

OPERATING INSTRUCTIONS

CONFIDENTIAL: DO NOT LEAVE INSTRUCTIONS IN GAME

Bally®

BRIGHT LIGHTS

BRIGHT LIGHTS

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.

TO SERVICE LIGHT BULBS

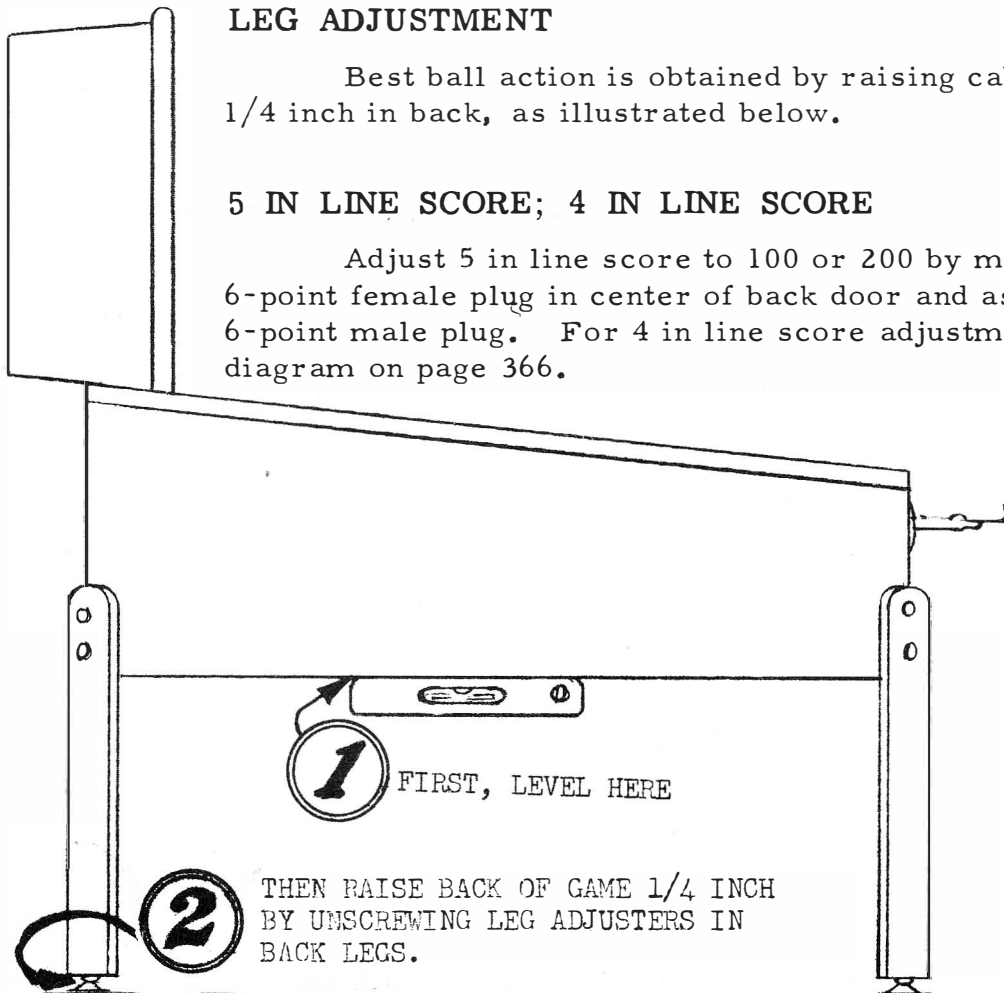
Unlock back door and unscrew slotted bolt with red tag attached. Bolt is located in top center of back box. Remove 2 screws at top of top moulding and slide out back-glass. (NOTE: 2 screws in moulding may be omitted on location.)

LEG ADJUSTMENT

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

5 IN LINE SCORE; 4 IN LINE SCORE

Adjust 5 in line score to 100 or 200 by means of 6-point female plug in center of back door and associated 6-point male plug. For 4 in line score adjustment, diagram on page 366.



SEARCH DISC #1, *2, *3

12 Winning Combinations for Each Section

Position of wiper on disc	Row 3	Row 2	Row 1	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

