ACE OF SPADES RELAY.

RELAY	SW.	WIRE COLORS	DIAG. LOC.	TYPE	SWITCH OPERATION
ACE OF CLUBS RELAY	18C	Y-BLU -Y- GRAY-Y	B-7	M&B	TO ACE OF CLUBS LITES.
	18B	O-R -J-	E-19	N.C.	IN CIRCUIT TO COIL ON THIS RELAY.
	18A	-J- -J-	C-20	N.O.	IN SERIES WITH SWITCH '16A' ON ACE OF DIAMONDS RELAY.
ACE OF HEARTS RELAY	19A	O-R BR-G	D-19	N.O.	IN SERIES WITH SWITCH '18B' ON ACE OF CLUBS RELAY.
	20C	-GRAY- -Y- W-G	F-7	M&B	TO ACE OF HEARTS LITES.
	20B	O-W -J-	E-19	N.C.	IN CIRCUIT TO COIL ON THIS RELAY.
	20A	-J- -Y-	C-20	N.O.	IN SERIES WITH SWITCH '18A' ON ACE OF CLUBS RELAY.

TYPICAL "M" RELAY SWITCH POSITION

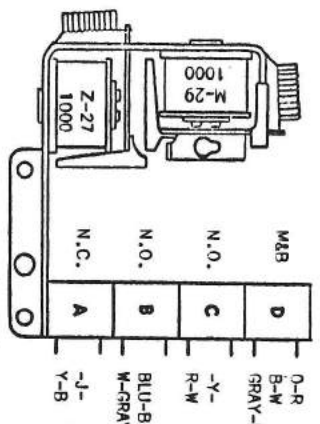


RELAYS & SWITCHES
LOCATED ON MECHANISM PANEL

GAME

LATCH COIL IS ENERGIZED BY COIN RELAY, THRU WIPER FINGERS ON BALL COUNT UNIT (AT ZERO POSITION). TRIP COIL IS ENERGIZED BY BALL INDEX RELAY OR GAME-OVER RELAY.

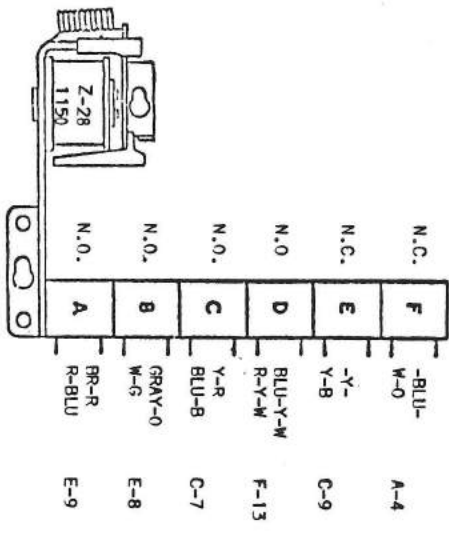
SWITCH TYPE DIAGRAM LOCATION



OPENS IN CIRCUIT TO BALL COUNT S.U. COIL AND CLOSSES TO BALL COUNT RESET COIL.
IN HOLD CIRCUIT TO COIN RELAY.
IN CIRCUIT TO COIN RELAY OR COIN LOCKOUT COIL, THRU CREDIT UNIT ZERO SWITCH.
TO GAME RELAY TRIP COIL, FROM BALL INDEX RELAY OR GAME-OVER RELAY.

GAME OVER

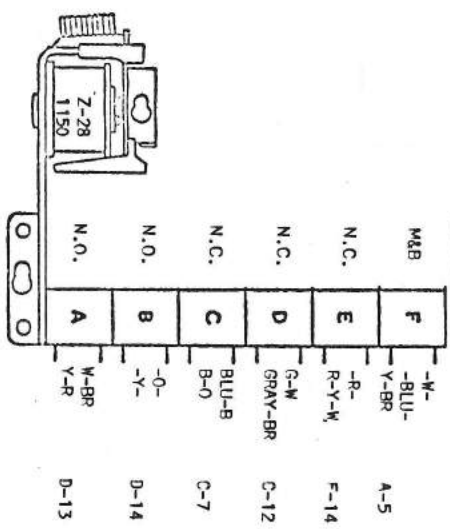
IS ENERGIZED BY COIN RELAY. IT THEN HOLDS IN BY ZERO SWITCH ON BALL COUNT UNIT OR WIPER FINGER ON BALL COUNT UNIT DISC.



TO GAME-OVER AND NUMBER MATCH LITERS.
IN SERIES WITH SWITCH 'A' ON GAME RELAY.
OPENS CIRCUITS TO MOST PLAYFIELD SWITCHES.
IN CIRCUIT TO "PLAY ADJUSTMENT" JACK, WHEN SCORING 'SPECIAL'.
IN HI SCORE & NUMBER MATCH CIRCUITS.
IN HOLD CIRCUIT TO THIS RELAY, THRU WIPER FINGER OR ZERO SWITCH ON BALL COUNT UNIT.

