

# OPERATING INSTRUCTIONS

CONFIDENTIAL: DO NOT LEAVE INSTRUCTIONS IN GAME

*Bally*®

# BRIGHT SPOT

# BRIGHT SPOT

## INSTALLATION AND OPERATING INSTRUCTIONS

Fasten 4 legs to cabinet with bolts and washers furnished. Place back-box in position, fasten to cabinet with bolts furnished, plug in connector cables. Plug power line into A.C. ONLY, 60 cycles, 110-115 volts. Turn on power by turning toggle switch on in bottom of cabinet (front right).

## ACCESS TO MECHANISM

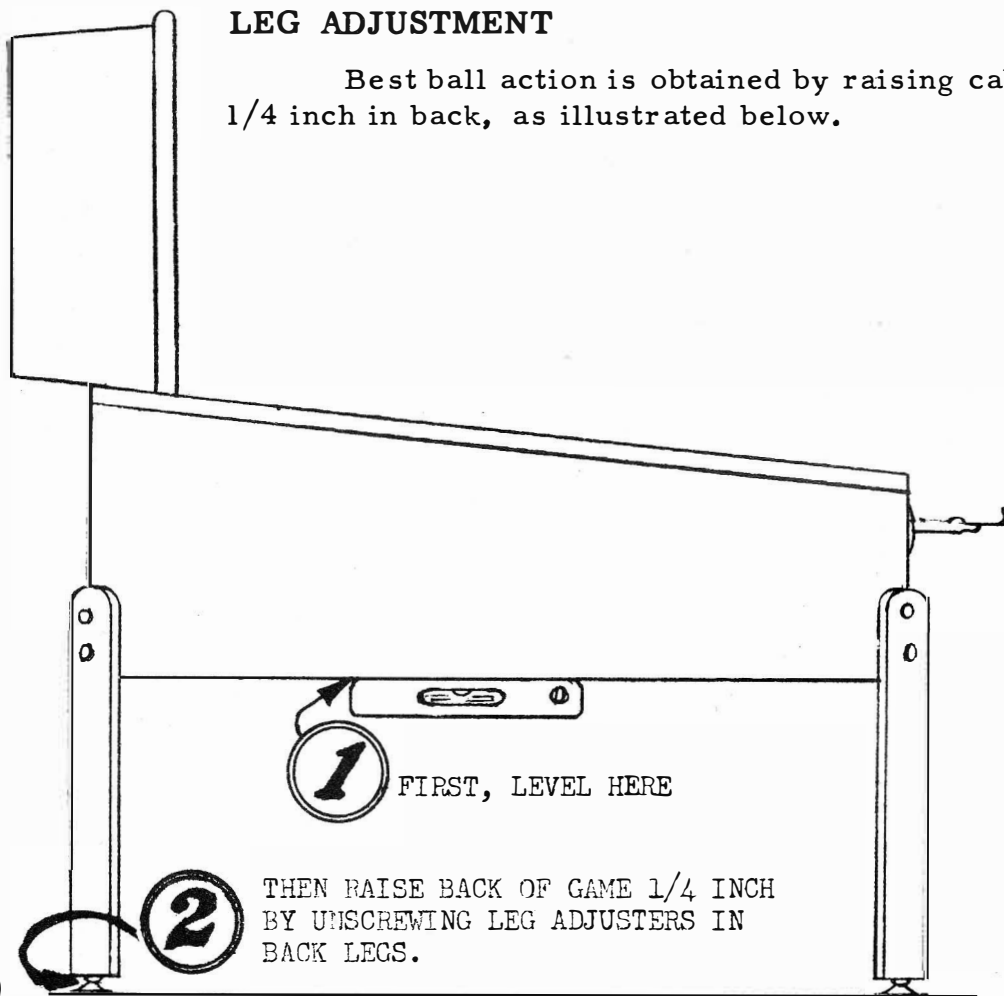
Mechanism is almost entirely in back-box. Unlock and lower back door to horizontal position. Door may be lowered to vertical position if shoulder screw that joins support-links for back door is removed. Front part of lite box insert is hinged to shelf and can be lowered by removing two screws as marked after glass is removed.