SECTION #2

SECTION #3

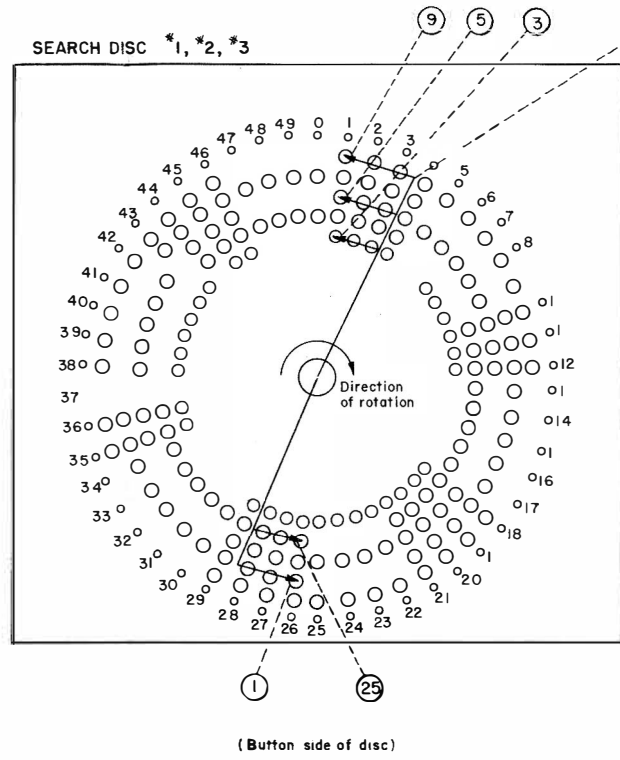
5 Blank Positions

5 Blank Positions

4 Blank Positions

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

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



SEARCH DISC #4, #5, #6

12 Winning Combinations for Each Section

Position of wiper on disc

	Row 3	Row 2	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

SECTION #5

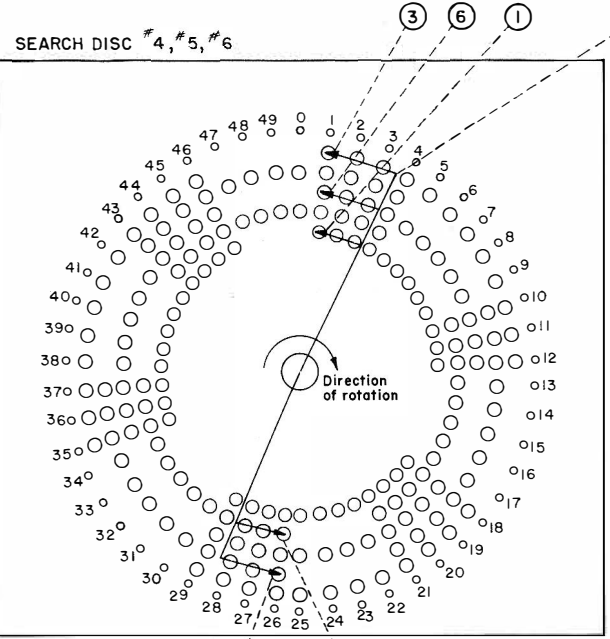
SECTION #6

5 Blank Positions

5 Blank Positions

4 Blank Positions

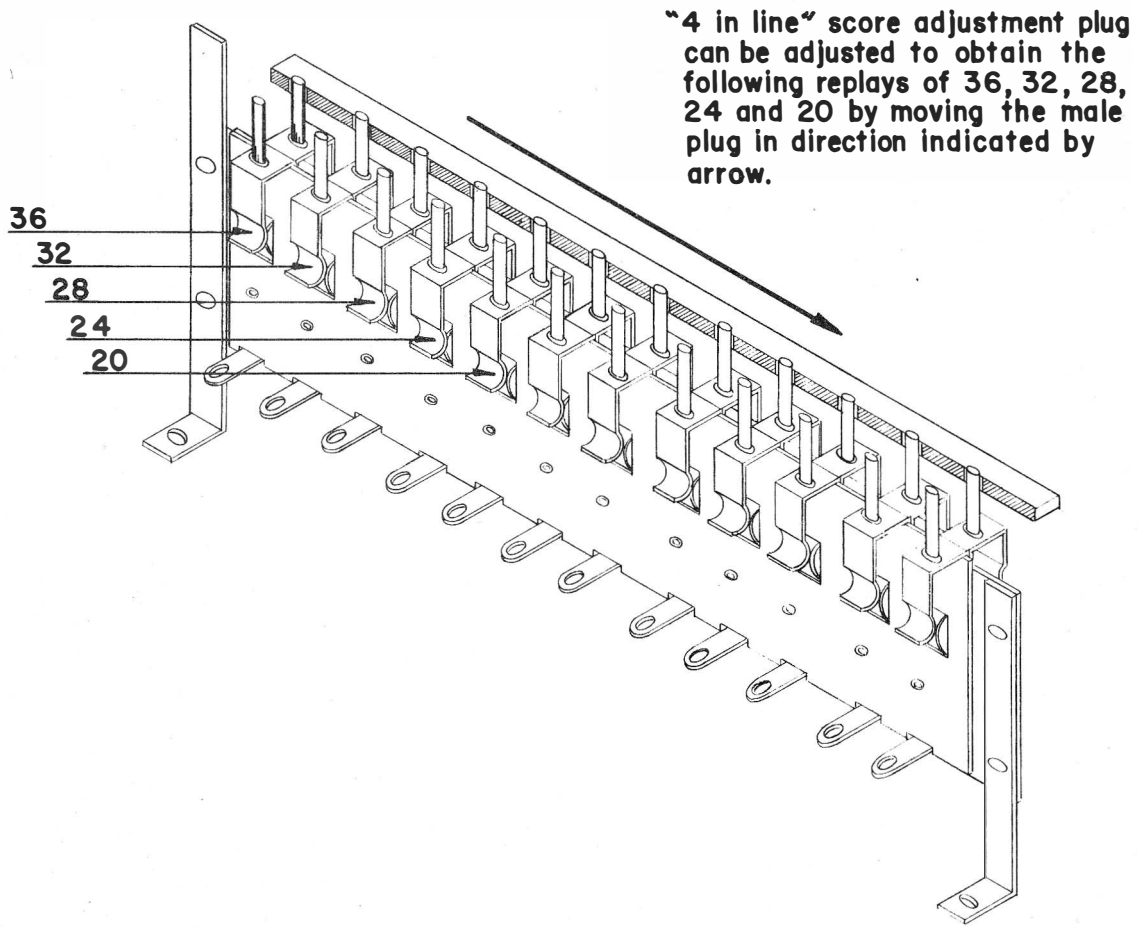
Wiper arm shown in #1 position contacting No.s. 6-7-3-24-1