TILT

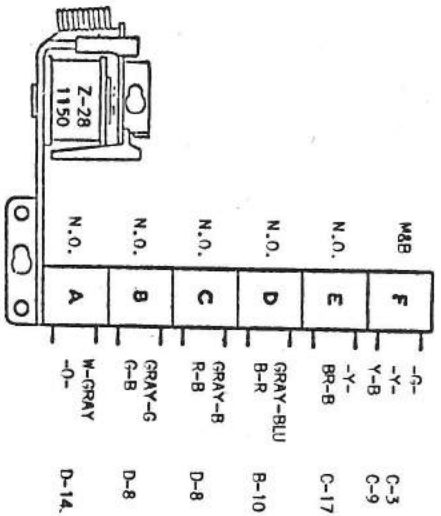
IS ENERGIZED BY PLUMB BOB TILT, BALL ROLLOVER TILT OR PLAYFIELD VIBRATION TILT SWITCH.



OPENS IN CIRCUIT TO MOST PLAYFIELD LITERS AND CLOSSES TO TILT LITE.
OPENS CIRCUITS TO MOST PLAYFIELD SWITCHES.
IN CIRCUIT TO BONUS RELAY AND OUTHOLE RELAY.
IN SERIES WITH SWITCH 'C' ON GAME-OVER RELAY.
ENERGIZES BALL INDEX RELAY.
IN HOLD CIRCUIT TO THIS RELAY.

BALL INDEX

IS ENERGIZED BY 10 POINT, 100 POINT, 1,000 POINT OR 10,000 POINT RELAY, THRU WIPER FINGER ON BONUS UNIT--- ALSO BY TILT RELAY.



OPENS IN HOLD CIRCUIT TO COIN SET-UP RELAY AND CLOSSES TO ENERGIZE GAME RELAY TRIP COIL.

IN SERIES WITH SWITCH 'E' ON BONUS RELAY AND LEFT TOP LANE ROLL-OVER SWITCH.

IN CIRCUIT TO 'DOUBLE BONUS' LITE, SPINNER 1,000 AND LEFT LANE TOP AND BOTTOM LITES.

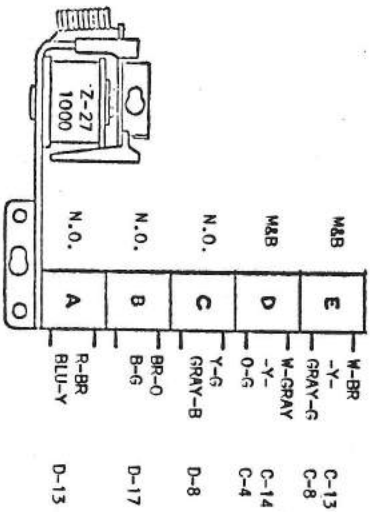
IN SERIES WITH SWITCH 'C' ON OUTHOLE RELAY.

IN CIRCUIT TO BALL COUNT UNIT RESET COIL.

IN HOLD CIRCUIT TO THIS RELAY.

OUTHOLE

IS ENERGIZED BY BONUS RELAY, THRU ZERO SWITCH ON BONUS UNIT AND TILT RELAY SWITCH.



OPENS IN CIRCUIT TO TILT RELAY AND CLOSSES IN SERIES WITH SWITCH 'B' ON BALL INDEX RELAY.

OPENS IN HOLD CIRCUIT TO BALL INDEX & DOUBLE BONUS RELAYS ---CLOSSES TO RUN SCORE MOTOR.

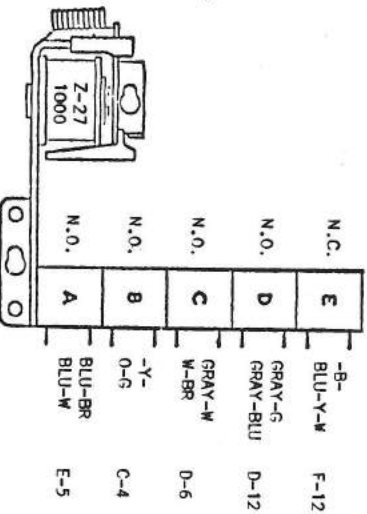
IN NUMBER MATCH CIRCUIT TO CREDIT UNIT S.U. COIL.

IN CIRCUIT TO BONUS UNIT S.U. COIL.

IN HOLD CIRCUIT TO THIS RELAY.

RESET

IS ENERGIZED BY COIN RELAY.



OPENS CIRCUITS TO MOST PLAYFIELD SWITCHES.

ENERGIZES BONUS RELAY, THRU ZERO SWITCH ON BONUS UNIT.