## TO SERVICE LIGHT BULBS

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

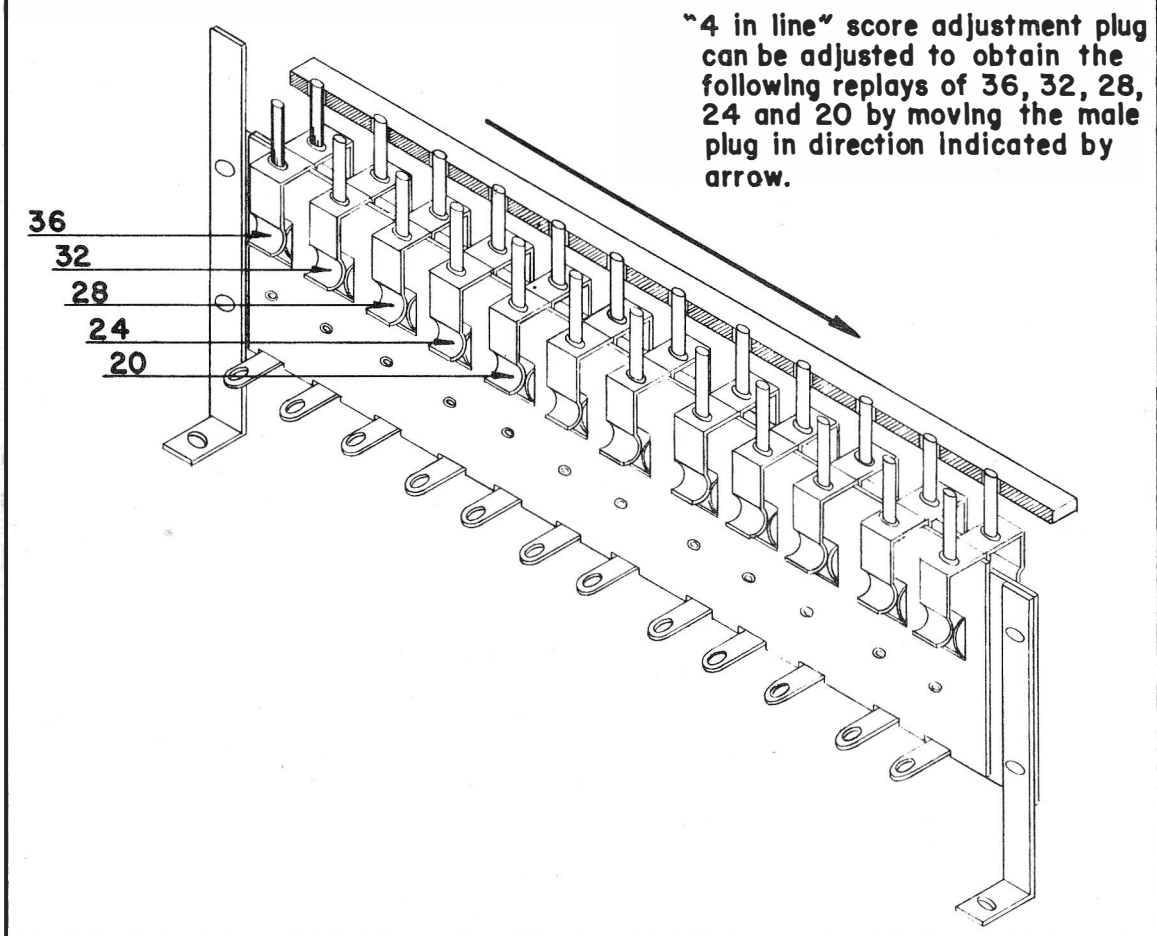
## LEG ADJUSTMENT

Best ball action is obtained by raising cabinet 1/4 inch in back, as illustrated below.



## "4 IN LINE" SCORE ADJUSTMENT PLUG

(Located on back door next to tilt switch)



### 5 IN LINE ADJUSTMENT

Adjust 5 in line score to 100 or 200 by means of 4-point female plug in center of back door and associated 4-point male plug.

### SPOTTING ADJUSTMENT

Adjustment is by means of 2-point female plug on Spotting Unit and associated 1-point male plug. When plug is in A position, spotting is liberalized.

SEARCH DISC #1, #2, #3

12 Winning Combinations for Each Section

| Position of wiper on disc | Row 1 | Row 2 | Row 3 | Row 4 | Row 5 |
|---------------------------|-------|-------|-------|-------|-------|
| 1                         | 5     | 1     | 9     | 25    | 3     |
| 2                         | 8     | 22    | 10    | 19    | 7     |
| 3                         | 6     | 18    | 16    | 11    | 17    |
| 4                         | 24    | 21    | 14    | 20    | 13    |
| 5                         | 12    | 23    | 2     | 4     | 15    |
| 6                         | 5     | 8     | 6     | 24    | 12    |
| 7                         | 1     | 22    | 18    | 21    | 23    |
| 8                         | 9     | 10    | 16    | 14    | 2     |
| 9                         | 25    | 19    | 11    | 20    | 4     |
| 10                        | 3     | 7     | 17    | 13    | 15    |
| 11                        | 5     | 22    | 16    | 20    | 15    |
| 12                        | 3     | 19    | 16    | 21    | 12    |
| 13                        | —     | —     | —     | —     | —     |
| 14                        | —     | —     | —     | —     | —     |
| 15                        | —     | —     | —     | —     | —     |
| 16                        | —     | —     | —     | —     | —     |
| 17                        | —     | —     | —     | —     | —     |
| 18                        | 9     | 24    | 16    | 4     | 6     |
| 19                        | 13    | 19    | 14    | 20    | 25    |
| 20                        | 2     | 18    | 15    | 12    | 17    |
| 21                        | 1     | 22    | 11    | 21    | 8     |
| 22                        | 10    | 7     | 5     | 23    | 3     |
| 23                        | 9     | 13    | 2     | 1     | 10    |
| 24                        | 24    | 19    | 18    | 22    | 7     |
| 25                        | 16    | 14    | 15    | 11    | 5     |
| 26                        | 4     | 20    | 12    | 21    | 23    |
| 27                        | 6     | 25    | 17    | 8     | 3     |
| 28                        | 9     | 19    | 15    | 21    | 3     |
| 29                        | 6     | 20    | 15    | 22    | 10    |
| 30                        | —     | —     | —     | —     | —     |
| 31                        | —     | —     | —     | —     | —     |
| 32                        | —     | —     | —     | —     | —     |
| 33                        | —     | —     | —     | —     | —     |
| 34                        | —     | —     | —     | —     | —     |
| 35                        | 3     | 7     | 10    | 4     | 9     |
| 36                        | 24    | 21    | 18    | 22    | 8     |
| 37                        | 15    | 14    | 17    | 11    | 2     |
| 38                        | 13    | 20    | 12    | 19    | 23    |
| 39                        | 6     | 25    | 16    | 1     | 5     |
| 40                        | 3     | 24    | 15    | 13    | 6     |
| 41                        | 7     | 21    | 14    | 20    | 25    |
| 42                        | 10    | 18    | 17    | 12    | 16    |
| 43                        | 4     | 22    | 11    | 19    | 1     |
| 44                        | 9     | 8     | 2     | 23    | 5     |
| 45                        | 3     | 21    | 17    | 19    | 5     |
| 46                        | 9     | 22    | 17    | 20    | 6     |
| 47                        | —     | —     | —     | —     | —     |
| 48                        | —     | —     | —     | —     | —     |
| 49                        | —     | —     | —     | —     | —     |
| 50                        | —     | —     | —     | —     | —     |

