

OPERATING INSTRUCTIONS

CONFIDENTIAL: DO NOT LEAVE INSTRUCTIONS IN GAME

Bally®

PALM BEACH



PALM BEACH

Replay amusement-game

5-balls 5 cents

(EXTRA COINS PLAYED FOR SELECTED ADVANTAGES)

IN-LINE SCORES: Card on backglass contains 25 numbers, from 1 to 25, arranged in a square 5 numbers wide by 5 numbers high, not in numerical order.

Each of 2 Super-Cards on backglass contains 9 numbers, duplicating numbers on Card, arranged in a square 3 numbers wide by 3 numbers high, not in numerical order.

Playfield contains 25 skill-holes, numbered 1 to 25, arranged in numerical order from top to bottom of playfield, and Ball-Return Hole that returns balls for free shots.

Object of game is to shoot 5 balls (and extra balls) into numbered skill holes

- (A) To light 3, 4 or 5 adjoining numbers tied together with white line on Card or 3 adjoining numbers tied together with white line on Super-Card;
- (B) To light 4 corner-numbers of Card or Super-Cards.

4-CORNERS SCORES: At mystery-intervals, when coin is deposited (or Replay is played off by pressing Red Button), CORNERS-Panel lights up. When CORNERS-Panel is lit, player scores 200 by lighting 4 corner-numbers of Card. (See YELLOW BUTTON on Page 572.)

Player scores 400* by lighting 4 corner-numbers of a Super-Card with title SUPER-CARD lit, as described in NEW SUPER-CARD FEATURE below.

NEW SUPER-CARD FEATURE: At mystery-intervals, when coin is deposited (or Replay is played off by pressing Red Button), Arrow-Lights advance above each of 2 Super-Cards. When Arrow-Lights advance to fourth and final Arrow, title SUPER-CARD lights up. Super-Card with title SUPER-CARD lit scores as described in IN-LINE SCORES and 4-CORNERS SCORES above. (See YELLOW BUTTON on Page 572.)

SPOT-NUMBER: At mystery-intervals, when coin is deposited (or Replay is played off by pressing Red Button), 1 of following numbers on Card lights up: 2, 5, 15, 16 and 17. Player is "spotted" lit number. (See NEW STARS FEATURE on next page and YELLOW BUTTON on page 572.)

NEW STARS FEATURE: At mystery-intervals, when coin is deposited (or Replays are played off by pressing Red Button), Red and Yellow Stars light on backglass. Player who shoots ball across Red or Yellow Roll-over on playfield, when corresponding Star is lit, is "spotted" 2, 5, 15, 16 and 17. (See YELLOW BUTTON on next page.)

EXTRA-BALLS FEATURE: At mystery-intervals, when coin is deposited (or Replays are played off by pressing Red Button), Arrow-Lights advance above EXTRA-BALLS titles on backglass. When Arrow-Lights advance to eighth and final Arrow of first group, 1st EXTRA BALL lights up, and first Extra Ball is released to player. When Arrow-Lights advance to eighth and final Arrow of second group, 2nd EXTRA BALL lights up, and second Extra Ball is released to player. When Arrow-Lights advance to eighth and final Arrow of third group, 3rd EXTRA BALL lights up and third and final Extra Ball is released to player. (See YELLOW BUTTON and GREEN BUTTON on next page.)

ADVANCING SCORES: Scores flash on backglass, when coin is deposited (or Replays are played off by pressing Red Button). Scores either advance to higher bracket or remain as high as on previous coin, never drop back to a lower bracket. See illustration for actual scores. (See BLUE BUTTON below).

SPECIAL SUPER-CARD SCORES: 3-in-line lit on a Super-Card scores 4-in-line Scores. (Title SUPER-CARD must be lit to qualify for in-line scores on Super-Card.)

SELECTIVE-BUTTON PLAY: After depositing first coin (or pressing Red Button to play off Replays), player may deposit additional coins to play for selected Advantages, as described below.

RED BUTTON: When Red Button is pressed and coin is deposited, all Advantages flash on backglass:

- (1) CORNERS-panel may light;
- (2) Arrow-Lights may advance on Super-Cards;
- (3) Number may be "spotted";
- (4) Stars may light;
- (5) Arrow-Lights may advance for Extra Balls;
- (6) Scores may advance.

BLUE BUTTON: When Blue Button is pressed and coin is deposited, flash is concentrated in Scores-section of backglass and Scores advance faster than when Red Button is played.

YELLOW BUTTON: When Yellow Button is pressed and coin is deposited, flash is concentrated in sections of backglass other than Scores-section:

- (1) CORNER-panel lights with increased frequency;
- (2) Arrow-lights on Super-Cards advance faster than when Red Button is played;
- (3) Number is "spotted" with increased frequency;
- (4) Stars light with increased frequency;
- (5) Arrow-lights advance for Extra Balls faster than when Red Button is played (but not as fast as when Green Button is played).

GREEN BUTTON: When --- after 5 balls have been shot --- Green Button is deposited, flash is concentrated in Extra Balls section of backglass. Arrow-Lights for Extra Balls advance faster than when Red Button or Yellow Button is played.

Only highest in-line score plus highest corners score registers.

PALM BEACH

INSTALLATION & OPERATING INSTRUCTIONS.

Fasten 4 legs to cabinet with bolts and washers furnished. Place back-box in position. Remove C-clamp holding back door, remove door and fasten the back-box to cabinet with bolts and washers furnished. Remove top of back-box by opening lock on right side, lift out glass and lower insert by raising slide brackets on top. Replace back door and lock with turn-bolts mounted on back door. Raise insert and lock in place. Replace glass and top of back-box and lock.

Plug power line into 110-115 volt 60 cycle alternating current only. Turn on power by turning toggle switch on in bottom of cabinet (front right).

ACCESS TO MECHANISM

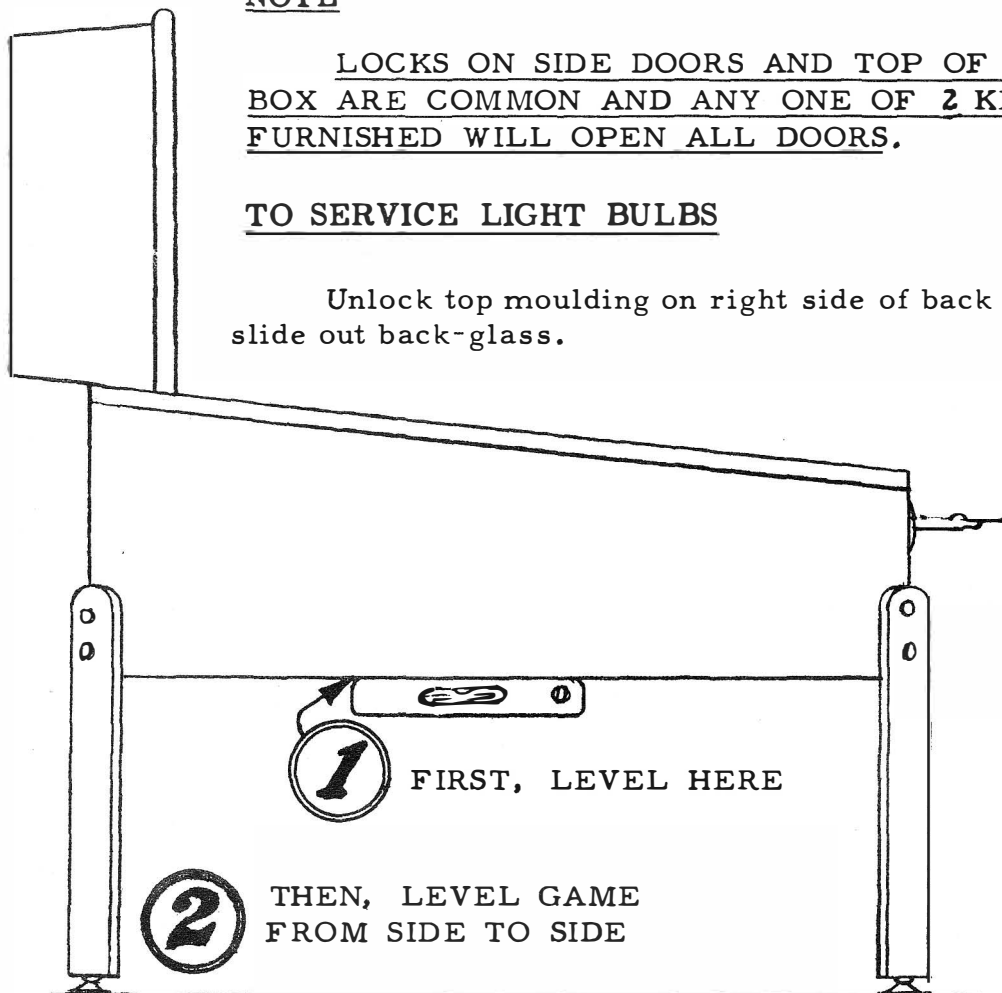
The above paragraph explains access to back box. Mechanism in cabinet can be reached by removing doors on either side of cabinet for minor repairs.

NOTE

LOCKS ON SIDE DOORS AND TOP OF BACK BOX ARE COMMON AND ANY ONE OF 2 KEYS FURNISHED WILL OPEN ALL DOORS.

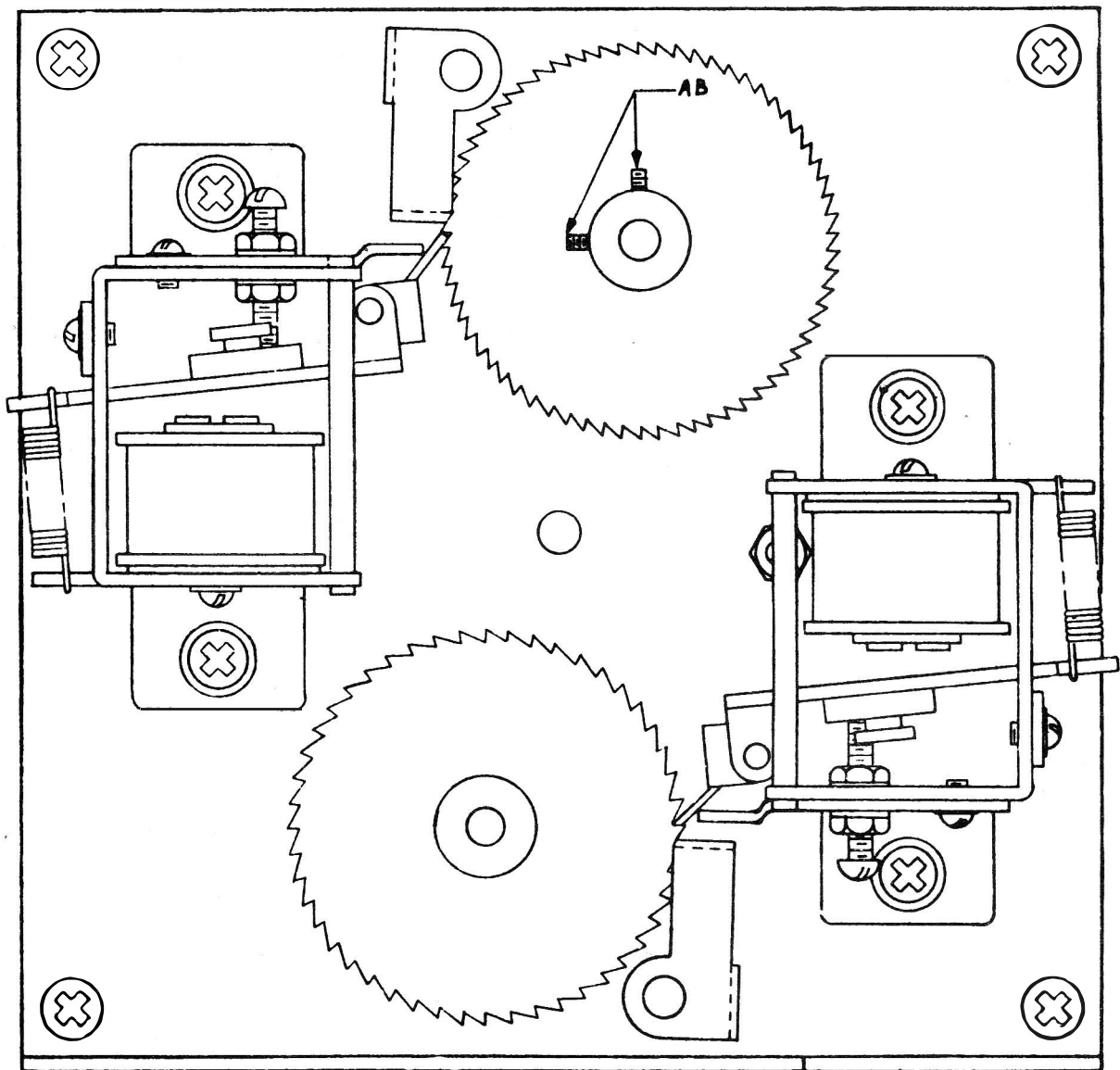
TO SERVICE LIGHT BULBS

Unlock top moulding on right side of back box and slide out back-glass.