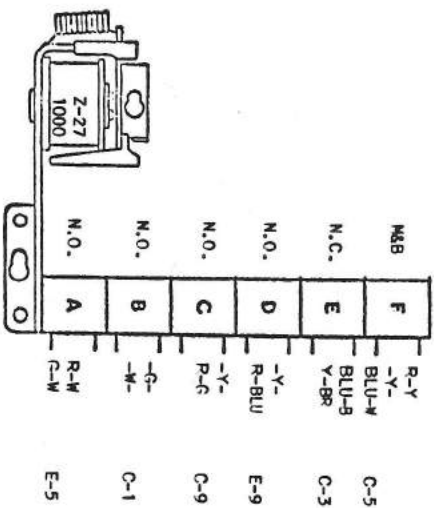
PULSES SCORE RESET RELAY, THRU IMPULSE CAM SWITCH 'A'.

RUNS SCORE MOTOR.

IN HOLD CIRCUIT TO THIS RELAY.

COIN

IS ENERGIZED BY 10¢ COIN SWITCH, IF 10¢ ADJUSTMENT IS IN "1 PLAYS" POSITION
 ---ALSO BY CREDIT BUTTON, THRU ZERO SWITCH ON CREDIT UNIT.

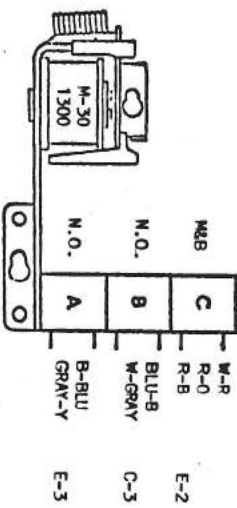


OPENS IN CIRCUIT TO KNOCKER COIL AND CLOSERS TO ENERGIZE RESET RELAY.
 OPENS CIRCUIT TO COIN LOCKOUT COIL.
 ENERGIZES GAME-OVER RELAY.

IN CIRCUIT TO GAME RELAY LATCH COIL AND CREDIT UNIT RESET COIL---ALSO IN SERIES WITH SWITCH 'D' ON GAME RELAY.
 ENERGIZES RELAY BANK RESET COIL (115 V.), THRU CAM SWITCH.
 IN HOLD CIRCUIT TO THIS RELAY.

COIN SET UP

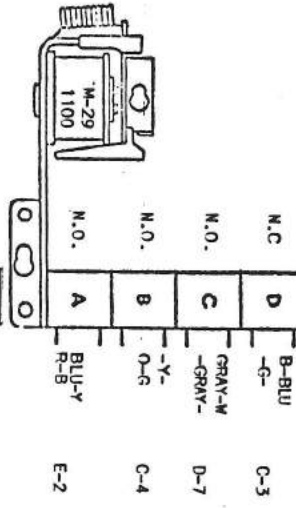
IS ENERGIZED BY 25¢ RELAY, IF "1 COIN-1 PLAY AND 2 COINS-3 PLAYS" ADJUSTMENT JACK IS IN "ON" POSITION.



OPENS IN CIRCUIT TO 25¢ RELAY AND CLOSERS TO 10¢ RELAY.
 IN CIRCUIT TO COIN LOCKOUT COIL OR COIN RELAY.
 IN HOLD CIRCUIT TO THIS RELAY.

10¢

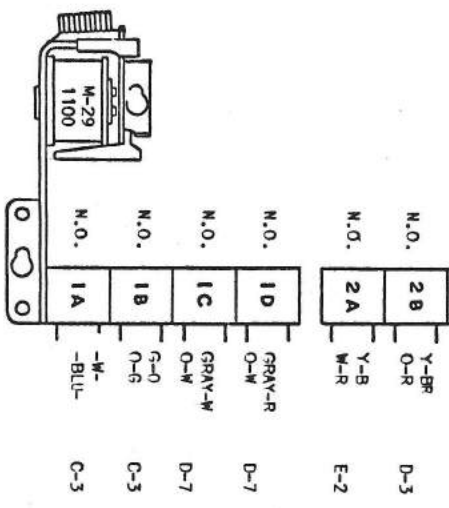
IS ENERGIZED BY 10¢ COIN SWITCH, IF 10¢ ADJUSTMENT JACK IS IN "2 PLAYS" OR "3 PLAYS" POSITION---ALSO BY 25¢ COIN SWITCH, THRU SWITCH ON COIN SET-UP RELAY IF "2 COINS FOR 3 PLAYS" ADJUSTMENT IS IN "ON" POSITION.



IN HOLD CIRCUIT TO COIN SET-UP RELAY.
 PULSES CREDIT UNIT S.U. COIL, THRU IMPULSE CAM SWITCH 'A'.
 RUNS SCORE MOTOR.
 IN HOLD CIRCUIT TO THIS RELAY.