SECTION #1

5 Blank Positions

SECTION #2

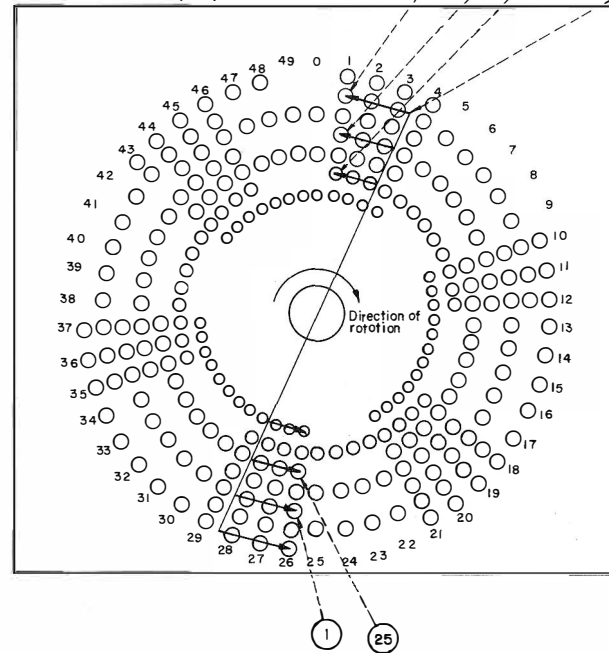
5 Blank Positions

SECTION #3

4 Blank Positions

Wiper arm shown in #1 position contacting Nos 5-1-9-25-3

SEARCH DISC #1, #2, #3



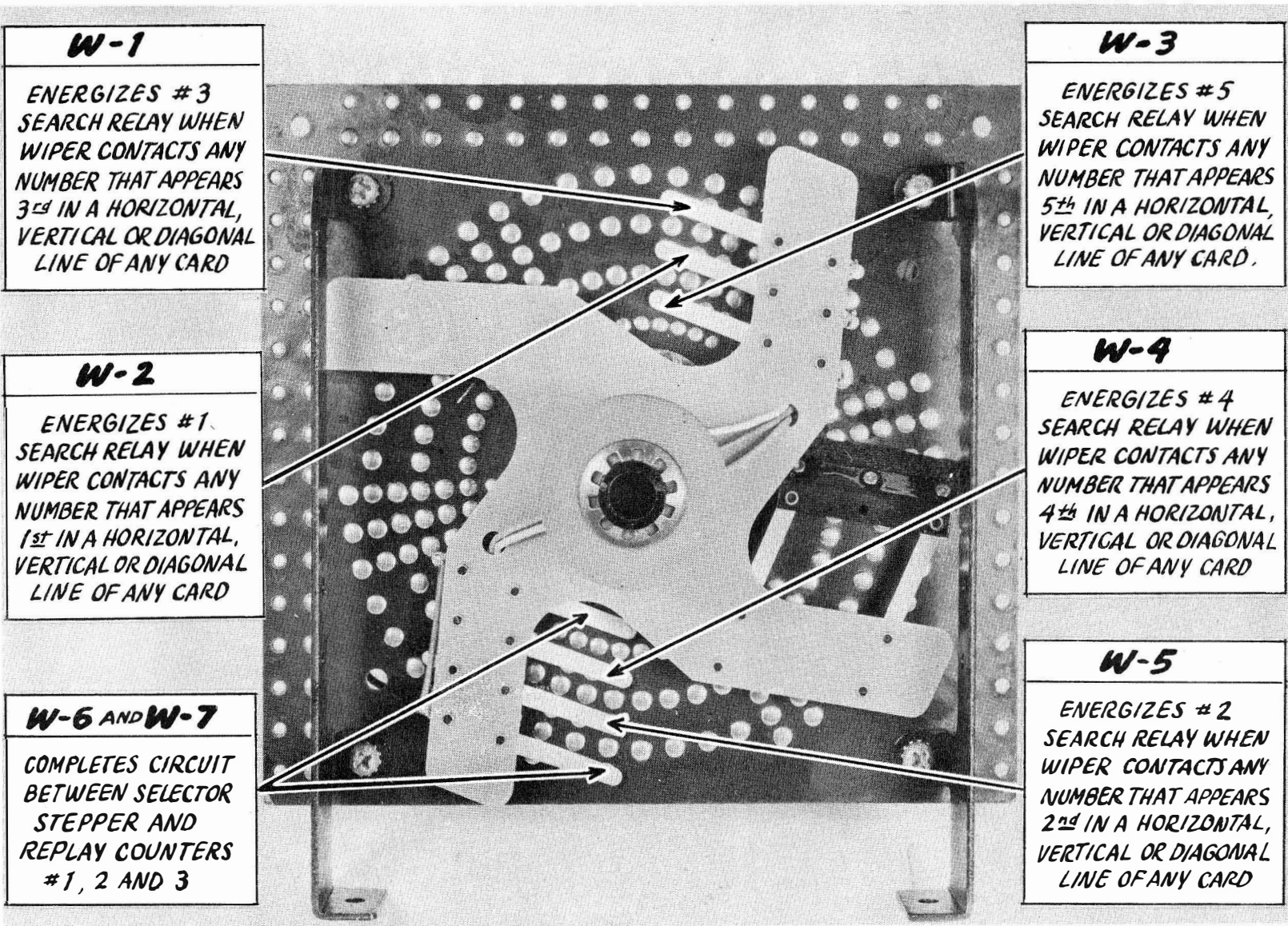
Use three finger portion of wiper arm for locating positions