(Button side of disc)

"4 IN LINE" SCORE ADJUSTMENT PLUG

(Located on back door next to tilt switch)



"4 in line" score adjustment plug can be adjusted to obtain the following replays of 36, 32, 28, 24 and 20 by moving the male plug in direction indicated by arrow.

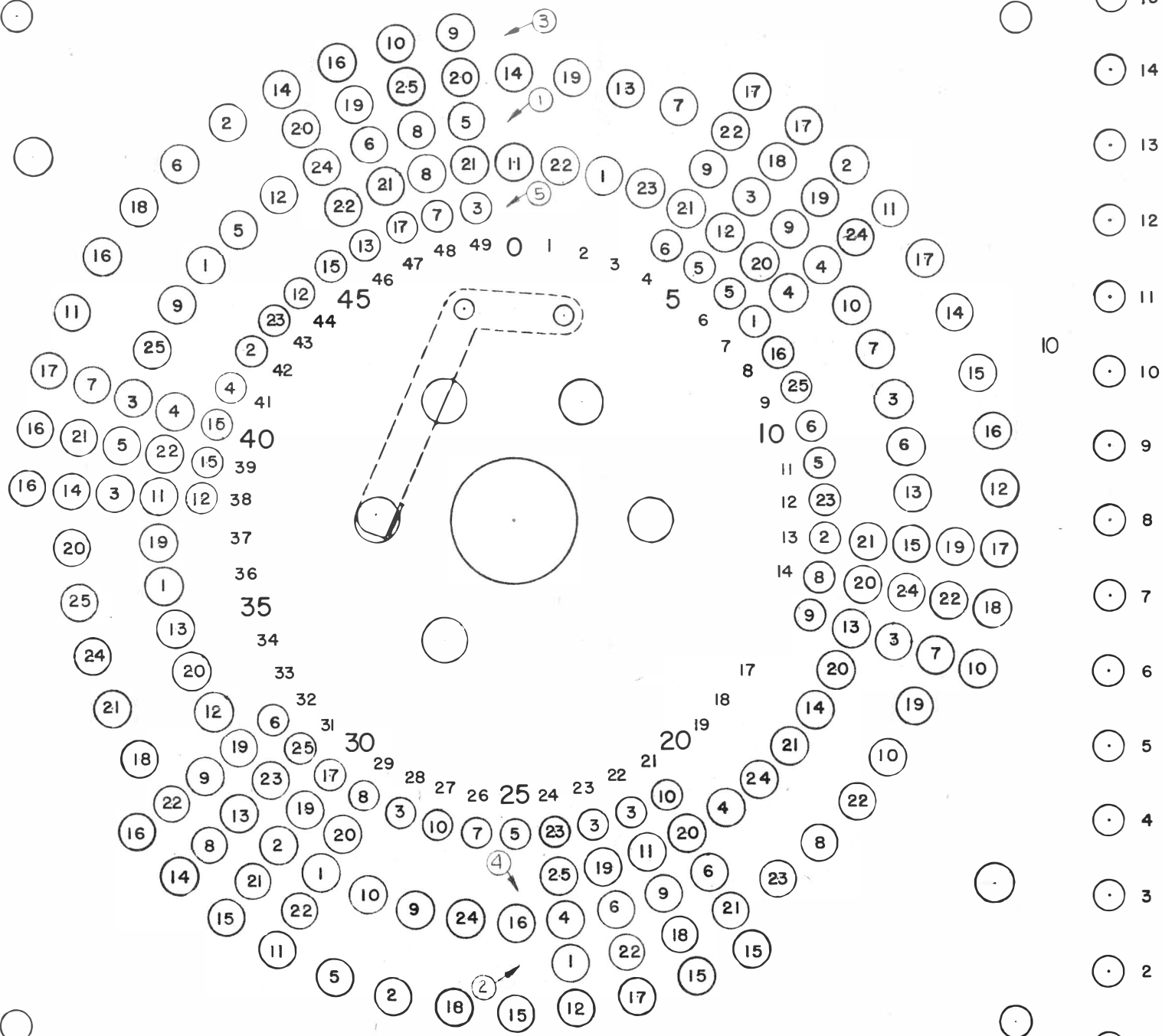
BRIGHT LIGHTS

CONTROL UNIT CAM SWITCH CHART

SWITCHES ARE NUMBERED FROM MOTOR END AND LETTERED FROM TOP DOWN

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

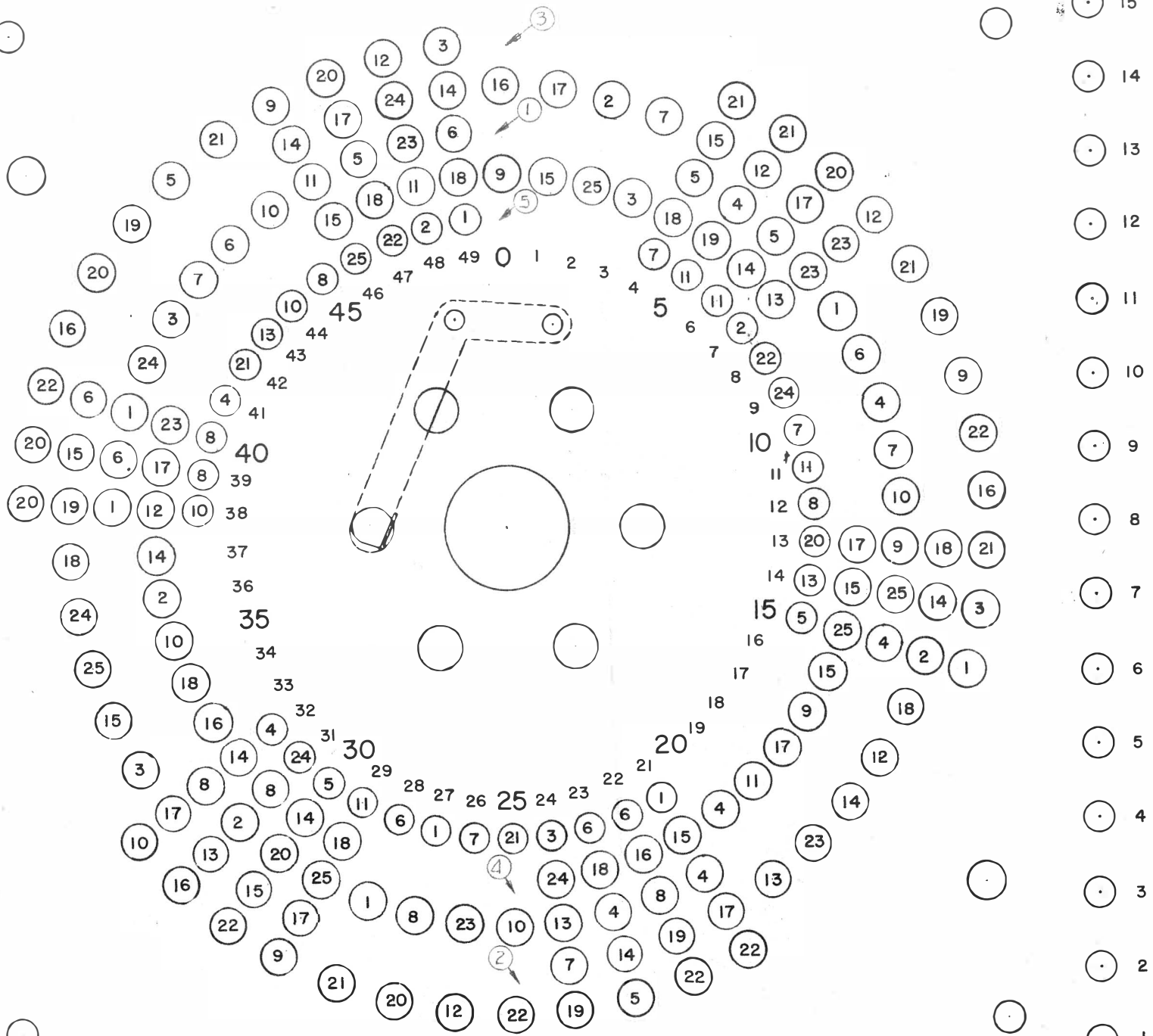
RELAY SWITCH OR CAM SWITCH	SWITCH CODE	WIRE NO.	WIRE COLORS	FUNCTION OF SWITCHES
CAM SWITCH #1A	N.O.	27-2 30-2	Blue-Orange Yellow	Steps replay sequence stepper #1. In series with search index #1 switch.
CAM SWITCH #1B	N.O.	83 75	Black-Yellow Orange-White	Pulses replay register reset coil when replay reset relay is energ
CAM SWITCH #2A	N.O.	50 93-2	White Gray-Yellow	Steps timer stepper in series with cam switch #8.
CAM SWITCH #2B	N.O.	10 20	Red Blue	Runs control unit motor.
CAM SWITCH #3A	N.O.	75 83	Orange-White Black-Yellow	Pulses replay register reset coil when replay reset relay is energized. Counts replays into replay meter also.
CAM SWITCH #3B	N.O.	85-1 93-1	Black-White Gray-Yellow	Steps replay sequence stepper #2. In series with search index #2 switch.