25¢

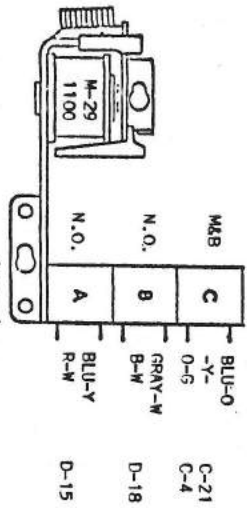
IS ENERGIZED BY 25¢ COIN SWITCH, THRU SWITCH ON COIN SET-UP RELAY.



ENERGIZES COIN RELAY, THRU "1 COIN=1 PLAY & 2 COINS= 3 PLAYS" ADJUSTMENT JACK.
 IN HOLD CIRCUIT TO THIS RELAY.
 PULSES CREDIT UNIT S.U., THRU "2 COINS FOR 3 PLAYS" ADJUSTMENT.
 PULSES CREDIT UNIT ONCE (IN 6 PLAYS FOR 25¢ ADJUSTMENT).
 RUNS SCORE MOTOR.
 ENERGIZES COIN SET-UP RELAY, THRU "2 COINS FOR 3 PLAYS" ADJUSTMENT.

50 POINT

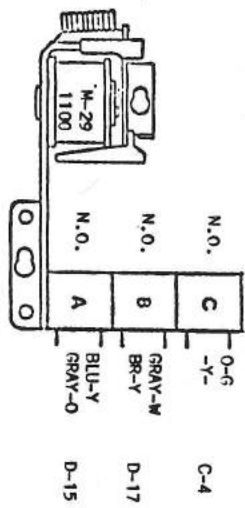
IS ENERGIZED BY (4) STAND-UP SWITCHES.



OPENS IN CIRCUIT TO NUMBER MATCH UNIT S.U. COIL AND CLOSSES TO RUN SCORE MOTOR.
 IN CIRCUIT TO PULSE 10 POINT RELAY OR 100 POINT RELAY.
 IN HOLD CIRCUIT TO THIS RELAY.

5,000

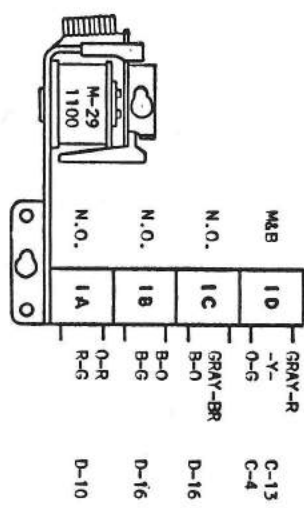
IS ENERGIZED BY LEFT OR RIGHT BOTTOM INSIDE ROLLOVER, LEFT TOP LANE ROLL-OVER OR RIGHT SIDE ROLLOVER.



RUNS SCORE MOTOR.
 IN CIRCUIT TO PULSE 1,000 POINT RELAY.
 IN HOLD CIRCUIT TO THIS RELAY.

SHOOTER

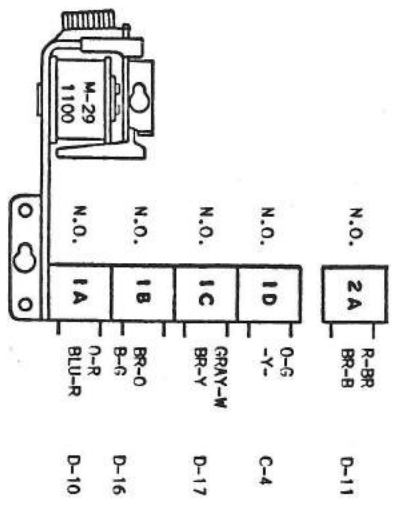
IS ENERGIZED BY SHOOTER SWITCH.



OPENS IN HOLD CIRCUIT TO RIGHT TOP SPECIAL RELAY AND CLOSSES TO RUN SCORE MOTOR.
 IN CIRCUIT TO PULSE 10,000 POINT RELAY.
 IN CIRCUIT TO PULSE BONUS UNIT S.U. COIL.
 ENERGIZES SHOOTER COIL AT SCORE MOTOR CAM SWITCH '5D'.

L&R EJECT

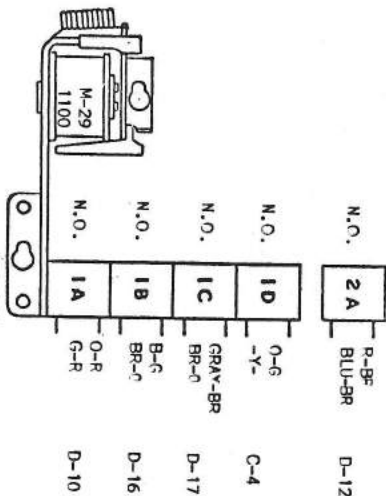
IS ENERGIZED BY LEFT OR RIGHT EJECT SWITCH.