(Button side of disc)

# BRIGHT SPOT

## SEARCH DISC (1, 2, 3)

(CONTROL UNIT)



**W-1**

ENERGIZES #3 SEARCH RELAY WHEN WIPER CONTACTS ANY NUMBER THAT APPEARS 3<sup>rd</sup> IN A HORIZONTAL, VERTICAL OR DIAGONAL LINE OF ANY CARD

**W-2**

ENERGIZES #1 SEARCH RELAY WHEN WIPER CONTACTS ANY NUMBER THAT APPEARS 1<sup>st</sup> IN A HORIZONTAL, VERTICAL OR DIAGONAL LINE OF ANY CARD

**W-6 AND W-7**

COMPLETES CIRCUIT BETWEEN SELECTOR STEPPER AND REPLAY COUNTERS #1, 2 AND 3

**W-3**

ENERGIZES #5 SEARCH RELAY WHEN WIPER CONTACTS ANY NUMBER THAT APPEARS 5<sup>th</sup> IN A HORIZONTAL, VERTICAL OR DIAGONAL LINE OF ANY CARD.

**W-4**

ENERGIZES #4 SEARCH RELAY WHEN WIPER CONTACTS ANY NUMBER THAT APPEARS 4<sup>th</sup> IN A HORIZONTAL, VERTICAL OR DIAGONAL LINE OF ANY CARD

**W-5**

ENERGIZES #2 SEARCH RELAY WHEN WIPER CONTACTS ANY NUMBER THAT APPEARS 2<sup>nd</sup> IN A HORIZONTAL, VERTICAL OR DIAGONAL LINE OF ANY CARD

SEARCH DISC #4, #5, #6

12 Winning Combinations for Each Section

| Position of wiper on disc | Row 6 | Row 7 | Row 1 | Row 4 | Row 5 |
|---------------------------|-------|-------|-------|-------|-------|
| 1                         | 6     | 7     | 3     | 24    | 1     |
| 2                         | 23    | 14    | 12    | 18    | 2     |
| 3                         | 5     | 19    | 20    | 16    | 22    |
| 4                         | 11    | 17    | 9     | 15    | 25    |
| 5                         | 10    | 13    | 21    | 4     | 8     |
| 6                         | 6     | 23    | 5     | 11    | 10    |
| 7                         | 7     | 14    | 19    | 17    | 13    |
| 8                         | 3     | 12    | 20    | 9     | 21    |
| 9                         | 24    | 18    | 16    | 15    | 4     |
| 10                        | 1     | 2     | 22    | 25    | 8     |
| 11                        | 6     | 14    | 20    | 15    | 8     |
| 12                        | 1     | 18    | 20    | 17    | 10    |
| 13                        | —     | —     | —     | —     | —     |
| 14                        | —     | —     | —     | —     | —     |
| 15                        | —     | —     | —     | —     | —     |
| 16                        | —     | —     | —     | —     | —     |
| 17                        | —     | —     | —     | —     | —     |
| 18                        | 8     | 23    | 10    | 13    | 4     |
| 19                        | 2     | 17    | 16    | 14    | 24    |
| 20                        | 20    | 12    | 22    | 19    | 5     |
| 21                        | 25    | 15    | 9     | 18    | 11    |
| 22                        | 1     | 7     | 21    | 3     | 6     |
| 23                        | 8     | 2     | 20    | 25    | 1     |
| 24                        | 23    | 17    | 12    | 15    | 7     |
| 25                        | 10    | 16    | 22    | 9     | 21    |
| 26                        | 13    | 14    | 19    | 18    | 3     |
| 27                        | 4     | 24    | 5     | 11    | 6     |
| 28                        | 8     | 17    | 22    | 18    | 6     |
| 29                        | 4     | 14    | 22    | 15    | 1     |
| 30                        | —     | —     | —     | —     | —     |
| 31                        | —     | —     | —     | —     | —     |
| 32                        | —     | —     | —     | —     | —     |
| 33                        | —     | —     | —     | —     | —     |
| 34                        | —     | —     | —     | —     | —     |
| 35                        | 4     | 6     | 1     | 23    | 5     |
| 36                        | 25    | 15    | 3     | 17    | 13    |
| 37                        | 9     | 19    | 21    | 12    | 20    |
| 38                        | 10    | 18    | 16    | 14    | 8     |
| 39                        | 7     | 24    | 22    | 2     | 11    |
| 40                        | 4     | 25    | 9     | 10    | 7     |
| 41                        | 6     | 15    | 19    | 18    | 24    |
| 42                        | 1     | 3     | 21    | 16    | 22    |
| 43                        | 23    | 17    | 12    | 14    | 2     |
| 44                        | 5     | 13    | 20    | 8     | 11    |
| 45                        | 4     | 15    | 21    | 14    | 11    |
| 46                        | 5     | 17    | 21    | 18    | 7     |
| 47                        | —     | —     | —     | —     | —     |
| 48                        | —     | —     | —     | —     | —     |
| 49                        | —     | —     | —     | —     | —     |
| 50                        | —     | —     | —     | —     | —     |