CAM SWITCH #4	N.C.	50 65	White Brown-White	Opens circuit to start relay, selection reset, timer reset. Completes circuit to coin chute magnet and replay reset relay.
CAM SWITCH #5A	N.O.	50 51	White White-Red	Pulls in A.C. relay.
CAM SWITCH #5B	N.O.	50 85	White Black-White	Resets replay counters and replay register reset coil. Steps selection stepper also.
CAM SWITCH #6	N.O.	23-2 21-2	Blue-Yellow Blue-Red	Pulses replay register step-up coil when either replay relay is energized.
CAM SWITCH #7	N.O.	50 13-2	White Red-Yellow	Steps replay counter steppers #1 to #6.
CAM SWITCH #8	N.O.	93-2 53	Gray-Yellow White-Yellow	Steps timer stepper. In series with cam switch #2A.
CAM SWITCH #9A	N.O.	60-2 61-2	Brown Brown-Red	In series with 200 replay circuit of section #1.
CAM SWITCH #9B	N.O.	81-3 40-2	Black-Red Green	Completes circuit to replay relay for section #1 in series with selection circuit #1.
CAM SWITCH #9C	N.O.	78-2 14-2	Orange-Black Red-Green	Completes circuit to replay counter stepper #1.
CAM SWITCH #10A	N.O.	60-2 63-2	Brown Brown-Yellow	In series with 200 replay circuit of section #2.
CAM SWITCH #10B	N.O.	81-3 41-2	Black-Red Green-Red	Completes circuit to replay relay for section #2. In series with selection circuit #2.
CAM SWITCH #10C	N.O.	78-2 15-2	Orange-Black Red-White	Completes circuit to replay counter stepper #2.