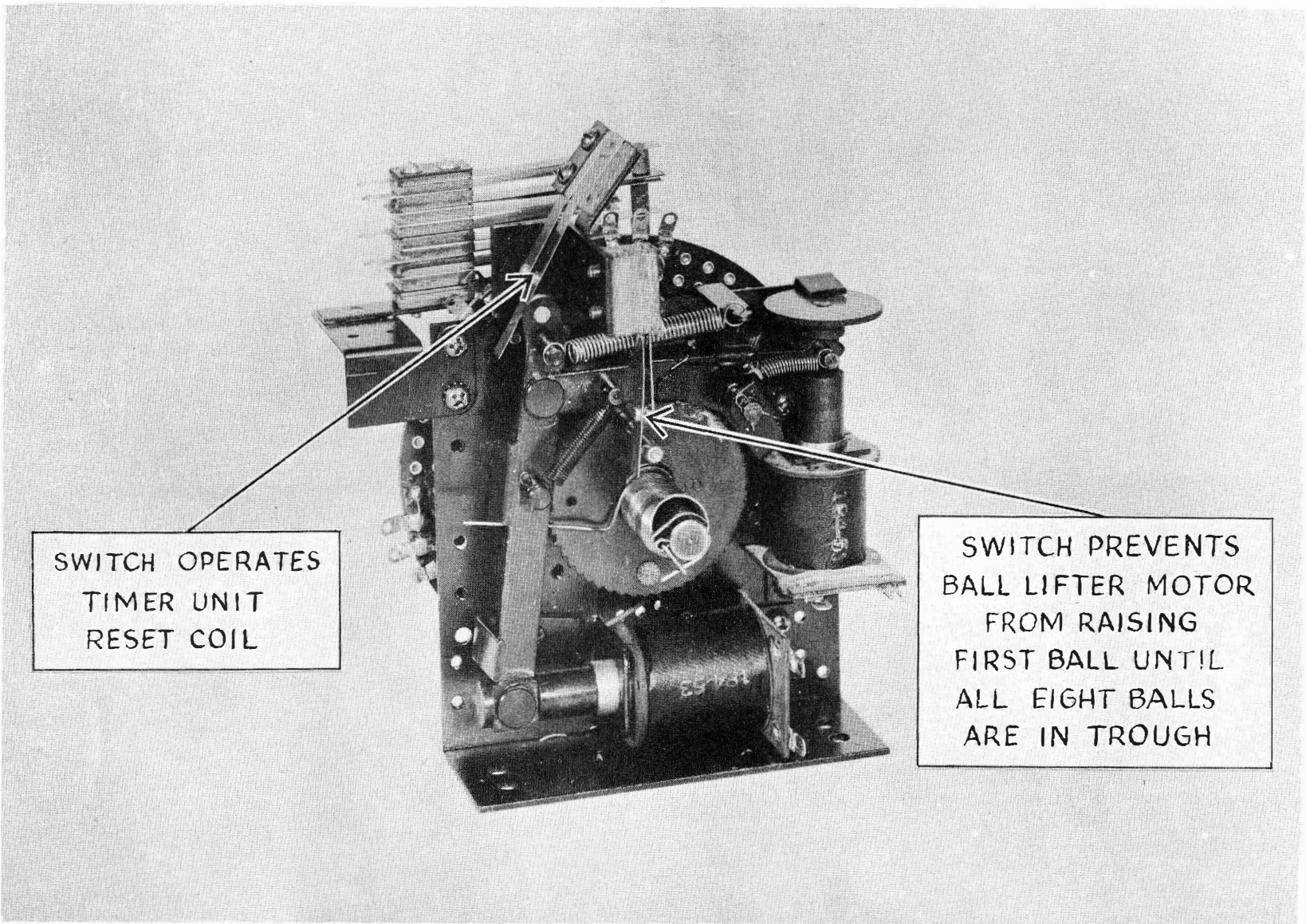


GAME PROPORTIONING

OVERALL PROPORTIONING of game to maintain a maximum amount of play is the function of the REFLEX UNIT which is located in the back cabinet. Two additional ratchets are supplied if the type of play in some locations require a change. See diagram below for location of set screws (A and B) for fastening ratchets.