IN HOLD CIRCUIT TO THIS RELAY.
 RUNS SCORE MOTOR.
 IN CIRCUIT TO PULSE 1,000 POINT RELAY.
 IN CIRCUIT TO BONUS UNIT S.U. COIL.
 ENERGIZES LEFT & RIGHT EJECT COILS AT SCORE MOTOR CAM SWITCH '5D'.

TOP EJECT

IS ENERGIZED BY TOP EJECT SWITCH.



IN HOLD CIRCUIT TO THIS RELAY.

RUNS SCORE MOTOR.

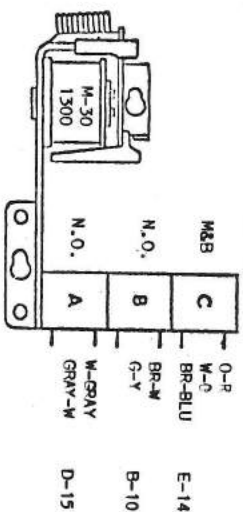
IN CIRCUIT TO PULSE 10,000 POINT RELAY.

IN CIRCUIT TO BONUS UNIT S.U. COIL.

ENERGIZES TOP EJECT COIL AT SCORE MOTOR CAM SWITCH '5D'.

L. TOP LANE CONTROL

IS ENERGIZED BY SPINNER 1,000 POINT RELAY IN 5 BALL GAME.



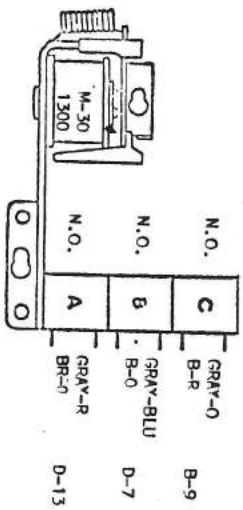
OPENS IN CIRCUIT TO SPINNER 1,000 POINT RELAY AND CLOSSES TO DOUBLE BONUS RELAY.

IN SERIES WITH SWITCH 'E' ON DOUBLE BONUS RELAY.

IN HOLD CIRCUIT TO THIS RELAY.

R TOP SPECIAL

IS ENERGIZED BY BANK RESET RELAY.



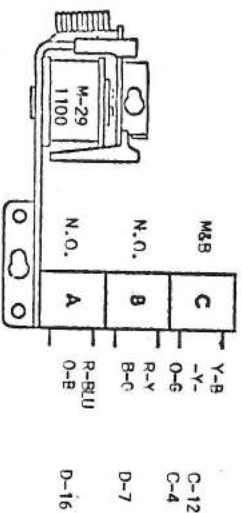
TO RIGHT TOP "SPECIAL" LITE.

IN SERIES WITH SWITCH '2B' ON SHOOTER RELAY.

IN HOLD CIRCUIT TO THIS RELAY.

L & R BOTTOM SPECIAL

IS ENERGIZED BY LEFT OR RIGHT BOTTOM OUTSIDE ROLLOVER, THRU SWITCH ON CHANGE RELAY AND #2 JOKER RELAY.



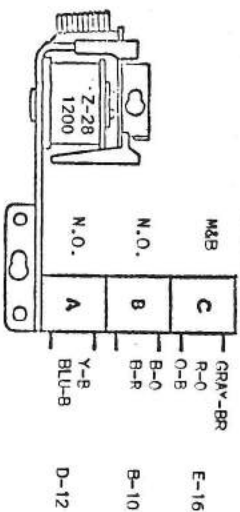
IN HOLD CIRCUIT TO THIS RELAY.

OPENS IN HOLD CIRCUIT TO NO. 2 JOKER RELAY AND CLOSSES TO RUN SCORE MOTOR.

IN CIRCUIT TO "PLAY ADJUSTMENT" JACK.

NO2 JOKER

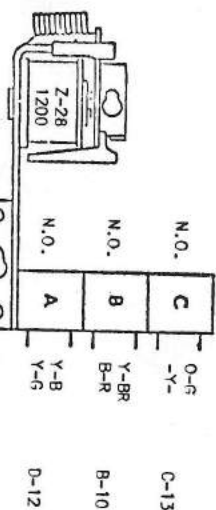
IS ENERGIZED BY #1 JOKER RELAY, THRU SWITCH ON 4 ACES RELAY AND 4 DETOGES RELAY.



OPENS IN CIRCUIT TO 10,000 POINT RELAY AND CLOSSES TO L & R BOTTOM SPECIAL RELAY.
TO #2 JOKER LITE---ALSO IN SERIES WITH SWITCH '2A' ON CHANGE RELAY.
IN HOLD CIRCUIT TO THIS RELAY.

NO1 JOKER

IS ENERGIZED BY BANK RESET RELAY.