CAM SWITCH #11A	N.O.	60-2 65-2	Brown Brown-White	In series with 200 replay circuit of section #3.
CAM SWITCH #11B	N.O.	81-3 43-2	Black-Red Green-Yellow	Completes circuit to replay relay for section #3. In series with selection circuit #3.
CAM SWITCH #11C	N.O.	78-2 18-2	Orange-Black Red-Black	Completes circuit to replay counter stepper #3.
CAM SWITCH #12A	N.O.	48-3 51-3	Green-Black White-Red	In series with 200 replay circuit of section #4.
CAM SWITCH #12B	N.O.	65-3 60-3	Brown-White Brown	Completes circuit to replay relay for section #4. In series with selection circuit #4.
CAM SWITCH #12C	N.O.	93-3 74-1	Gray-Yellow Orange-Green	Completes circuit to replay counter stepper #4.
CAM SWITCH #13A	N.O.	48-3 52-3	Green-Black White-Blue	In series with 200 replay circuit of section #5.
CAM SWITCH #13B	N.O.	65-3 61-3	Brown-White Brown-Red	Completes circuit to replay relay for section #5. In series with selection circuit #5.
CAM SWITCH #13C	N.O.	93-3 75-1	Gray-Yellow Orange-White	Completes circuit to replay counter stepper #5.
CAM SWITCH #14A	N.O.	48-3 53-3	Green-Black White-Yellow	In series with 200 replay circuit of section #6.
CAM SWITCH #14B	N.O.	65-3 63-3	Brown-White Brown-Yellow	Completes circuit to replay relay for section #6. In series with selection circuit #6.
CAM SWITCH #14C	N.O.	93-3 78-1	Gray-Yellow Orange-Black	Completes circuit to replay counter stepper #6.