SECTION #4

5 Blank Positions

SECTION #5

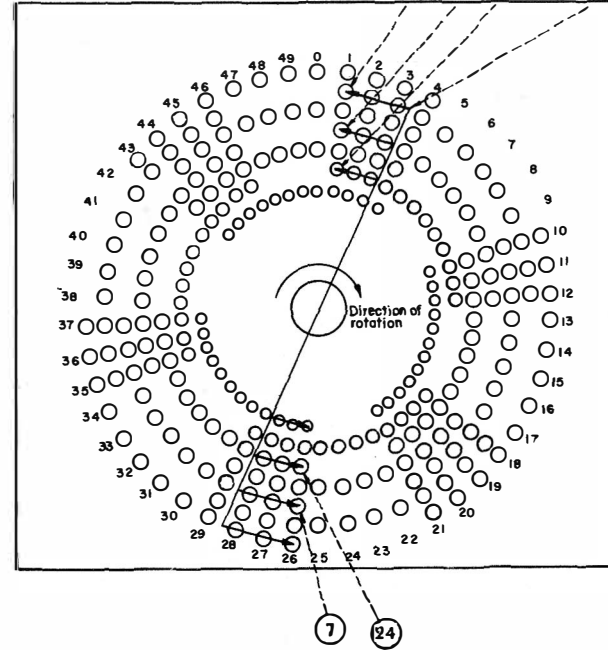
5 Blank Positions

SECTION #6

4 Blank Positions

Wiper arm shown in #1 position contacting No's 6-7-3-24-1

SEARCH DISC #4, #5, #6



Use three finger portion of wiper arm for locating positions on disc.

(Button side of disc)

**BRIGHT SPOT**  
**SEARCH DISC (4, 5, 6)**  
**(CONTROL UNIT)**

**W-1**

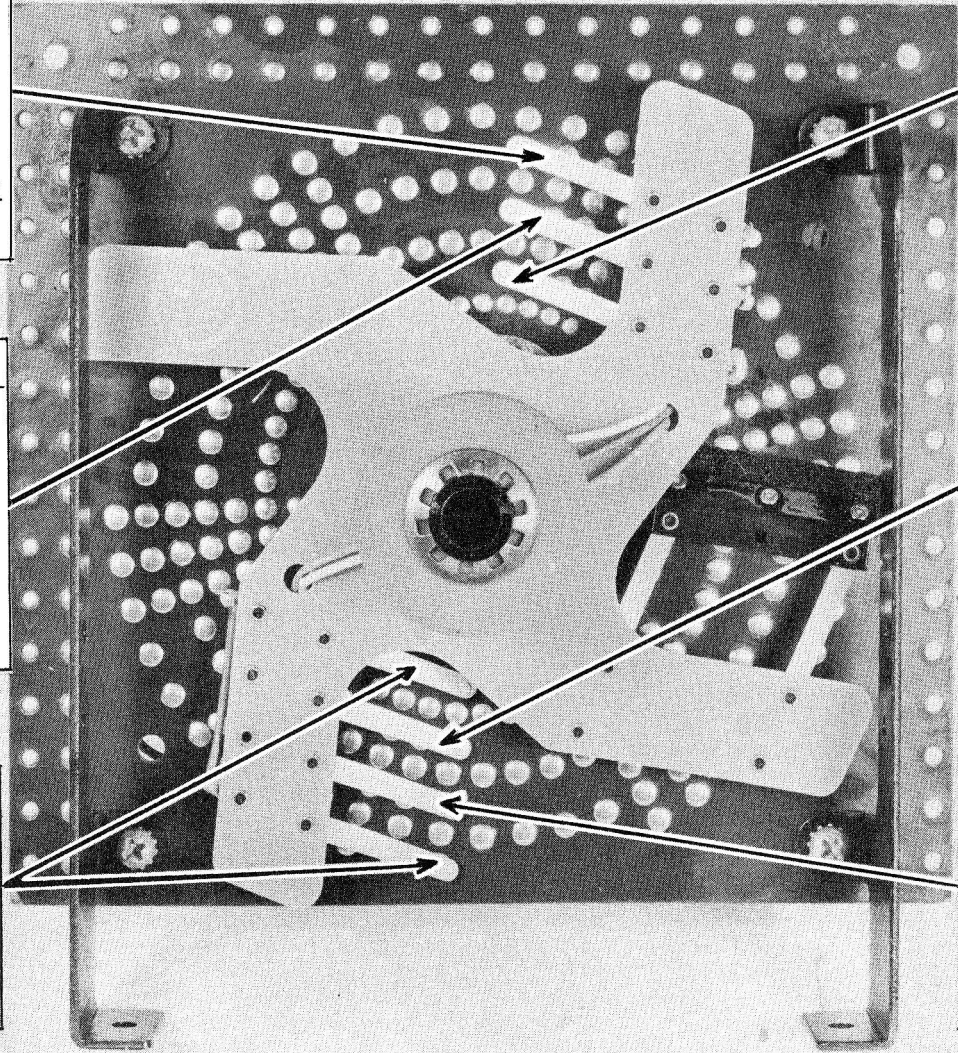
ENERGIZES #3 A SEARCH RELAY WHEN WIPER CONTACTS ANY NUMBER THAT APPEARS 3<sup>rd</sup> IN A HORIZONTAL, VERTICAL OR DIAGONAL LINE OF ANY CARD