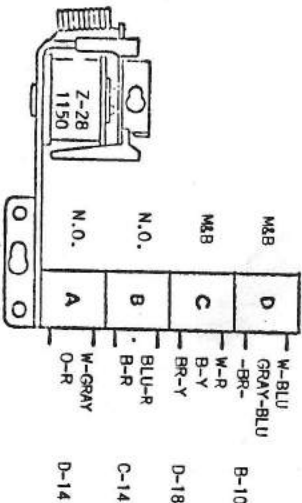


IN SERIES WITH SWITCH 'UC' ON L ACES RELAY,
TO #1 JOKER LITE.

IN HOLD CIRCUIT TO THIS RELAY.

SPINNER 1,000 POINT

IS ENERGIZED BY BALL INDEX RELAY, THRU LEFT TOP LANE ROLLOVER AND LEFT TOP LANE CONTROL RELAY.



OPENS TO LEFT LANE TOP LITE AND CLOSSES TO SPINNER 1,000 POINT LITE.

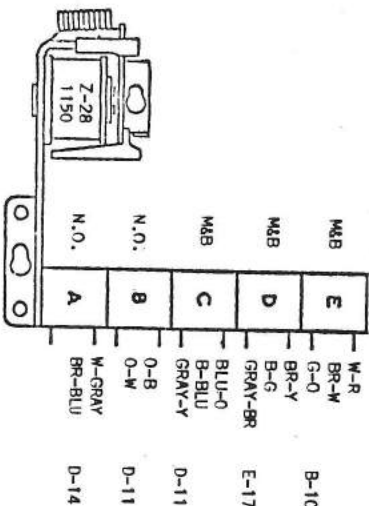
OPENS TO 100 POINT RELAY AND CLOSSES TO 1,000 POINT RELAY.

IN CIRCUIT TO DOUBLE BONUS RELAY OR LEFT TOP LANE CONTROL RELAY.

IN HOLD CIRCUIT TO THIS RELAY.

DOUBLE BONUS

IS ENERGIZED BY BALL INDEX RELAY, THRU LEFT TOP LANE ROLLOVER AND LEFT TOP LANE CONTROL RELAY---ALSO BY SPINNER 1,000 POINT RELAY IN 3 BALL GAME.



OPENS IN CIRCUIT TO LEFT LANE BOTTOM LITE AND CLOSSES TO DOUBLE BONUS LITE.

OPENS TO 1,000 POINT RELAY AND CLOSSES TO 10,000 POINT RELAY.

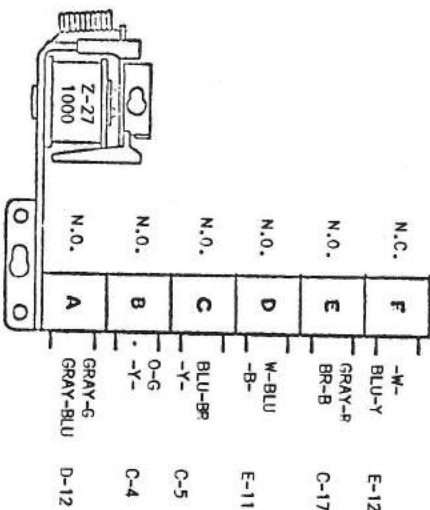
IN CIRCUIT TO BONUS UNIT RESET COIL.

OPENS CIRCUIT TO ENERGIZE 'X' RELAY.

IN HOLD CIRCUIT TO THIS RELAY.

BONUS

IS ENERGIZED BY RESET RELAY, THRU ZERO SWITCH ON BONUS UNIT---ALSO BY OUTHOLE SWITCH, THRU ANOTHER ZERO SWITCH ON BONUS UNIT.



IN CIRCUIT TO OUTHOLE RELAY.

IN CIRCUIT TO 1,000 OR 10,000 POINT RELAY (WHEN COLLECTING BONUS).

OPENS CIRCUIT TO 'X' RELAY AND BONUS UNIT RESET COIL.

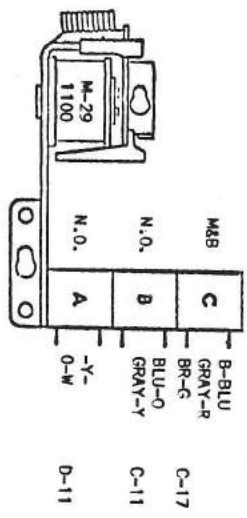
IN HOLD CIRCUIT TO RESET RELAY.

RUNS SCORE MOTOR.

HOLD CIRCUIT TO THIS RELAY, THRU ZERO SWITCH ON BONUS UNIT.

'X'

IS ENERGIZED BY BONUS RELAY, THRU SWITCH ON DOUBLE BONUS RELAY AND WIPER FINGER ON BONUS UNIT.



