

**GamePlan, inc.**®

GAME PLAN, INC.®  
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*Lady*  
*Sharpshooter* T.M.

**PARTS**  
**CATALOG**

**MODEL**  
**830**

02-30104

## INTRODUCTION

THIS PARTS CATALOG HAS BEEN COMPILED TO HELP THE SERVICEMAN IN SELECTING THE PARTS NECESSARY FOR PROPER MAINTENANCE OF GAME PLAN, INC. GAMES.

ALL MOTORS IN NEW GAME PLAN GAMES CARRY A 6 MONTH WARRANTY FROM THE DATE OF PURCHASE OF THE MACHINE. ANY DEFECTIVE MOTOR WILL BE REPLACED FREE OF CHARGE BY YOUR GAME PLAN DISTRIBUTOR.

ALL P.C. BOARDS CARRY A 90 DAY WARRANTY. ANY DEFECTIVE P.C. BOARD WILL BE REPAIRED FREE OF CHARGE.

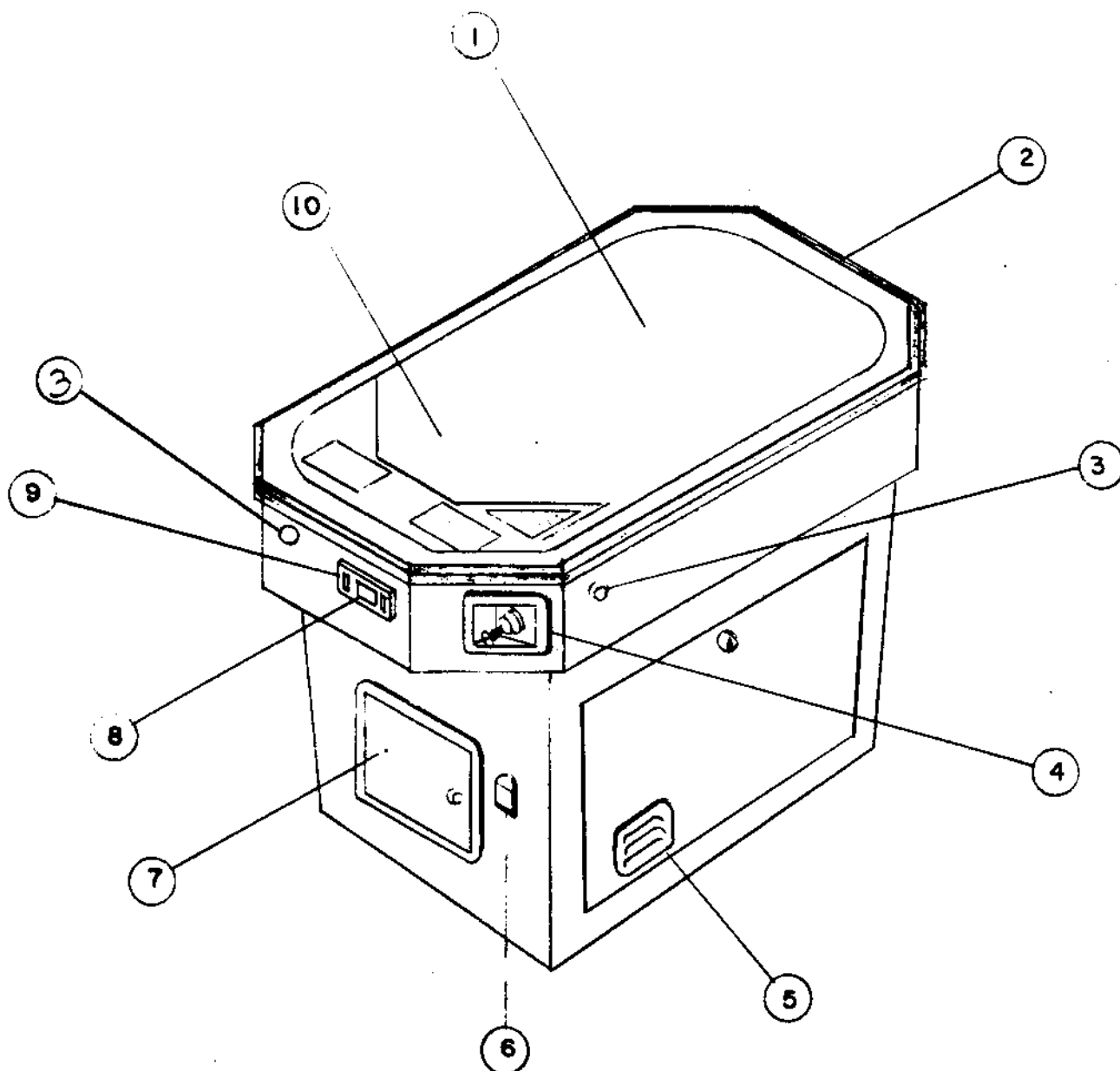
WHEN ORDERING PARTS, ALWAYS SPECIFY THE NAME OF THE UNIT, PART NUMBERS, AND A DESCRIPTION OF THE PART AS SHOWN IN THIS CATALOG.