**W-2**

ENERGIZES #1 A SEARCH RELAY WHEN WIPER CONTACTS ANY NUMBER THAT APPEARS 1<sup>st</sup> IN A HORIZONTAL, VERTICAL OR DIAGONAL LINE OF ANY CARD

**W-6 AND W-7**

COMPLETES CIRCUIT BETWEEN SELECTOR STEPPER AND REPLAY COUNTERS #4, 5 AND 6



**W-3**

ENERGIZES #5 A SEARCH RELAY WHEN WIPER CONTACTS ANY NUMBER THAT APPEARS 5<sup>th</sup> IN A HORIZONTAL, VERTICAL OR DIAGONAL LINE OF ANY CARD.

**W-4**

ENERGIZES #4 A SEARCH RELAY WHEN WIPER CONTACTS ANY NUMBER THAT APPEARS 4<sup>th</sup> IN A HORIZONTAL, VERTICAL OR DIAGONAL LINE OF ANY CARD

**W-5**

ENERGIZES #2 A SEARCH RELAY WHEN WIPER CONTACTS ANY NUMBER THAT APPEARS 2<sup>nd</sup> IN A HORIZONTAL, VERTICAL OR DIAGONAL LINE OF ANY CARD

# BRIGHT SPOT

## CONTROL UNIT SWITCHES

FOR POSITION OF SWITCHES REFER TO PICTORIAL  
VIEW OF CONTROL UNIT ON OPPOSITE PAGE

### CODE

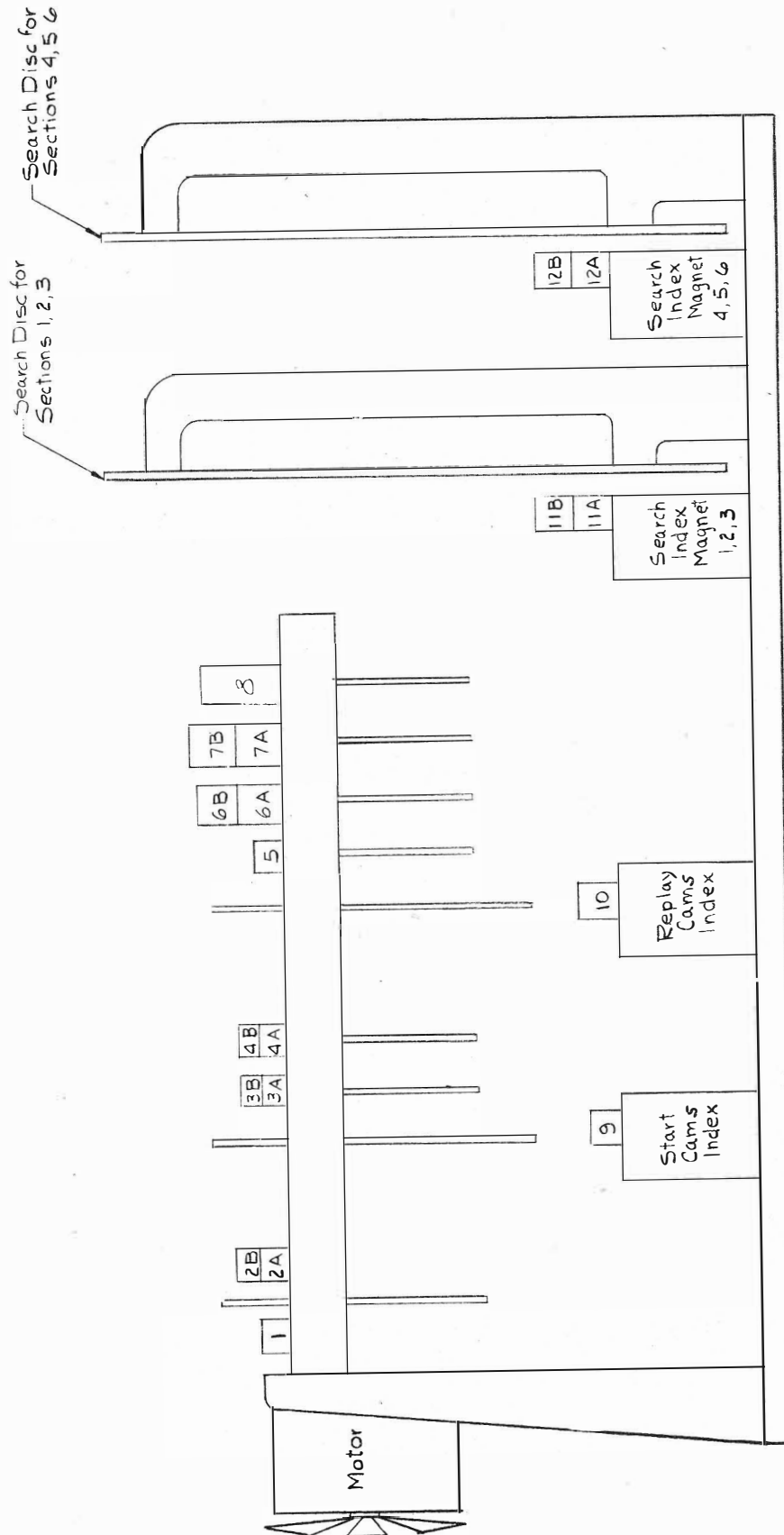
N.C. .... NORMALLY CLOSED  
N.O. .... NORMALLY OPEN  
M.B.B. .... MAKE BEFORE BREAK  
S.P.D.T. ... SINGLE POLE DOUBLE THROW