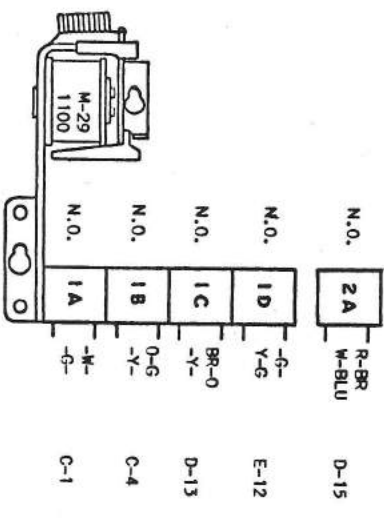
IN CIRCUIT TO 1,000 OR 10,000 POINT RELAY (WHEN COLLECTING BONUS).

IN CIRCUIT TO BONUS UNIT RESET COIL.

IN HOLD CIRCUIT TO THIS RELAY.

BANK RESET

IS ENERGIZED BY SWITCH ON 4 ACBS RELAY, THRU SWITCH ON 4 DEUCES RELAY.



IN HOLD CIRCUIT TO THIS RELAY.

ENERGIZES #1 JOKER RELAY, THRU SCORE MOTOR CAM SWITCH '5C'.

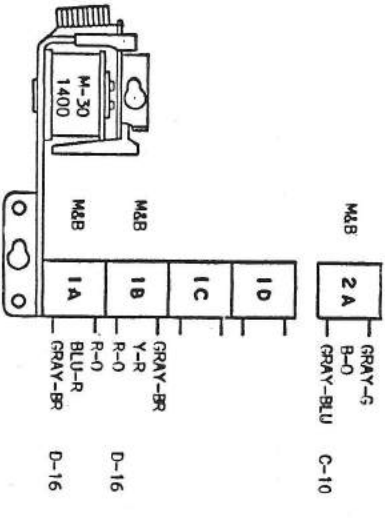
ENERGIZES RIGHT TOP SPECIAL RELAY.

RUNS SCORE MOTOR.

ENERGIZES RELAY BANK RESET COIL (115 V.) AT CAM SWITCH '2A'.

CHANGE

IS ENERGIZED BY NUMBER MATCH UNIT ALTERNATOR SWITCH.



OPENS TO RIGHT SIDE LITE AND CLOSES TO LEFT SIDE LITE.

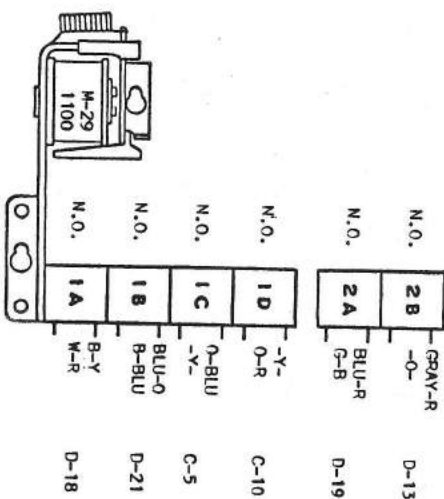
OPENS IN CIRCUIT TO 10,000 POINT RELAY AND CLOSES IN SERIES WITH SWITCH 'C' ON #2 JOKER RELAY.

OPENS IN SERIES WITH SWITCH 'C' ON #2 JOKER RELAY AND CLOSES TO 10,000 POINT RELAY.

LOCATED IN BACKBOX

10 POINT

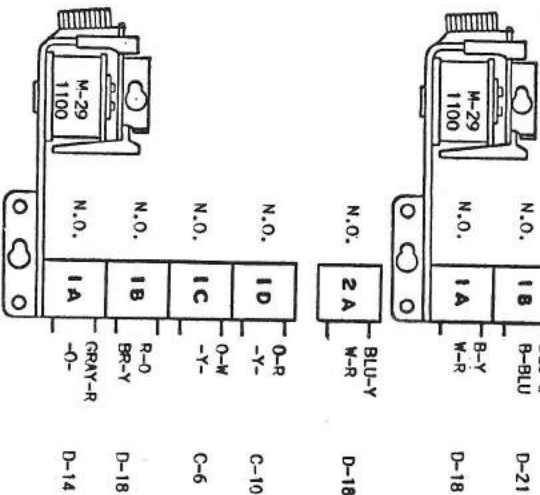
IS ENERGIZED BY 50 POINT RELAY IN 5 BALL GAME---ALSO BY (2) KICKER SWITCHES.



ENERGIZES BALL INDEX RELAY, THRU BONUS UNIT DISC.
 IN HOLD CIRCUIT TO THIS RELAY.
 PULSES SMALL CHIME COIL.
 PULSES 10 POINT DRUM UNIT.
 ENERGIZES NUMBER MATCH UNIT COIL.
 PULSES 100 POINT RELAY, THRU 9TH POSITION SWITCH ON 10 POINT DRUM UNIT.