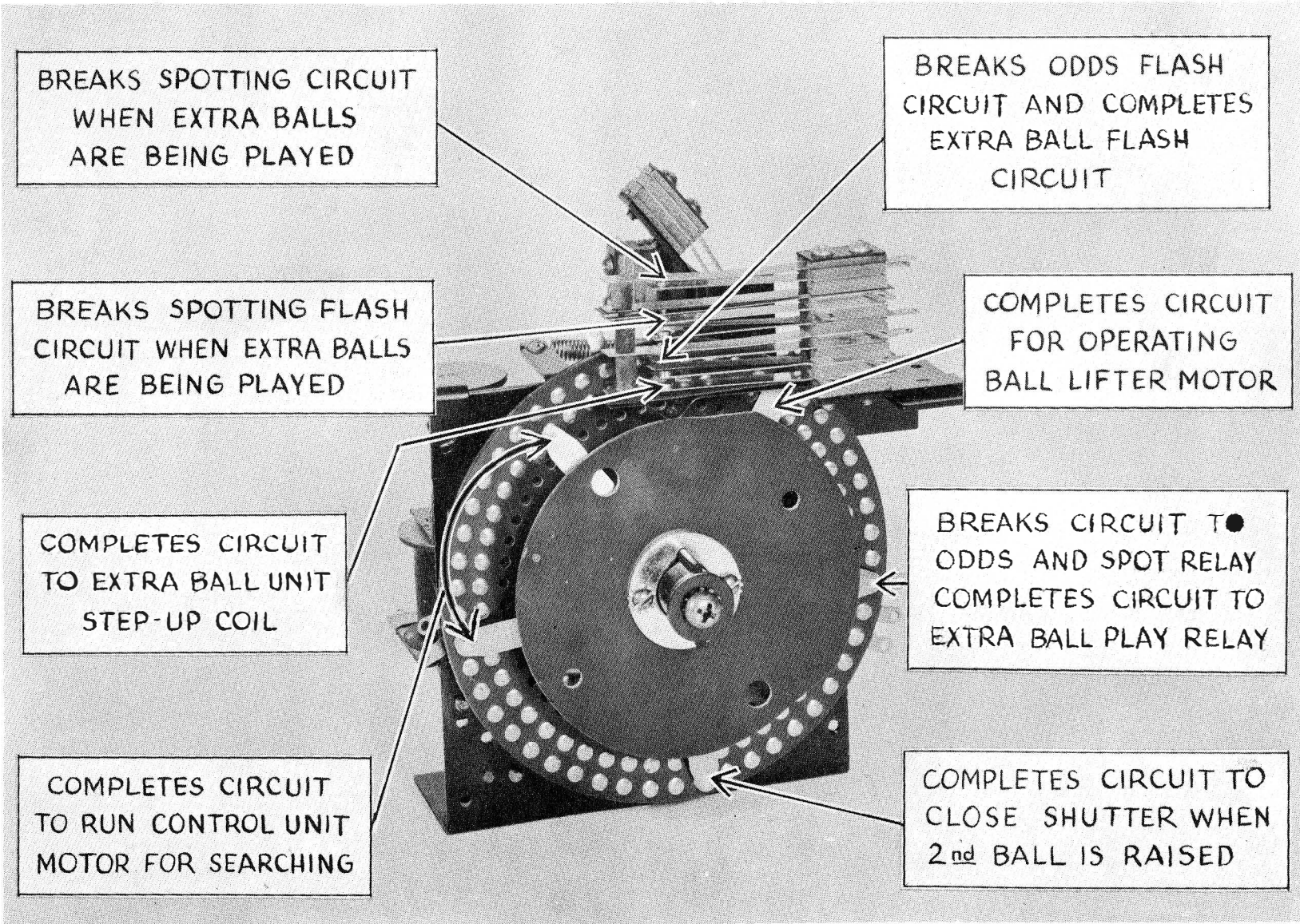
PALM BEACH BALL COUNTER — SWITCH SIDE



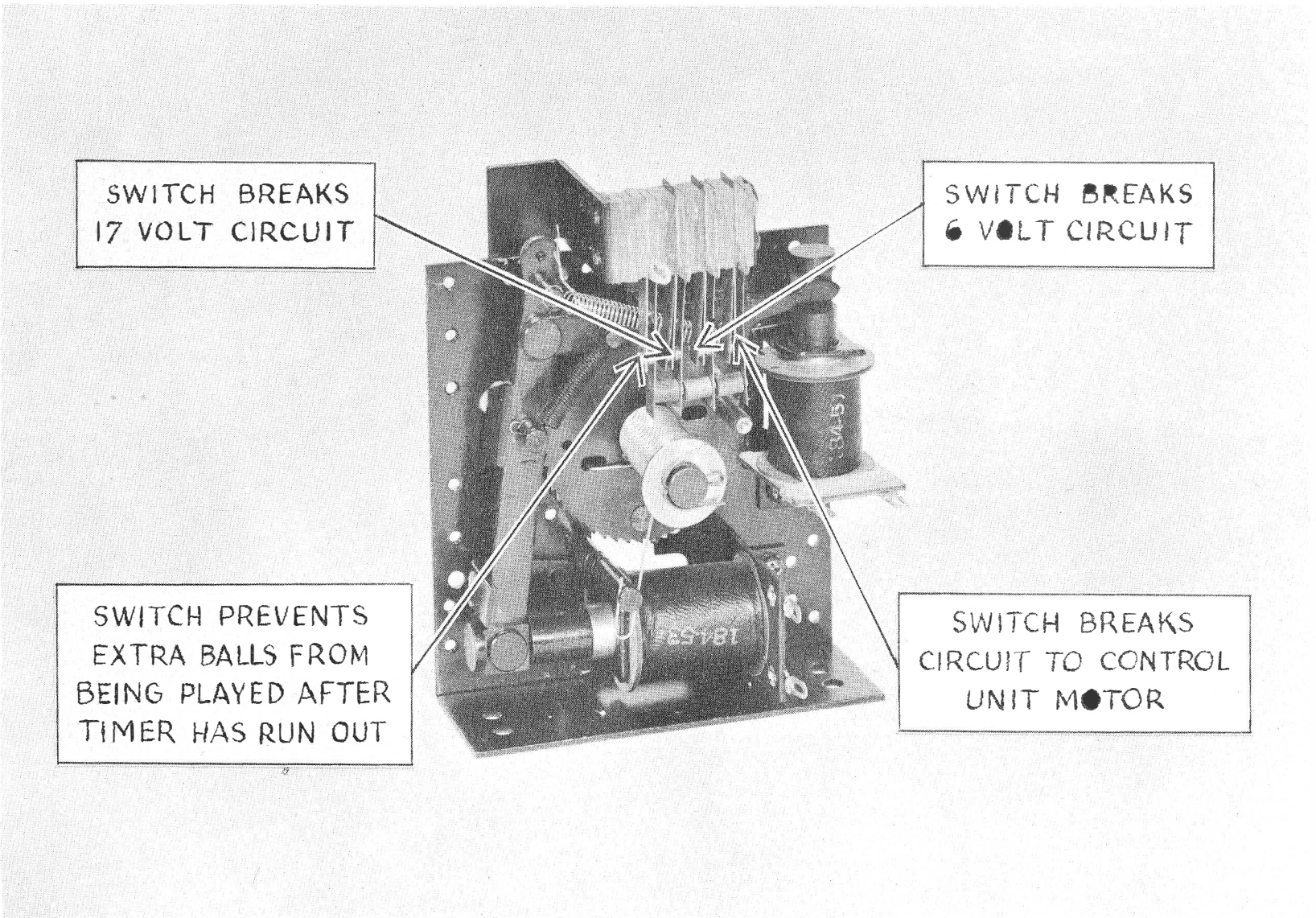
SWITCH OPERATES
TIMER UNIT
RESET COIL

SWITCH PREVENTS
BALL LIFTER MOTOR
FROM RAISING
FIRST BALL UNTIL
ALL EIGHT BALLS
ARE IN TROUGH

PALM BEACH BALL COUNTER — WIPER SIDE

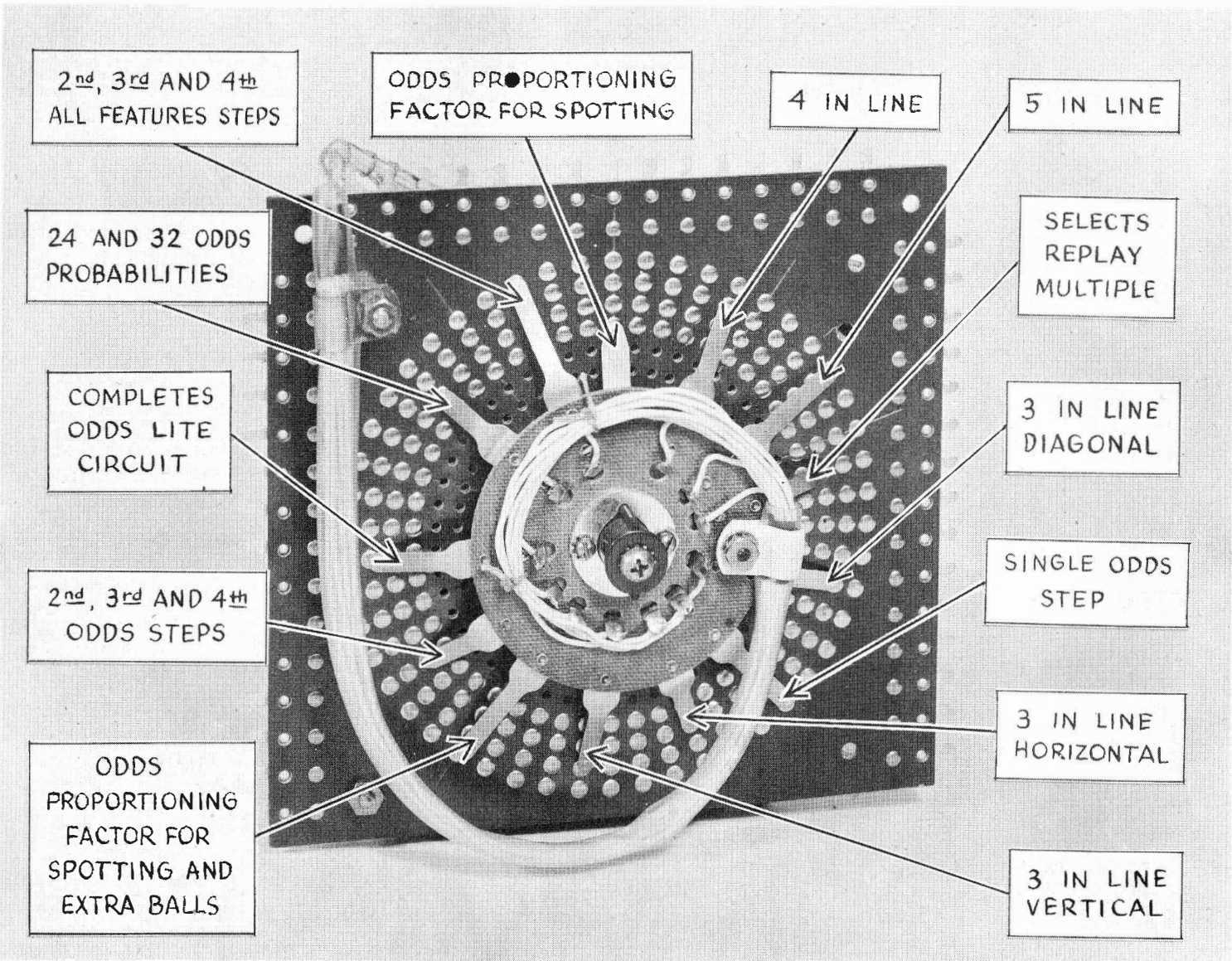


PALM BEACH TIMER STEPPER



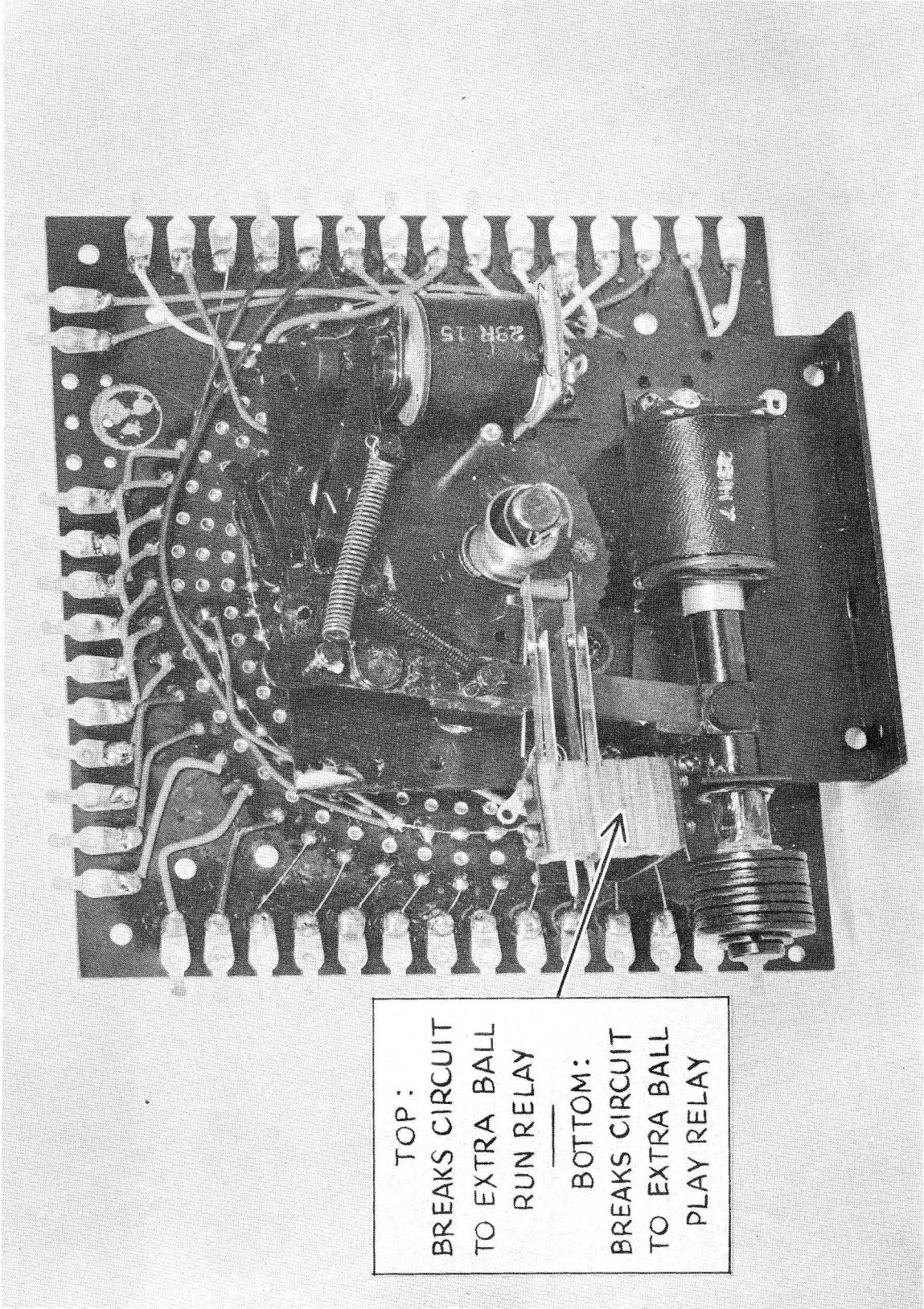
PALM BEACH

ODDS UNIT — WIPER SIDE



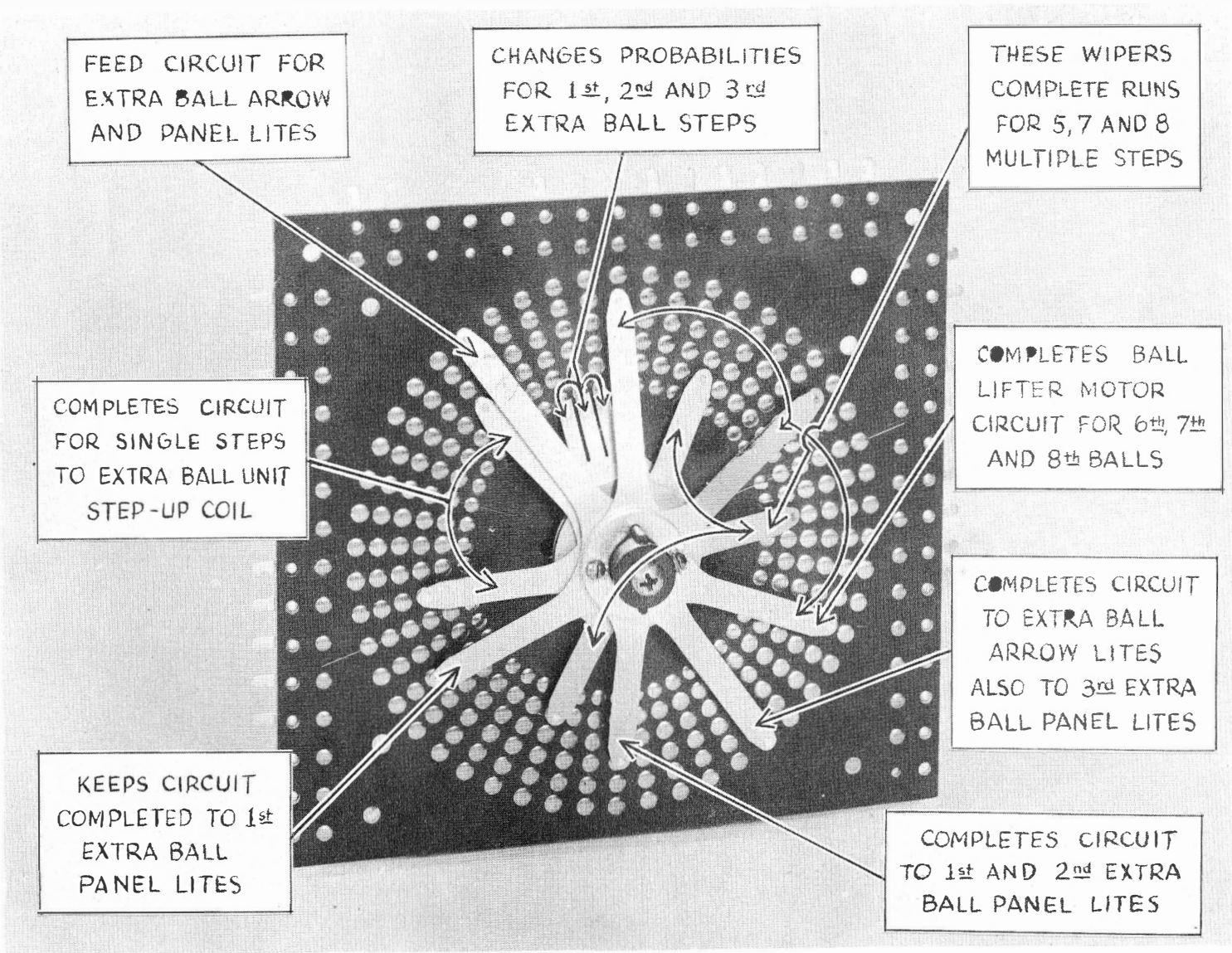