| RELAY SWITCH OR<br>CAM SWITCH                   | SWITCH<br>CODE | WIRE<br>NO.          | WIRE COLORS                              | FUNCTION OF SWITCHES  |
|---|----------------|----------------------|--|---|
| 1   | N.O.           | 10-2<br>13-2         | Red<br>Red-Yellow                        | Completes circuit from control unit switch #38 to energize spot unit step-up coil during start cycle.   |
| 2A  | N.O.           | 10<br>20             | Red (Plastic)<br>Blue (Plastic)          | Operates control unit motor. Prevents timer step-up coil from remaining energized on 20th step.   |
| 2B  | N.O.           | 50<br>93-2           | White<br>Gray-Yellow                     | Feeds control unit switch #8 to energize timer step-up coil.  |
| 3A  | N.C.           | 50<br>71             | White<br>Orange-Red                      | Opens during start cycle, breaking feed to coin magnet, selection and timer reset coils, and replay reset circuit.  |
| 3B  | N.O.           | 36-4<br>10-2         | Yellow-Brown<br>Red                      | Completes circuit from 6th step switch on selection unit to control unit switch #1 for energizing spot unit step-up coil during start cycle.  |
| 4A  | N.O.           | 36-4<br>85           | Yellow-Brown<br>Black-White              | Completes circuit to energize replay register and replay counter reset coils, and selection step-up coil during start cycle.  |
| 4B  | N.O.           | 50<br>51             | White<br>White-Red                       | Completes circuit to energize anti-cheat relay during start cycle.  |
| 5   | N.O.           | 21-2<br>23-2         | Blue-Red<br>Blue-Yellow                  | Completes circuit from search index switches through 5th step on replay delay unit to energize replay register step-up coil.  |
| 6A  | N.O.           | 75-4<br>90           | Orange-White<br>Gray                     | Completes circuit to energize #1, #2, and #3 replay counter step-up coils.  |
| 6B  | N.O.           | 78-2<br>80           | Orange-Black<br>Black                    | Completes circuit to energize #4, #5, and #6 replay counter step-up coils.  |
| 7A  | N.O.           | 75<br>83             | Orange-White<br>Black-Yellow             | Completes circuit to energize replay meter and replay register reset coil when replay reset relay is energized.   |
| 7B  | N.O.           | 27-2<br>30-2         | Blue-Orange<br>Yellow                    | Completes circuit from search index switches to energize replay delay unit step-up coil.  |
| 8   | N.O.           | 93-2<br>53           | Gray-Yellow<br>White-Yellow              | Gear cam switch operates at same time as control unit switch 2B every third revolution of motor to energize timer unit step-up coil.  |
| START CAMS<br>INDEX COIL                        |                | 56<br>70             | White-Brown<br>Orange                    | Energized by switch on start relay.   |
| 9   | N.O.           | 10<br>20             | Red (Plastic)<br>Blue (Plastic)          | Completes circuit to control unit motor.  |
| REPLAY CAMS<br>INDEX COIL                       |                | 21-2<br>70           | Blue-Red<br>Orange                       | Energized by search index switches through 5th step switch on replay delay unit.  |
| 10  | N.O.           | 10<br>20             | Red (Plastic)<br>Blue (Plastic)          | Completes circuit to control unit motor.  |
| SEARCH INDEX<br>MAGNET COIL<br>SECTIONS 1, 2, 3 |                | 91-2<br>93-1         | Gray-Red<br>Gray-Yellow                  | Energized when any 3, 4 or 5 in line is scored in sections #1, #2, and #3.  |
| 11A   | S.P.D.T.       | 15-4<br>50<br>27-2   | Red-White<br>White<br>Blue-Orange        | Normally completes circuit through #12A search index switch to energize replay delay unit reset coil. Completes circuit to replay delay unit and replay register step-up coils and replay cams index coil when energized. |
| 11B   | N.C.           | 70<br>85-1           | Orange<br>Black-White                    | Opens 50 volt circuit in search sections 4, 5, 6 preventing 4, 5, 6 search index from energizing at same time as search index 1, 2, 3.  |
| SEARCH INDEX<br>MAGNET COIL<br>SECTIONS 4, 5, 6 |                | 71-3<br>85-1         | Orange-Red<br>Black-White                | Energized when any 3, 4, or 5 in line is scored in sections #4, #5, and #6.   |
| 12A   | S.P.D.T.       | 36-2<br>15-4<br>27-2 | Yellow-Brown<br>Red-White<br>Blue-Orange | Normally completes circuit through #11A search index switch to energize replay delay unit reset coil. Completes circuit to replay delay unit and replay register step-up coils and replay cams index coil when energized. |
| 12B   | N.C.           | 70<br>93-1           | Orange<br>Gray-Yellow                    | Opens 50 volt circuit in search sections 1, 2, 3 preventing 1, 2, 3 search index from energizing at same time as search index 4, 5, and 6.  |