100 POINT

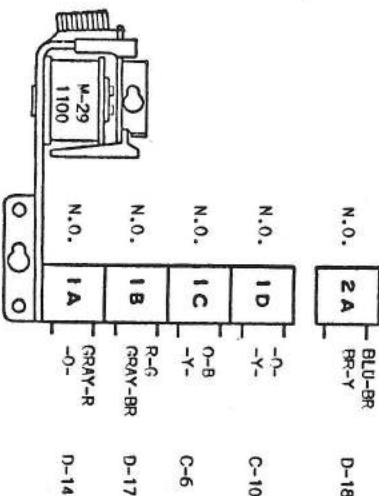
IS PULSED BY LEFT OR RIGHT JET BUMPER SWITCH IN 5 BALL, 50 POINT RELAY IN 3 BALL GAME; OR BY SPINNER SWITCH, THRU SPINNER 1,000 POINT RELAY.



IN HOLD CIRCUIT TO THIS RELAY.
 PULSES SMALL CHIME COIL.
 PULSES 100 POINT DRUM UNIT.
 PULSES 1,000 POINT RELAY, THRU 9TH POSITION SWITCH ON 100 POINT DRUM UNIT.
 ENERGIZES BALL INDEX RELAY, THRU BONUS UNIT DISC.

1,000 POINT

- IS PULSED BY:
1. L & R EJECT RELAY.
 2. 5,000 POINT RELAY.
 3. SPINNER SWITCH, THRU SPINNER 1,000 POINT RELAY.
 4. (3) TARGET SWITCHES.
 5. LEFT OR RIGHT JET BUMPER SWITCH IN 3 BALL GAME.
 6. BALL INDEX RELAY, THRU BONUS RELAY, 'X' RELAY AND DOUBLE BONUS RELAY.

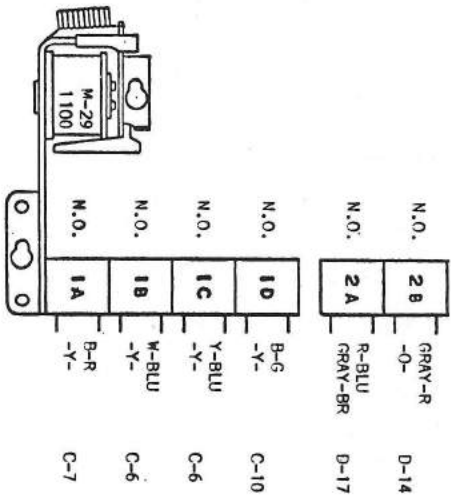


IN HOLD CIRCUIT TO THIS RELAY.
 PULSES MEDIUM CHIME COIL.
 PULSES 1,000 POINT DRUM UNIT.
 PULSES 10,000 POINT RELAY, THRU 9TH POSITION SWITCH ON 1,000 POINT DRUM UNIT.
 ENERGIZES BALL INDEX RELAY, THRU BONUS UNIT DISC.

10,000 POINT

IS PULSED BY:

1. LEFT OR RIGHT BOTTOM OUTSIDE ROLL-OVER, THRU CHANGE RELAY OR #2 JOKER RELAY.
2. SHOOTER RELAY.
3. TOP EJECT RELAY.
4. BALL INDEX RELAY, THRU BONUS RELAY, 'X' RELAY OR DOUBLE BONUS RELAY.



ENERGIZES BALL INDEX RELAY, THRU BONUS UNIT DISC.

IN HOLD CIRCUIT TO THIS RELAY.

PULSES LARGE CHIME COIL.

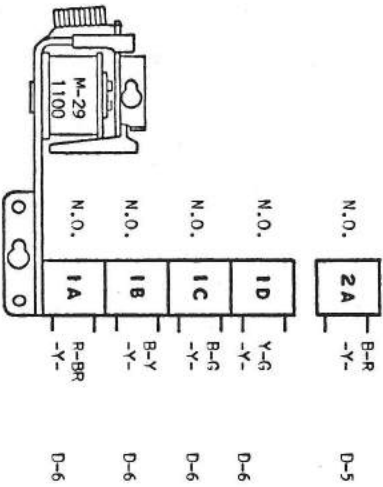
PULSES 100,000 POINT DRUM UNIT, THRU 9TH POSITION SWITCH ON 10,000 POINT DRUM UNIT.

PULSES 10,000 POINT DRUM UNIT.

IN HI-SCORE CIRCUIT TO "PLAY ADJUSTMENT" JACK.

SCORE RESET

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



PULSES 10 POINT DRUM UNIT, THRU ZERO SWITCH ON THAT UNIT.

PULSES 100,000 POINT DRUM UNIT, THRU ZERO SWITCH ON THAT UNIT.

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

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

PULSES 100 POINT DRUM UNIT, THRU ZERO SWITCH ON THAT UNIT.