A-234-52

P-279-36

ION MANUFACTURING CORP.	
2640 BELMONT AVE. CHICAGO, ILL.	
CONTACT PLATE WIRING	
ED ON	SENSING UNIT (*1,*2,*3,)
BY	AP'D. BY
	DATE

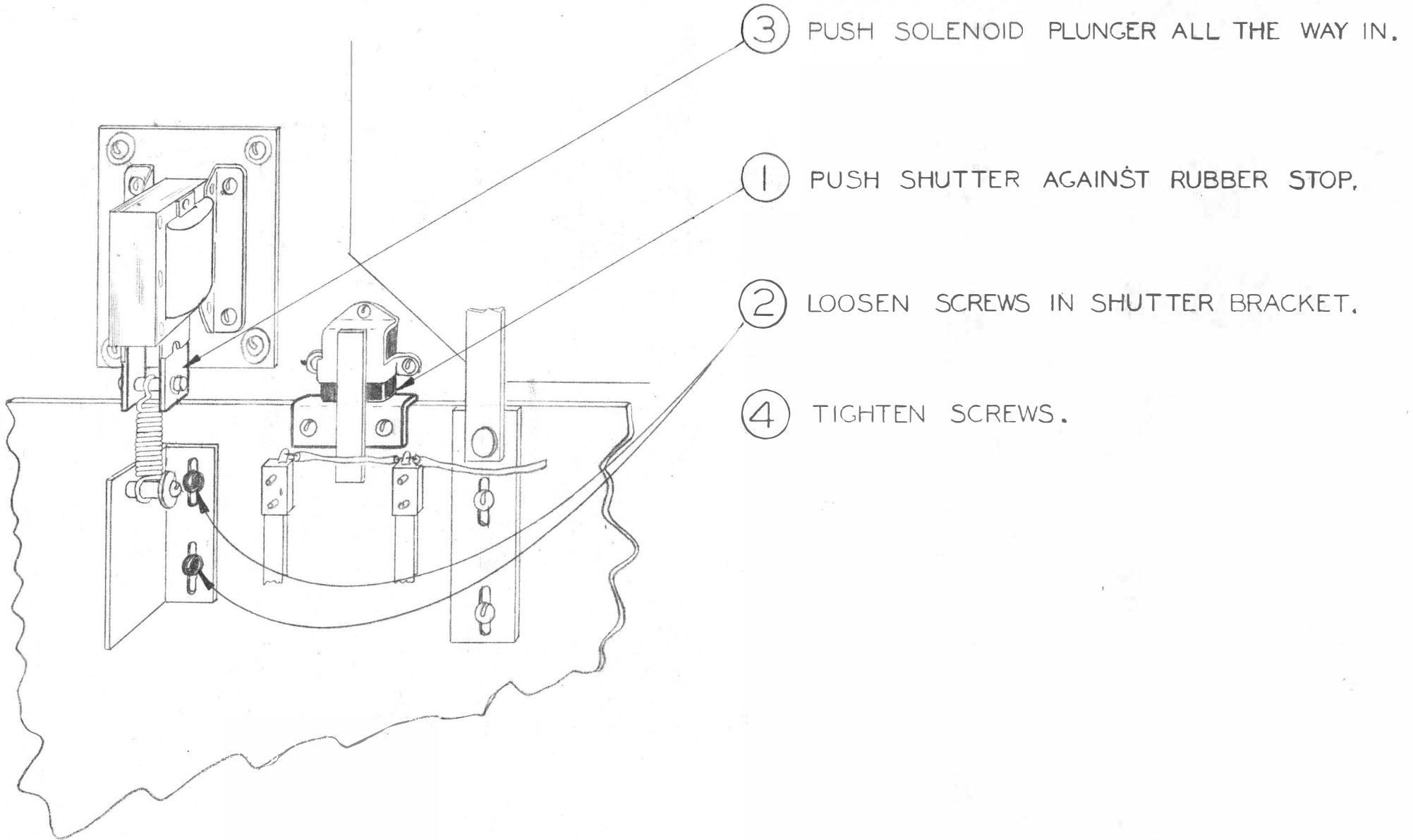


A-234-52

P-279-36

ON MANUFACTURING CORP.	
2640 BELMONT AVE CHICAGO, ILL.	
CONTACT PLATE WIRING	
ON SENSING UNIT (#, #, #, #, #, #)	DATE
AP'D. BY	