PALM BEACH

EXTRA BALL UNIT — SWITCH SIDE

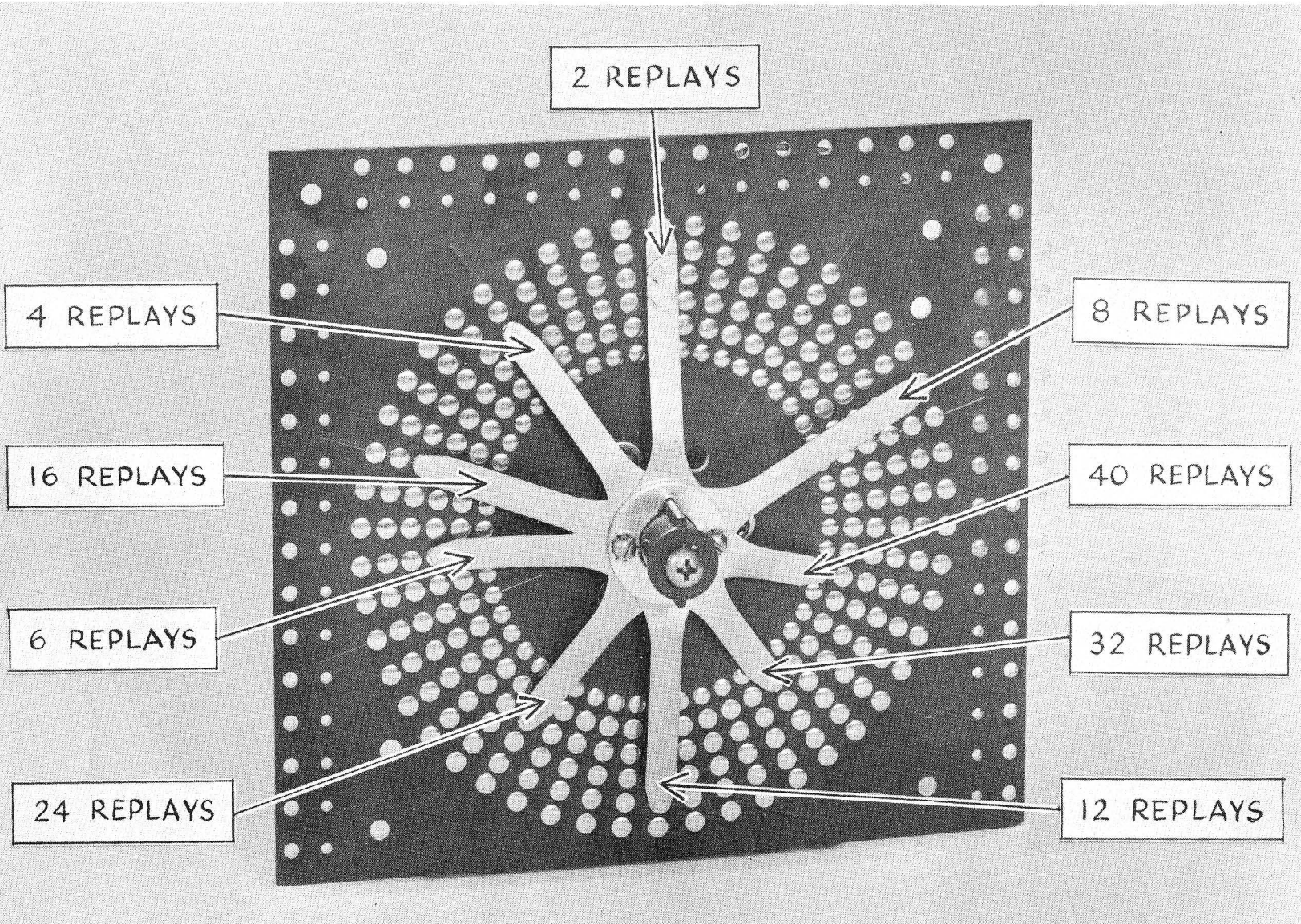


PALM BEACH

EXTRA BALL UNIT — WIPER SIDE



PALM BEACH REPLAY COUNTER

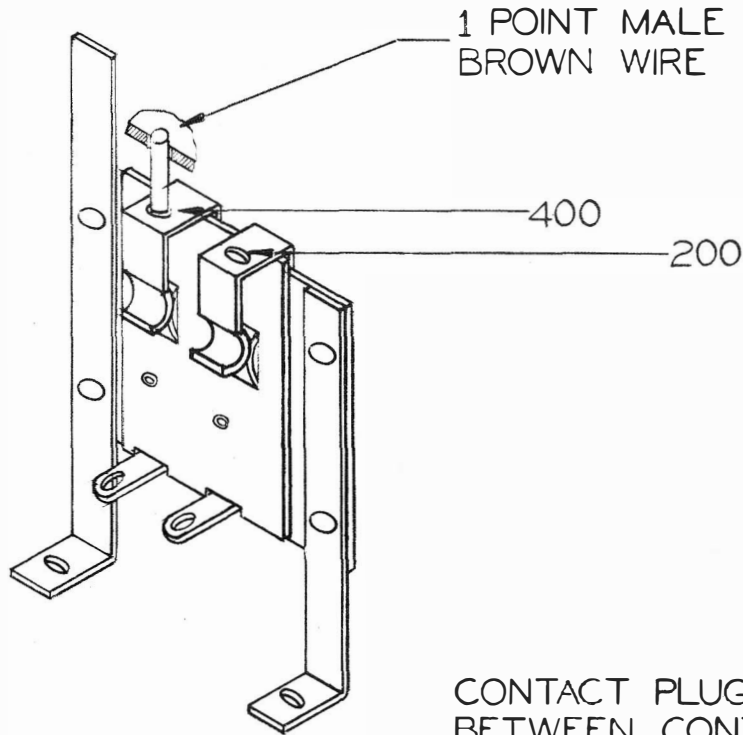


PALM BEACH

SUPER-CARDS CORNERS ADJUSTMENT

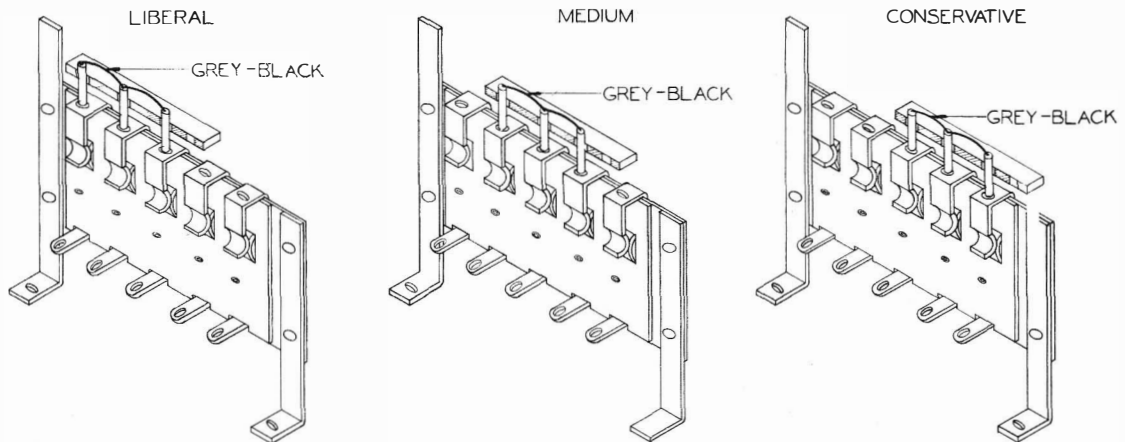
SUPER CARD CORNERS MAY BE OPERATED TO REGISTER 200 OR 400 REPLAYS.

BE SURE TO CHANGE SCORE CARD WHEN ADJUSTING SUPER CARDS CORNERS SCORE



CONTACT PLUG IS LOCATED BETWEEN CONTROL UNIT AND MIXER UNIT.