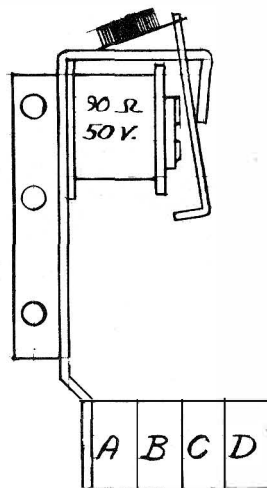
# BRIGHT SPOT

CONTROL UNIT PICTORIAL VIEW  
SWITCH NUMBERS CORRESPOND TO SWITCH CHART

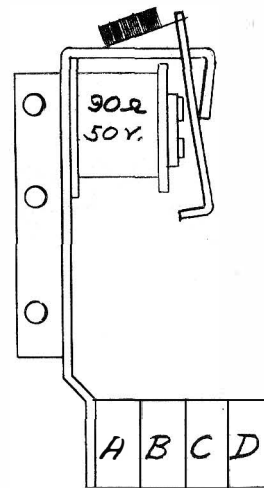


# BRIGHT SPOT

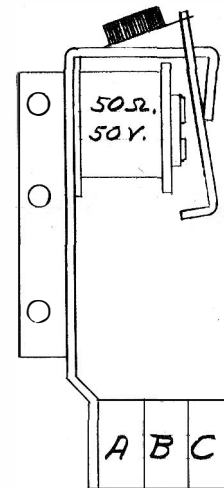
## RELAY CHARTS



REPLAY RESET  
RLY.



ANTI-CHEAT  
RLY.



START RLY.

### 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   |
|----------------------------|-------------|----------------|---|--|
| REPLAY RESET RELAY         | Coil        | 70<br>75       | Orange<br>Orange-White                  | Energized by cabinet replay reset button or by switch on anti-cheat relay if replay register is off zero position.   |
| A                          | S.P.D.T.    | 85<br>91<br>83 | Black-White<br>Grey-Red<br>Black-Yellow | Normally completes circuit from control unit switch #3A to energize replay register reset coil. Completes circuit to energize replay register reset coil when replay meter is energized. |
| B                          | N.O.        | 74<br>75       | Orange-Green<br>Orange-White            | Locks replay reset relay in through zero switch on replay register.  |
| C                          | N.O.        | 10<br>20       | Red (Plastic)<br>Blue (Plastic)         | Completes circuit to control unit motor.   |
| D                          | N.C.        | 57<br>98-3     | White-Orange<br>Grey-Black              | Opens circuit to start relay while replay reset circuit is in operation.   |
| ANTI-CHEAT RELAY           | Coil        | 51<br>70       | White-Red<br>Orange                     | Energized at all times while game is in operation.   |
| A                          | N.C.        | 57<br>61       | White-Orange<br>Brown-Red               | Completes circuit to selection unit reset coil if 110 is turned off while shutter is in latched position.  |
| B                          | N.C.        | 74<br>75       | Orange-Green<br>Orange-White            | Completes circuit to energize replay reset relay after 110 has been turned off and then is turned on again.  |
| C                          | N.O.        | 50<br>51       | White<br>White-Red                      | Locks anti-cheat relay in until 110 is turned off.   |
| D                          | N.O.        | 15<br>13       | Red-White<br>Red-Yellow                 | Completes 17 volt circuit to card lites and search relays.   |
| START RELAY                | Coil        | 98-3<br>70     | Grey-Black<br>Orange                    | Energized by coin chute switch or by replay button when replays are registered.  |
| A                          | N.O.        | 54<br>56       | White-Green<br>White-Brown              | Completes circuit from shutter latch switch to energize start cams index coil.   |
| B                          | N.O.        | 71<br>57       | Orange-Red<br>White-Orange              | Locks in start relay until control unit cam switch #2A opens.  |
| C                          | N.O.        | 10<br>70       | Red (Plastic)<br>Orange (Plastic)       | Completes circuit to shutter latch switch to energize shuffle solenoid.  |