CORRECT ADJUSTMENT OF SHUTTER MAGNET BRACKET ON BRIGHT LIGHTS

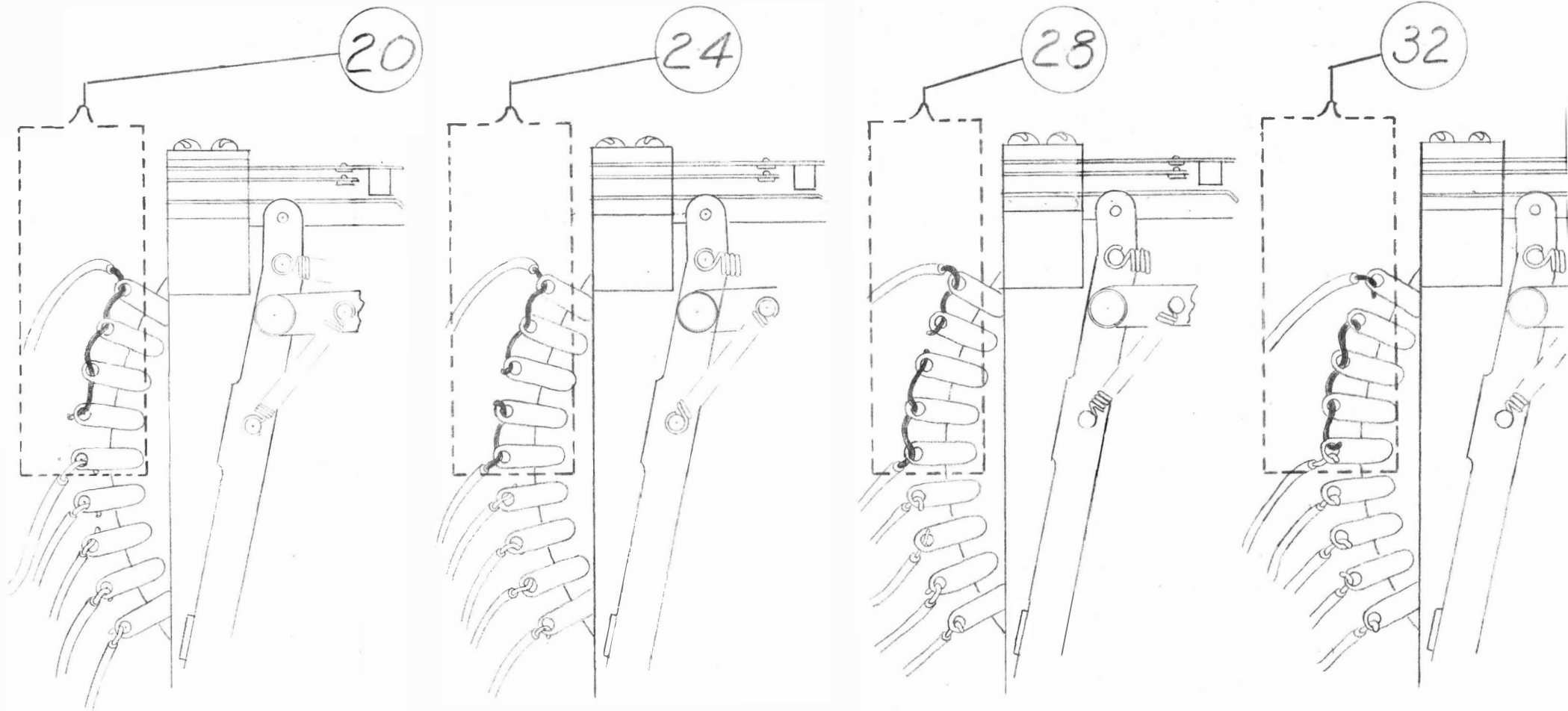


BRITE LITES

"4 IN LINE" SCORE ADJUSTMENT

GAME CAN BE OPERATED WITH A 4 IN LINE"
SCORE OF 20-24-28 OR 32 BY WIRING TOP FIVE
TERMINAL LUGS ON EACH OF THE SIX REPLAY
COUNTER DISCS AS SHOWN BELOW.

NOTE: THIS INFORMATION APPLYS TO FIRST 175 GAMES ONLY
ADJUSTMENT PLUG IS SUPPLIED WITH GAME THEREAFTER



REPLAY COUNTER DISC # 1 IS SHOWN ABOVE
WIRE OTHER 5 REPLAY COUNTER DISCS IN SAME MANNER

BRIGHT LIGHTS

PARTS CATALOG

SECTION 1: FRONT CABINET

AS-187-6.....Ball Shooter Assembly.....

PARTS:

A-100.....Knob and Shooter-rod.....
A-110.....Push Rod (Ball Lifter-rod).....
R-108.....Shooter Tip.....
A-292-3.....Shooter Casting.....
SP-200-20.....Spring, Shooter.....
SP-218.....Spring, Outside Barrel Spring.....

AS-186-5.....Ball Lifter Assembly.....

PARTS:

A-270-2.....Lifter Assembly.....
P-448-1.....Snap Washer.....
SP-117.....Spring, Extension.....
SP-200-10.....Spring, Compression.....

MISCELLANEOUS PARTS IN FRONT CABINET

M-168-2.....Ball.....
P-1900-7.....Cash-box.....
CA-536-3.....Cash-box Cover.....
CA-350.....Leg.....
M-163.....Leg Adjuster.....
M-106.....Leg Bolt.....
E-108-25.....Toggle Switch.....
G-173.....Top Glass (21x41").....
E-122-15.....Transformer.....
CA-533-4.....Front Molding (Specify Serial Number of Game).....
CA-536-4.....Front Molding (" " " " ").....

SECTION 2: FRONT DOOR ASSEMBLY

AS-1077.....Front Door Complete (Old Style).....

PARTS:

M-112-3.....Coin Chute 5¢.....
E-130.....Counter 48 Volt.....
CA-533-2.....Front Door only.....
M-281.....Lock and Keys.....
E-101-38.....Magnet.....
SW-802.....Switch.....

BRIGHT LIGHTS

PARTS CATALOG

SECTION 2: FRONT DOOR ASSEMBLY (Continued)

AS-1077-1.....Front Door Complete (New Style).....

PARTS:

E-130.....Counter 48 Volt.....
E-271-2.....Drop Chute 5¢.....
CA-536-2.....Front Door only.....
M-281.....Lock and Keys.....
C-178-1.....Push Button for replays.....
SW-709.....Switch.....

SECTION 3: TOP PANEL ASSEMBLY

PARTS:

AS-985.....Ball-gate.....
C-153.....Ball-lift Cover.....
E-125-10.....Lamp for C-258-5.....
E-120-32.....Lamp-socket for E-125-10.....
C-258-5.....Light-shield.....
AS-493-2.....Rebound Assembly.....
R-203.....Rebound Rubber for AS-493-2.....
M-170.....Rebound Spring.....
SW-800.....Switch (Panel runway).....