SUPER-CARDS ADJUSTMENT

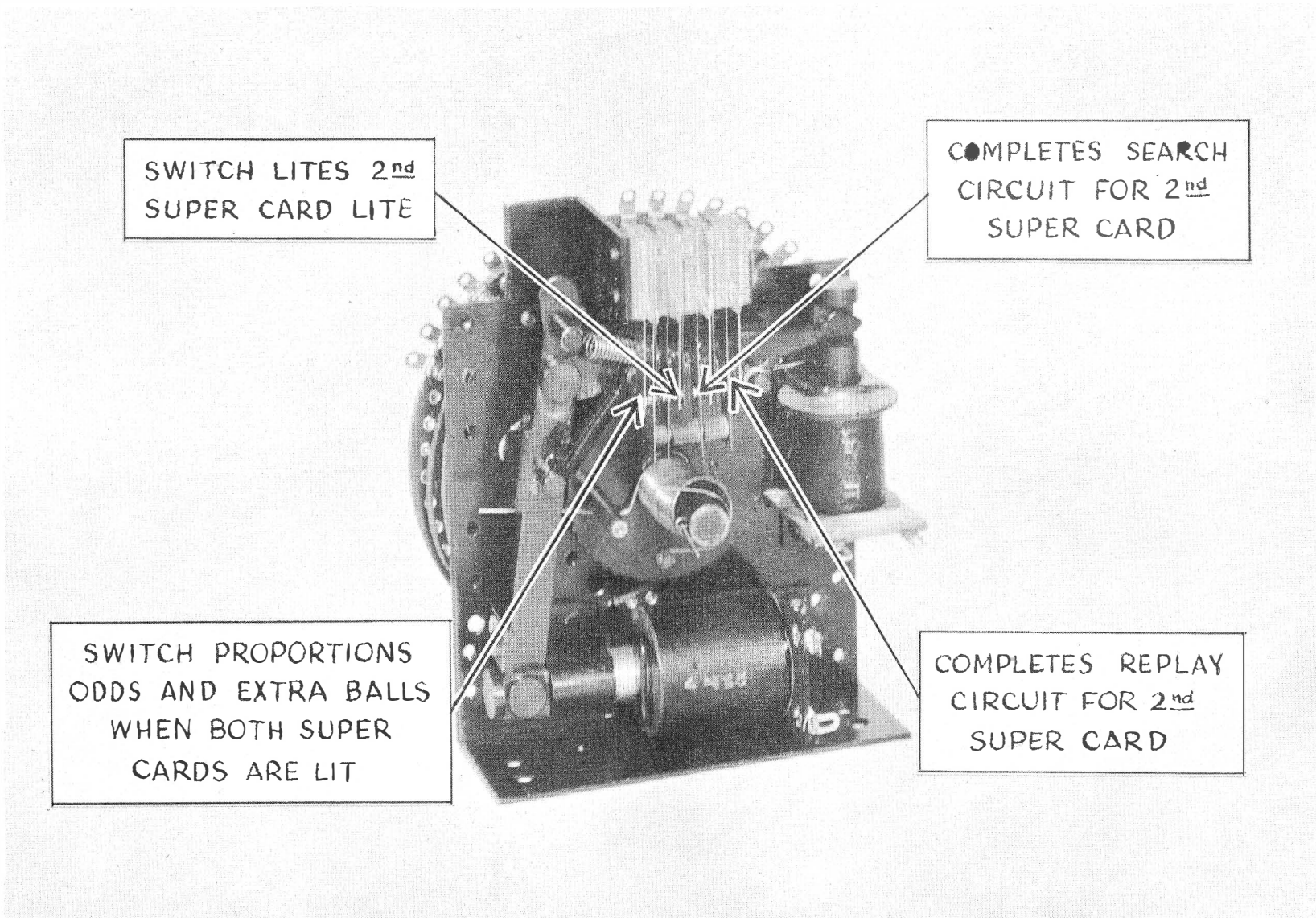


SUPER CARDS MAY BE OPERATED AT ONE OF 3 DEGREES OF LIBERALITY

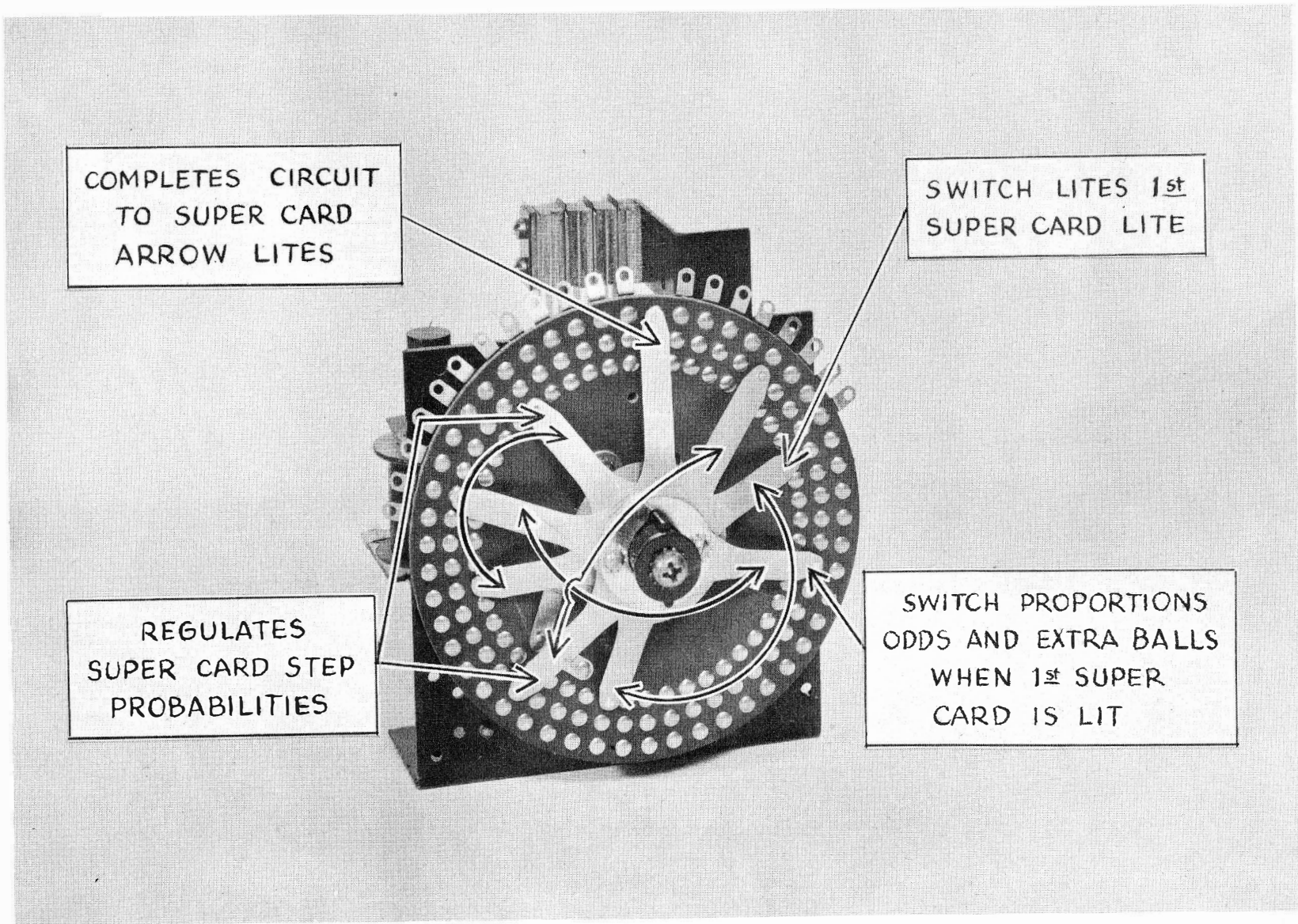
CONTACT PLUG IS LOCATED BETWEEN CONTROL UNIT AND MIXER UNIT

PALM BEACH

SUPER-CARDS UNIT — SWITCH SIDE

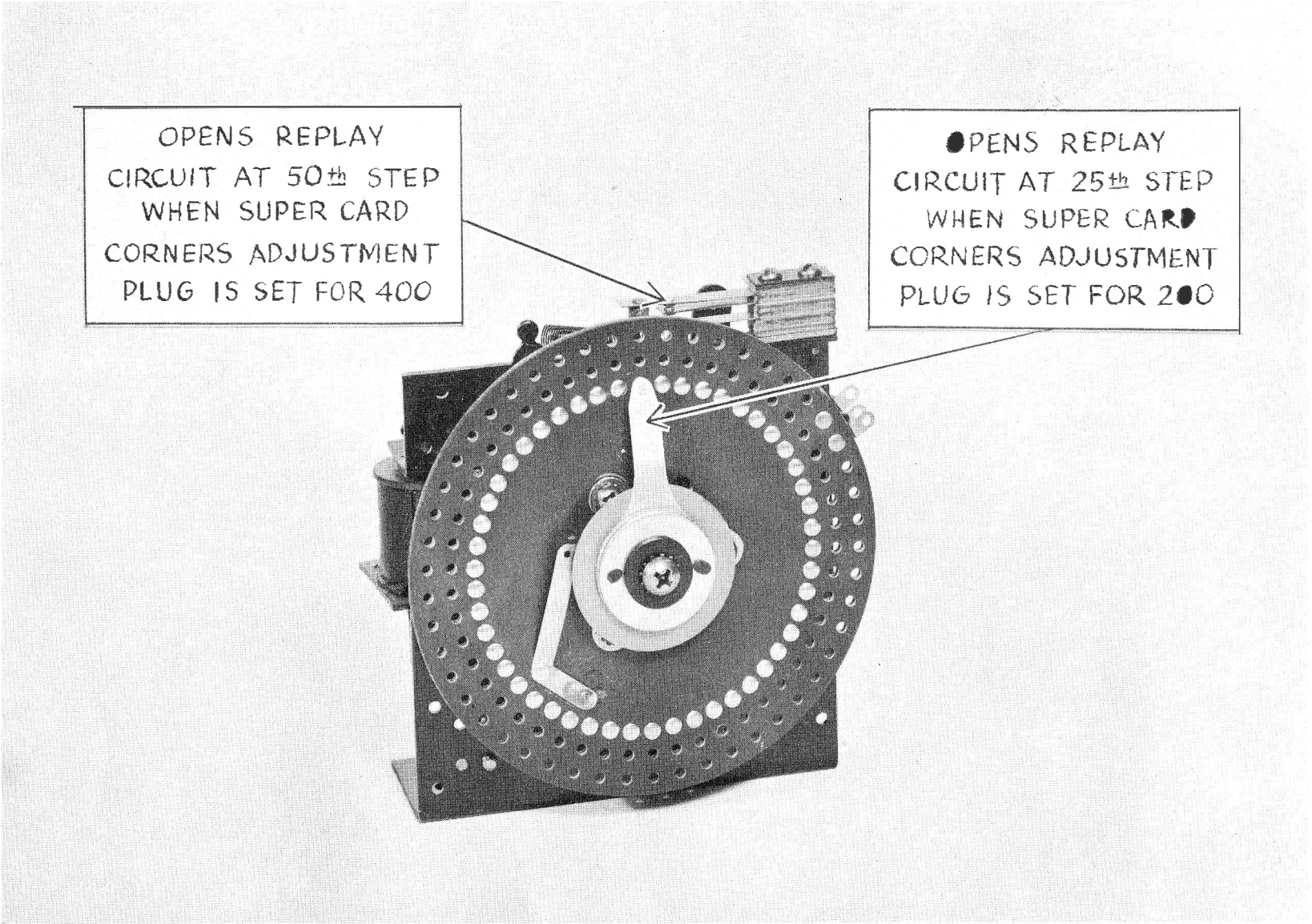


PALM BEACH SUPER-CARDS UNIT — WIPER SIDE

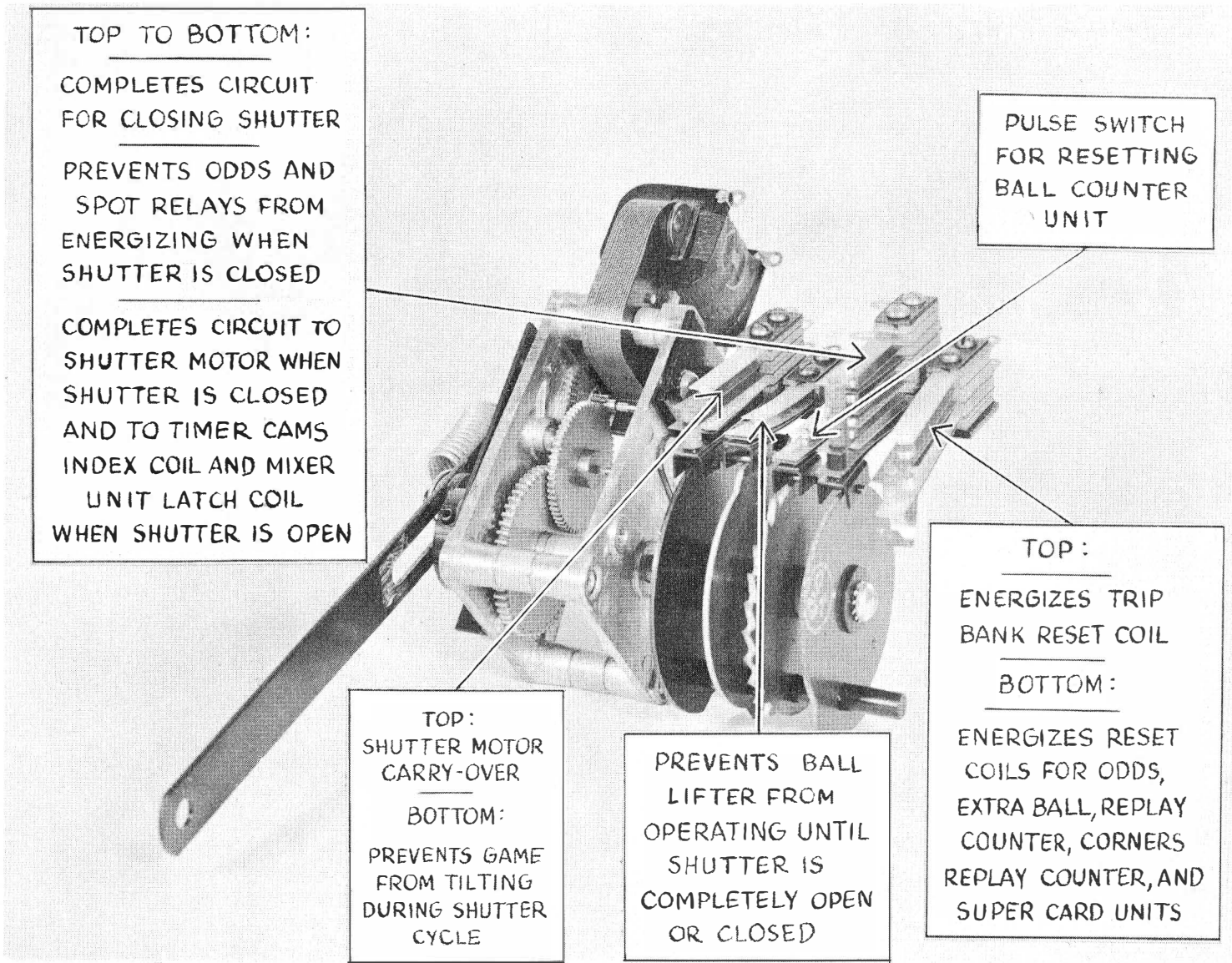


PALM BEACH

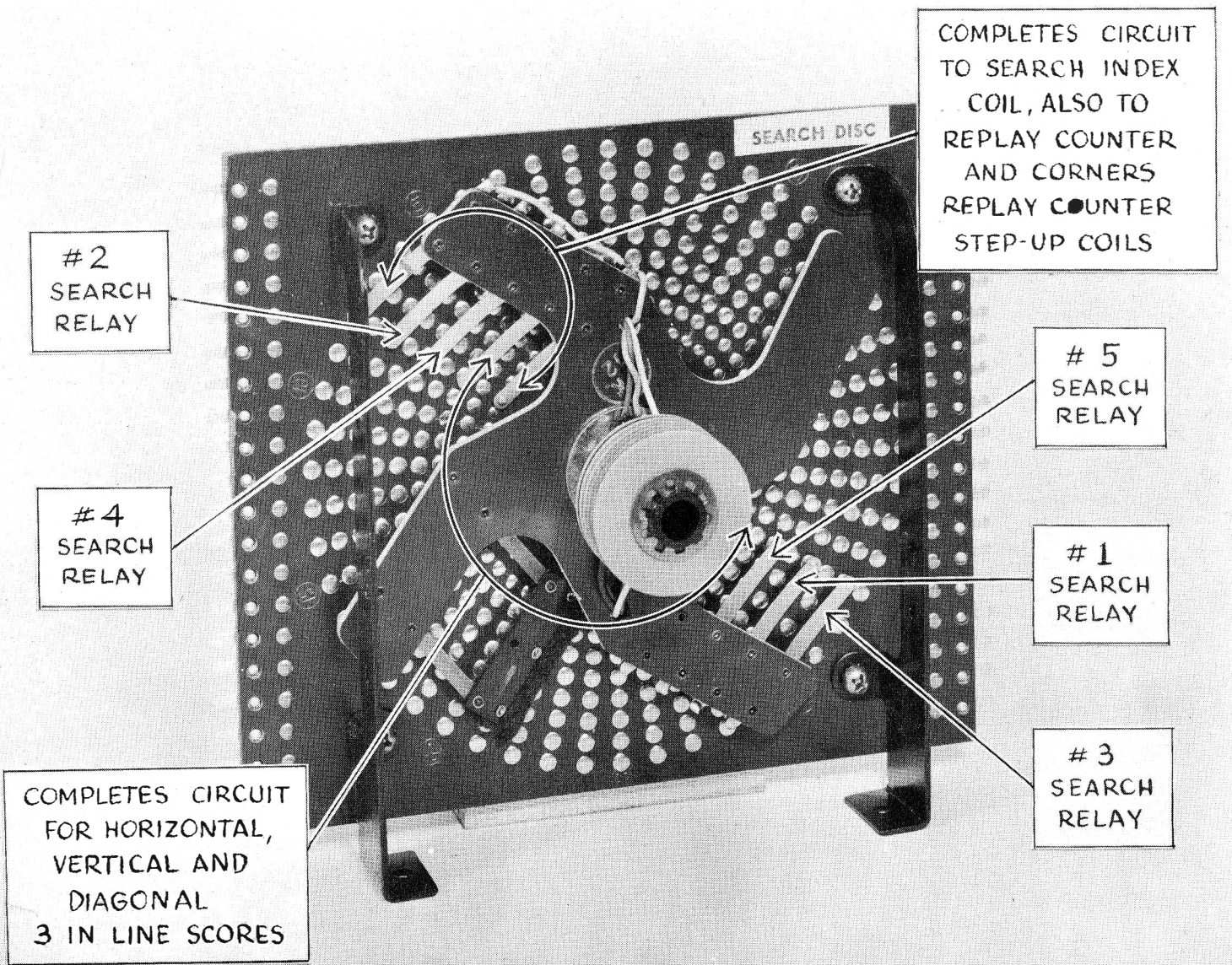
CORNERS REPLAY COUNTER — WIPER SIDE



PALM BEACH SHUTTER MOTOR

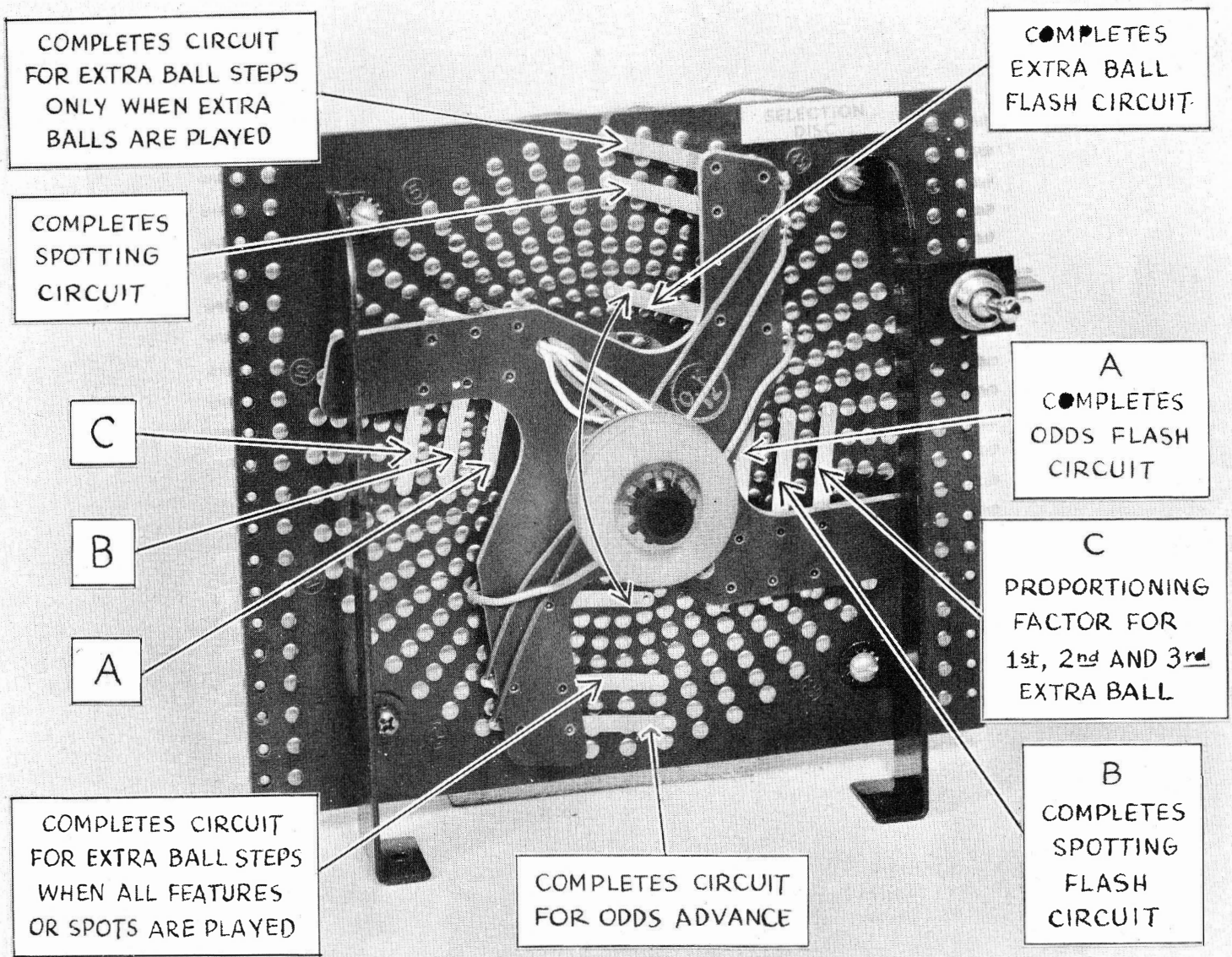


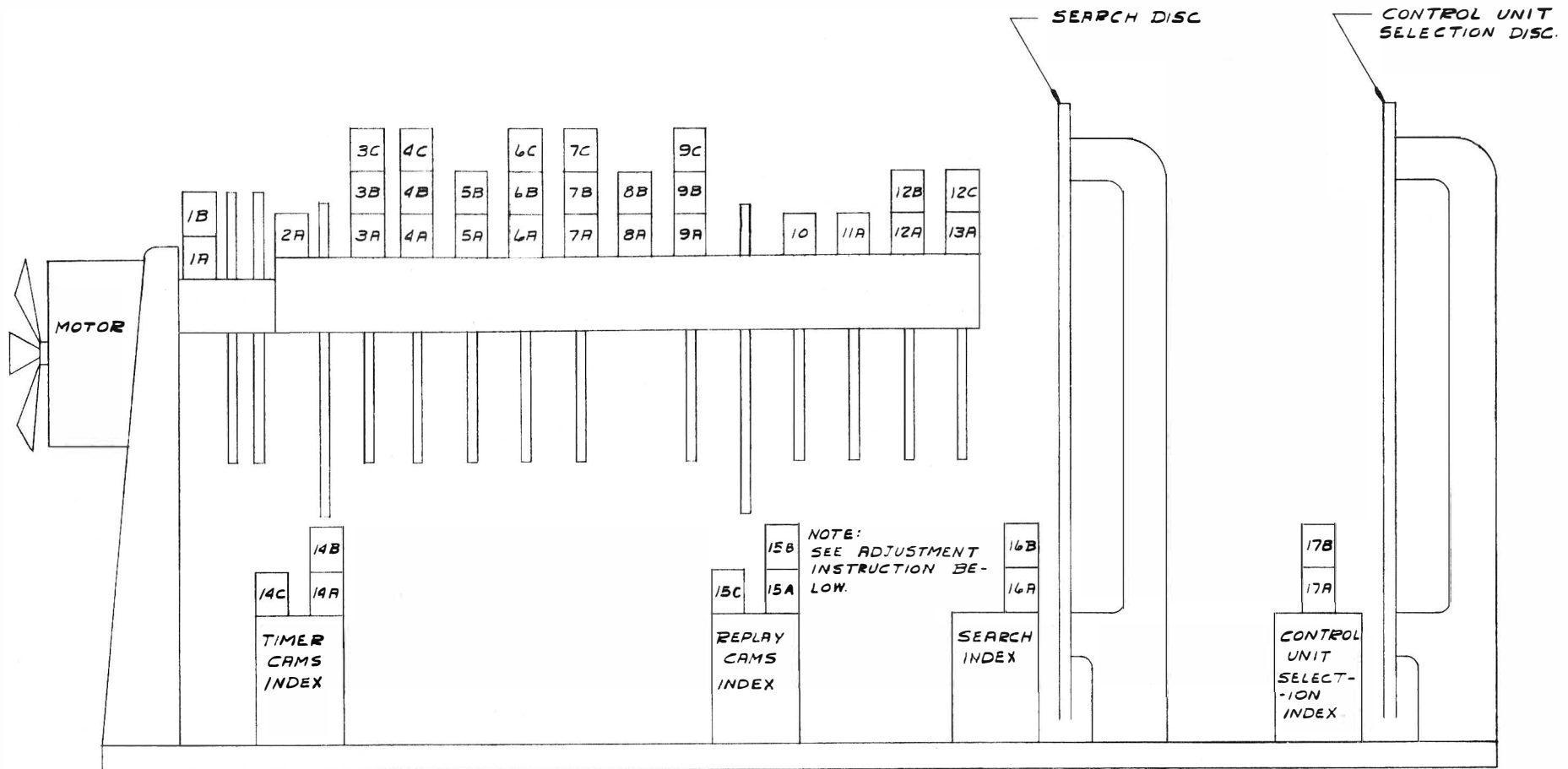
PALM BEACH SEARCH DISC AND WIPERS



PALM BEACH

CONTROL UNIT SELECTION DISC AND WIPERS





NOTE:

IT IS IMPORTANT TO ADJUST REPLAY CAMS INDEX SWITCH NO. 15B, SO THAT IT MAKES ONLY WHEN THE REPLAY CAMS INDEX COIL IS ENERGIZED. WHEN THE REPLAY CAMS INDEX COIL IS DE-ENERGIZED THIS SWITCH SHOULD OPEN AND REMAIN OPEN, WHILE SWITCH IS RIDING ON OUTER EDGE OF CAM.

CONTROL UNIT PICTORIAL VIEW.
NUMBERS CORRESPOND TO SWITCH CHART.

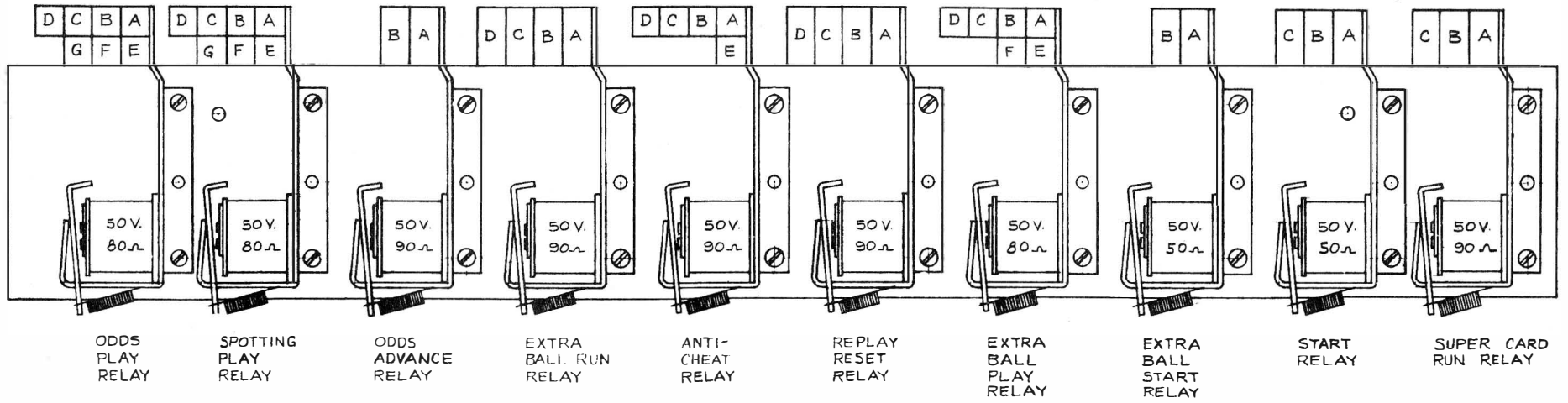
PALM BEACH

FOR POSITION OF SWITCHES
REFER TO PICTORIAL VIEW ABOVE

CODE

N.C. NORMALLY CLOSED
N.O. NORMALLY OPEN
M.B.B. MAKE BEFORE BREAK
S.P.D.T. SINGLE POLE DOUBLE THROW

RELAY SWITCH OR CAM SWITCH	SWITCH CODE	WIRE NO.	WIRE COLORS	FUNCTION OF SWITCHES
1A	N.O.	20-P 60-P	Blue (Plastic) Brown (Plastic)	Prevents control unit motor from stopping while 1B is closed.
1B	N.O.	30 90-9	Yellow Gray	Energizes timer unit step-up coil.
2	N.C.	80 54-2	Black White-Green	Drops out spot relay and odds relay at end of timing cam cycle.
3A	N.C.	14-4 48-2	Red-Green Green-Black	Prevents start relay and extra ball start relay from being pulled in during timing cam cycle.
3B	N.C.	57-2 56-2	White-Orange White-Brown	Prevents spot relay from pulling in during timing cam cycle.
3C	N.C.	60-2 63-2	Brown Brown-Yellow	Prevents odds relay from pulling in during timing cam cycle.
4A	N.O.	74 75	Orange-Green Orange-White	Completes circuit for extra ball flash.
4B	N.O.	30 40-2	Yellow Green	Energizes selection index coil, also odds extra step index coil.
4C	N.O.	85 91	Black-White Gray-Red	Completes circuit to odds flash lites.
5A	N.O.	30 74-9	Yellow Orange-Green	Completes circuit to energize anti-cheat relay after power to game has been turned off and then on again.
5B	N.O.	30 71-9	Yellow Orange-Red	Energizes timer reset coil.
6A	N.O.	25-5 27-5	Blue-White Blue-Orange	Completes circuit to extra ball unit step-up coil.
6B	N.O.	41 54-5	Green-Red White-Green	Energizes super card unit step-up coil for single steps.
6C	N.O.	31-6 83-6	Yellow-Red Black-Yellow	Completes circuit to energize odds unit step-up coil.
7A	N.O.	30 27-4	Yellow Blue-Orange	Energizes replay register reset coil and reflex play magnet.
7B	N.O.	54-5 56-5	White-Green White-Brown	Detector switch to energize left button, right button, #2, #5, #15, #16, #17 and regular corners trip relays.
7C	N.C.	30 98-2	Yellow Gray-Black	Drops out extra ball play relay.
8A	N.O.	40-5 50-5	Green White	Switch is closed 1/3 of the time, to increase extra ball advantages.
8B	N.O.	53-5 57-5	White-Yellow White-Orange	Switch is closed 1/3 of the time, to increase extra ball advantages.
9A	N.O.	75-2 53-2	Orange-White White-Yellow	Pulse switch for operating replay meter and replay register reset coil, when replay reset relay is energized.
9B	N.O.	31-5 83-5	Yellow-Red Black-Yellow	Energizes extra ball unit step-up coil when extra ball run relay is energized.
9C	N.O.	85-5 78-5	Black-White Orange-Black	Energizes super card unit step-up coil when super card unit run relay is energized.
10	N.O.	50-4 45-4	White Green-White	4 pulse switch for energizing replay counter step-up coil.
11	N.O.	48-4 45-4	Green-Black Green-White	8 pulse switch for energizing replay counter step-up coil.
12A	N.O.	43-4 45-4	Green-Yellow Green-White	16 pulse switch for energizing replay counter step-up coil.