SECTION 4: BOTTOM PANEL ASSEMBLY

AS-1112.....Latch Assembly Complete.....

PARTS:

A-1428-1.....Arm.....
CO-25-H-7.....Coil.....
A-613-17.....Core Plug.....
S-496.....Plunger for Coil.....
SP-100-9.....Spring.....
SW-801.....Switch.....

AS-435-13.....Relay Assembly Complete.....

PARTS:

A-635.....Arm.....
P-344-1.....Armature Plate.....
E-184-52.....Coil.....
SW-547.....Switch.....

MISCELLANEOUS PARTS ON BOTTOM PANEL

E-184-60.....Solenoid for resetting Shutter.....
SP-156.....Spring for E-184-60.....
SP-100-70.....Spring (Shutter return).....

BRIGHT LIGHTS

PARTS CATALOG

SECTION 5: LIGHT BOX ASSEMBLY

AS-473-8.....Replay Register Assembly Complete.....

PARTS:

E-184-56.....Coil (2 used).....
A-613-2.....Core-plug for both Coils.....
S-739.....Pin for S-496-69 Plunger.....
S-496-69.....Plunger for both Coils.....
A-1168-10.....Wheel Assembly (right).....
A-1168-11.....Wheel Assembly (center).....
A-1168-12.....Wheel Assembly (left).....

AS-1109.....Sensing Unit Assembly Complete.....

PARTS:

A-1435.....Armature Plate for AS-1060-2.....
E-184-55.....Coil for Index Coil Assembly.....
W-362.....Contact Plate #1 with yellow dot.....
W-363.....Contact Plate #2 with red dot.....
A-613-17.....Core-plug for E-184-55 Coil.....
A-1138-6.....Index Arm for Index Coil Assembly.....
AS-472-22.....Index Coil Assembly Complete.....
AS-1060-2.....Magnet Assembly Complete.....
S-1289-9.....Main Shaft.....
E-119-60.....Motor.....
S-496-62.....Plunger for E-184-44 Coil.....
SP-100-23.....Spring for AS-572-22.....
SP-100-82.....Spring for AS-1060-2.....
E-184-46.....Solenoid for Magnet Assembly.....
AS-1034-2.....Wiper and Slip Ring for both Contact Plates.....
AS-910-9.....Wire Wiper for both Slip Rings.....
M-412-1.....Wire for AS-910-9.....

AS-828-5.....Selector Unit Complete.....

PARTS:

E-184-51.....Coil (reset).....
CO-25-H-7.....Coil (step-up).....
W-360.....Contact Plate.....
A-613-17.....Core-plug for both Coils.....
S-496.....Plunger for 25-H-7 Coil.....
A-316.....Plunger and Washer for E-184-51 Coil.....
A-463-57.....Ratchet and Shaft Assembly.....
P-138-3.....Reset Arm.....
A-344-9.....Step-up Arm.....
SW-138.....Switch.....
AS-1046-13.....Wiper Assembly.....

BRIGHT LIGHTS

PARTS CATALOG

SECTION 5: LIGHT BOX ASSEMBLY (Continued)

AS-731-1.....Sounder Assembly Complete.....

PARTS:

E-184-59.....Coil.....
A-613-11.....Core-plug.....
A-316-25.....Plunger Assembly.....
SP-200-7.....Spring in Plunger.....

AS-1111.....Three Step Unit Complete.....

PARTS:

E-184-51.....Coil (reset).....
E-184-53.....Coil (step-up).....
A-613-17.....Core-plug for both Coils.....
S-496.....Plunger for E-184-53 Coil.....
A-316.....Plunger and Washer for E-184-51 Coil.....
A-463-59.....Ratchet and Shaft Assembly.....
P-138-3.....Reset Arm.....
A-344-9.....Step-up Arm.....
SW-805.....Switch.....

AS-1110.....Timer Unit Complete.....

PARTS:

E-184-51.....Coil (reset).....
E-184-53.....Coil (step-up).....
A-613-17.....Core-plug for both Coils.....
A-316-8.....Plunger for E-184-53 Coil.....
A-316.....Plunger and Washer for E-184-51 Coil.....
A-463-55.....Ratchet and Shaft Assembly.....
P-138-3.....Reset Arm.....
A-344-9.....Step-up Arm.....
SW-811.....Switch.....

SECTION 6: BACK DOOR ASSEMBLY

AS-797-6.....Replay Counter Complete.....

PARTS:

E-184-51.....Coil (reset).....
CO-26-H-10.....Coil (step-up).....
W-361.....Contact Plate.....
A-613-17.....Core-plug for both Coils.....
A-316-37.....Plunger for 26-H-10 Coil.....
A-316.....Plunger and Washer for E-184-51 Coil.....
A-463-60.....Ratchet and Shaft Assembly.....
P-138-3.....Reset Arm.....
A-344-9.....Step-up Arm.....
SW-807.....Switch.....
A-1400-9.....Wiper Assembly.....