12B	N.O.	36-4 38-4	Yellow-Brown Yellow-Black	16 pulse switch for energizing replay register step-up coil and reflex replay magnet.
13A	N.C.	50-4 60-3	White Brown	In series with 4 pulse cam switch #10. Changes cam switch #10 to a 2 pulse switch when registering replays for corner and super card corners scores.
13B	N.C.	93-3 36-4	Gray-Yellow Yellow-Brown	Drops out replay cam index coil. In series with search index coil switch.
TIMER CAMS INDEX	Coil	70 93-2	Orange Gray-Yellow	Energized by switches on start relay and extra ball start relay.
14A	N.O.	60-P 20-P	Brown (Plastic) Blue (Plastic)	Completes circuit to start control unit motor.
14B	N.C.	14-9 71-2	Red-Green Orange-Red	Opens circuit to coin lockout magnet during timer cams cycle.
14C	N.O.	74-2 78-2	Orange-Green Orange-Black	Prevents extra ball play relay from being de-energized during timer cams cycle.
REPLAY CAMS INDEX	Coil	70 40-4	Orange Green	Energized by switch #16A on search index when 3 or more in line is scored.
15A	N.O.	60-P 20-P	Brown (Plastic) Blue (Plastic)	Completes circuit to start control unit motor.
15B	N.O.	93-3 36-4	Gray-Yellow Yellow-Brown	Completes lock-in circuit for search index coil when replay cams index coil is energized. NOTE: See pictorial view above for adjusting this switch.
15C	N.C.	30 14-4	Yellow Red-Green	Opens circuit to start and extra ball start relays, while replays are registering.
SEARCH INDEX	Coil	70 36-4	Orange Yellow-Brown	Energized when 3 or more in line are scored.
16A	N.O.	36-4 40-4	Yellow-Brown Green	Completes circuit to energize replay cams index coil.
16B	N.O.	65-2 21-3	Brown-White Blue-Red	Prevents replay circuit from failing, should ball counter reset during scoring cycle.
SELECTION INDEX	Coil	70 40-2	Orange Green	Energized by c.u. cam #4B.
17A	N.O.	20-2 80-3	Blue Black	Completes circuit to flash lites for #2, #5, #15, #16 and #17 spots.
17B	N.O.	20-2 21-2	Blue Blue-Red	Completes circuit to flash lites for regular corners, also for left and right button and super card lites.



10 RELAY BANK

**10 RELAY BANK CHART
FOR POSITION OF SWITCHES
REFER TO PICTORIAL VIEW ABOVE**

N.C. NORMALLY CLOSED
N.O. NORMALLY OPEN
M.B.B. MAKE BEFORE BREAK
S.P.D.T. .. SINGLE POLE DOUBLE THROW

RELAY SWITCH OR CAM SWITCH	SWITCH CODE	WIRE NO.	WIRE COLORS	FUNCTION OF SWITCHES
ODDS PLAY RELAY	Coil	70 63-2	Orange Brown-Yellow	Energized when odds feature button is played.
A	S.P.O.T.	25-6 83-6 27-6	Blue-White Black-Yellow Blue-Orange	Normally completes circuit to advance odds unit at least 2 steps when play all button is played. Directs circuit to 4 steps when odds feature is played.
B	N.O.	61-2 63-2	Brown-Red Brown-Yellow	Completes lock-in circuit for odds play relay.
C	N.O.	85-7 74-3	Black-White Orange-Green	Completes circuit to odds feature lite in back-box.
D	N.O.	81-4 98-4	Black-Red Gray-Black	Completes circuit to advance odds when odds feature is played.
E	N.C.	91-4 93-4	Gray-Red Gray-Yellow	Opens circuit to extra balls and spot advantages when odds feature is played.
F	N.C.	10 18-2	Red Red-Black	Opens circuit to all spot advantage flash lites.
G	N.O.	51-2 50-2	White-Red White	Energizes start relay when odds feature is played.
SPOTTING PLAY RELAY	Coil	70 56-2	Orange White-Brown	Energized when spot feature button is played.
A	N.C.	31-6 36-6	Yellow-Red Yellow-Brown	Opens odds advance circuit when spot feature button is played.
B	N.C.	78 85	Orange-Black Black-White	Breaks circuit to odds flash lites.
C	N.O.	57-4 91-4	White-Orange Gray-Red	Increases spot probabilities when spot feature button is played.
D	N.O.	51-2 50-2	White-Red White	Energizes start relay when spot feature button is played.
E	S.P.D.T.	61-2 54-2 56-2	Brown-Red White-Green White-Brown	Normally completes lock-in circuit for odds play relay. Completes lock-in circuit to spotting play relay when energized.
F	N.O.	85-7 75-3	Black-White Orange-White	Completes circuit to spotting feature lite in back-box.
G	N.O.	93-4 23-4	Gray-Yellow Blue-Yellow	Increases spotting probabilities when spot feature button is played.
ODDS ADVANCE RELAY	Coil	70 43-6	Orange Green-Yellow	Energized when circuit is completed through control, mixer, and odds unit discs.
A	N.O.	45-6 43-6	Green-White Green-Yellow	Lock-in circuit for odds advance relay during odds run.
B	N.O.	20-P 60-P	Blue (Plastic) Brown (Plastic)	Completes circuit to run control unit motor.
EXTRA BALL RUN RELAY	Coil	70 93-5	Orange Gray-Yellow	Energized when circuit is completed thru mixer, control unit and extra ball unit discs.
A	N.C.	65-2 90-2	Brown-White Gray	Opens circuit to extra ball play relay while extra ball unit is stepping.
B	N.O.	20-P 60-P	Blue (Plastic) Brown (Plastic)	Completes circuit to run control unit motor.
C	N.O.	30 83-5	Yellow Black-Yellow	Completes circuit to energize extra ball unit step-up coil when control unit cam switch #98 closes.
D	N.O.	30 27-5	Yellow Blue-Orange	Locks extra ball run relay in until extra ball unit wipers advance to an open position.
ANTI-CHEAT RELAY	Coil	70 74-9	Orange Orange-Green	Energized by control unit cam switch #5A.
A	N.C.	50-2 75-2	White Orange-White	Energizes replay reset relay, when anti-cheat relay is de-energized.
B	N.O.	30 74-9	Yellow Orange-Green	Lock-in switch for anti-cheat relay.
C	N.O.	81-2 91-2	Black-Red Gray-Red	Prevents extra ball play relay from being pulled in if 110 volts has been turned off and then on again.
D	N.O.	56 10	White-Brown Red	Completes 17 volt circuit.
E	N.O.	85-7 40	Black-White Green	Completes 6 volt circuit.
REPLAY RESET RELAY	Coil	70 75-2	Orange Orange-White	Energized when replay reset button is operated or when 110 volts has been turned off and then on again, if replay register is off zero position.
A	N.O.	50-2 75-2	White Orange-White	Locks replay reset relay in until replay register is reset to zero.
B	S.P.D.T.	27-4 13-9 53-2	Blue-Orange Red-Yellow White-Yellow	Normally completes circuit to replay register reset coil for taking off 1 replay at a time. When energized it parallels replay register reset coil with replay meter.
C	N.O.	20-P 60-P	Blue (Plastic) Brown (Plastic)	Completes circuit to run control unit motor.
D	N.C.	52-2 21-6	White-Blue Blue-Red	Prevents start relay from being energized while replays are being reset.
EXTRA BALL PLAY RELAY	Coil	70 93-6	Orange Gray-Yellow	Energized when extra ball feature button is played. Operative only when 5 balls have been played.
A	N.C.	36-6 38-6	Yellow-Brown Yellow-Black	Breaks circuit to odds advance when extra ball feature is played.
B	S.P.D.T.	85-4 91-4 81-4	Black-White Gray-Red Black-Red	Controls proportioning of extra ball steps.
C	S.P.O.T.	52-2 51-2 20-3	White-Blue White-Red Blue	Normally completes circuit to start relay. Completes circuit to extra ball start relay when energized.
D	N.O.	51-2 50-2	White-Red White	Completes circuit to extra ball start relay when replay register is off zero position.
E	S.P.D.T.	41-3 98-2 74-2	Green-Red Gray-Black Orange-Green	Normally completes circuit for start relay to operate shutter motor. Lock-in circuit for extra ball play relay when energized.
F	N.O.	83-1 75	Black-Yellow Orange-White	Completes circuit to lite extra ball lite.
EXTRA BALL START RELAY	Coil	70 20-3	Orange Blue	Energized when extra ball play relay is pulled in and then coin is dropped.
A	N.O.	48-2 20-3	Green-Black Blue	Lock-in circuit for extra ball start relay.
B	N.O.	74-2 93-2	Orange-Green Gray-Yellow	Completes circuit to energize the timer cams index coil.
START RELAY	Coil	70 21-6	Orange Blue-Red	Energized by coin or replays, except when extra ball feature button is played.
A	N.O.	48-2 52-2	Green-Black White-Blue	Lock-in circuit for start relay.
B	N.O.	41-3 13-3	Green-Red Red-Yellow	Completes circuit to operate shutter motor after balls have been played. Energizes timer cams index coil when shutter is open.
C	N.C.	91-2 93-6	Gray-Red Gray-Yellow	Breaks circuit to extra ball play relay.
SUPER CARD RUN RELAY	Coil	70 83	Orange Black-Yellow	Energized by control unit cam #7B, when circuit is complete thru all other factors.
A	N.O.	20-P 60-P	Blue (Plastic) Brown (Plastic)	Completes circuit to run control unit motor.
B	N.O.	56-5 30	White-Brown Yellow	Lock-in circuit for super card run relay.
C	N.O.	85-5 30	Black-White Yellow	Completes circuit to energize super card unit step-up coil.

NOTES

PALM BEACH

TRIP RELAY BANK SWITCHES

SWITCHES ARE LISTED FROM LEFT TO RIGHT LOOKING AT LUGS

CODE	
N.C.	NORMALLY CLOSED
N.O.	NORMALLY OPEN
M.B.B.	MAKE BEFORE BREAK
S.P.D.T.	SINGLE POLE DOUBLE THROW

RELAY SWITCH OR CAM SWITCH	SWITCH CODE	WIRE NO.	WIRE COLORS	FUNCTION OF SWITCHES
ALL SPOT RELAY	Coil	70 85-9	Orange Black-White	Energized by left or right panel switch when left or right button relay is tripped.
Top Left	N.O.	30 14-7	Yellow Red-Green	Completes circuit to energize #17 spot relay.
Bottom Left	N.O.	30 13-7	Yellow Red-Yellow	Completes circuit to energize #5 spot relay.
Top Right	N.O.	30 41-7	Yellow Green-Red	Completes circuit to energize #16 spot relay.
Middle Right	N.O.	30 18-7	Yellow Red-Black	Completes circuit to energize #15 spot relay.
Bottom Right	N.O.	30 15-8	Yellow Red-White	Completes circuit to energize #2 spot relay.
RED STAR RELAY	Coil	70 60-5	Orange Brown	Energized by control unit cam #78, when circuit is complete thru all other factors.
Top	N.C.	71-4 63-4	Orange-Red Brown-Yellow	Proportioning factor for all advantages.
Middle	N.C.	75-9 85-9	Orange-White Black-White	Completes circuit to energize all spot trip relay when left panel switch is hit.
Bottom	N.O.	10 52-6	Red White-Blue	Completes circuit to lite in back-box and panel.
YELLOW STAR RELAY	Coil	70 57-5	Orange White-Orange	Energized by control unit cam #78, when circuit is complete thru all other factors.
Top	N.C.	65-7 74-4	Brown-White Orange-Green	Proportioning factor for all advantages.
Middle	N.O.	78-9 85-9	Orange-Black Black-White	Completes circuit to energize all spot trip relay when right panel switch is hit.
Bottom	N.O.	10 53-6	Red White-Yellow	Completes circuit to lite in back-box and panel.
REGULAR CORNERS RELAY	Coil	70 74-5	Orange Orange-Green	Energized by control unit cam #78, when circuit is complete thru all other factors.
Top	N.O.	25-3 14-6	Blue-White Red-Green	Completes search circuit to corners replay counter when regular corners trip relay is tripped.
Bottom	N.O.	10 23-2	Red Blue-Yellow	Completes circuit to corners lite in back-box.
#17 RELAY	Coil	70 65-5	Orange Brown-White	Energized by control unit cam #78, when circuit is complete thru all other factors.
Top	N.C.	14-7 65-5	Red-Green Brown-White	Breaks circuit to #17 coil when relay #17 has been tripped.
Middle	N.C.	90-4 63-4	Gray Brown-Yellow	Proportioning factor for all advantages.
Bottom	N.O.	10 57-1	Red White-Orange	Completes circuit to #17 lite in back-box.
#16 RELAY	Coil	70 61-5	Orange Brown-Red	Energized by control unit cam #78, when circuit is complete thru all other factors.
Top	N.C.	41-7 61-5	Green-Red Brown-Red	Breaks circuit to #16 coil when relay #16 has been tripped.
Middle	N.C.	57-4 60-4	White-Orange Brown	Proportioning factor for all advantages.
Bottom	N.O.	10 56-1	Red White-Brown	Completes circuit to #16 lite in back box.
#15 RELAY	Coil	70 71-5	Orange Orange-Red	Energized by control unit cam #78, when circuit is complete thru all other factors.
Top	N.C.	18-7 71-5	Red-Black Orange-Red	Breaks circuit to #15 coil when relay #15 has been tripped.
Middle	N.C.	75-4 74-4	Orange-White Orange-Green	Proportioning factor for all advantages.
Bottom	N.O.	10 54-1	Red White-Green	Completes circuit to #15 lite in back-box.
#5 RELAY	Coil	70 63-5	Orange Brown-Yellow	Energized by control unit cam #78, when circuit is complete thru all other factors.
Top	N.C.	13-7 63-5	Red-Yellow Brown-Yellow	Breaks circuit to #5 coil when relay #5 has been tripped.
Middle	N.C.	61-4 60-4	Brown-Red Brown	Proportioning factor for all advantages.
Bottom	N.O.	10 36-1	Red Yellow-Brown	Completes circuit to #5 lite in back-box.
#2 RELAY	Coil	70 90-5	Orange Gray	Energized by control unit cam #78, when circuit is complete thru all other factors.
Top	N.C.	15-8 90-5	Red-White Gray	Breaks circuit to #2 coil when relay #2 has been tripped.
Middle	N.C.	63-4 65-4	Brown-Yellow Brown-White	Proportioning factor for all advantages.
Bottom	N.O.	10 27-1	Red Blue-Orange	Completes circuit to #2 lite in back-box.
TILT RELAY	Coil	23-3 15-7	Blue-Yellow Red-White	Energized by plumb bob tilt in cabinet also by replay reset button switch in cabinet.
Top	N.C.	30 21-3	Yellow Blue-Red	Opens search circuit when tilt relay is tripped.
Middle	N.C.	25 45-7	Blue-White Green-White	Breaks 17 volt lite circuit when tilt relay is tripped.
Bottom	S.P.D.T.	38 81 41-9	Yellow-Black Black-Red Green-Red	Break 6 volt lite circuit and lites tilt lite when tilt relay is tripped.