GAME PLAN, INC.

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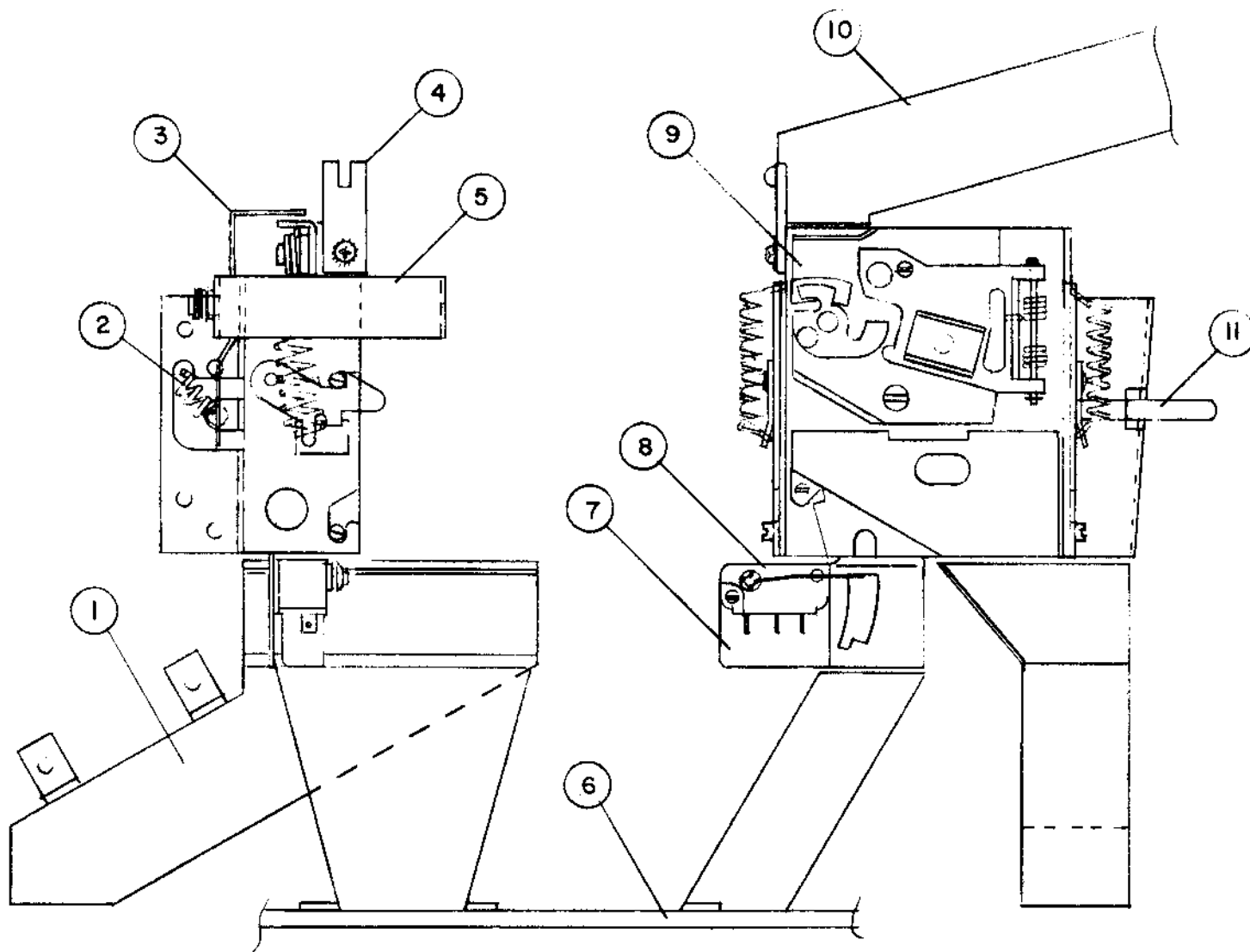
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| 28 | MSU-2 SOUND SIMULATOR UNIT.....            |
| 29 | MSU-2 SOUND SIMULATOR PARTS LIST.....      |
| 30 | BDU-2 LOWER DISPLAY UNIT.....              |
| 31 | SOLENOID SPECIFICATION CHART.....          |

# COMPLETE CABINET



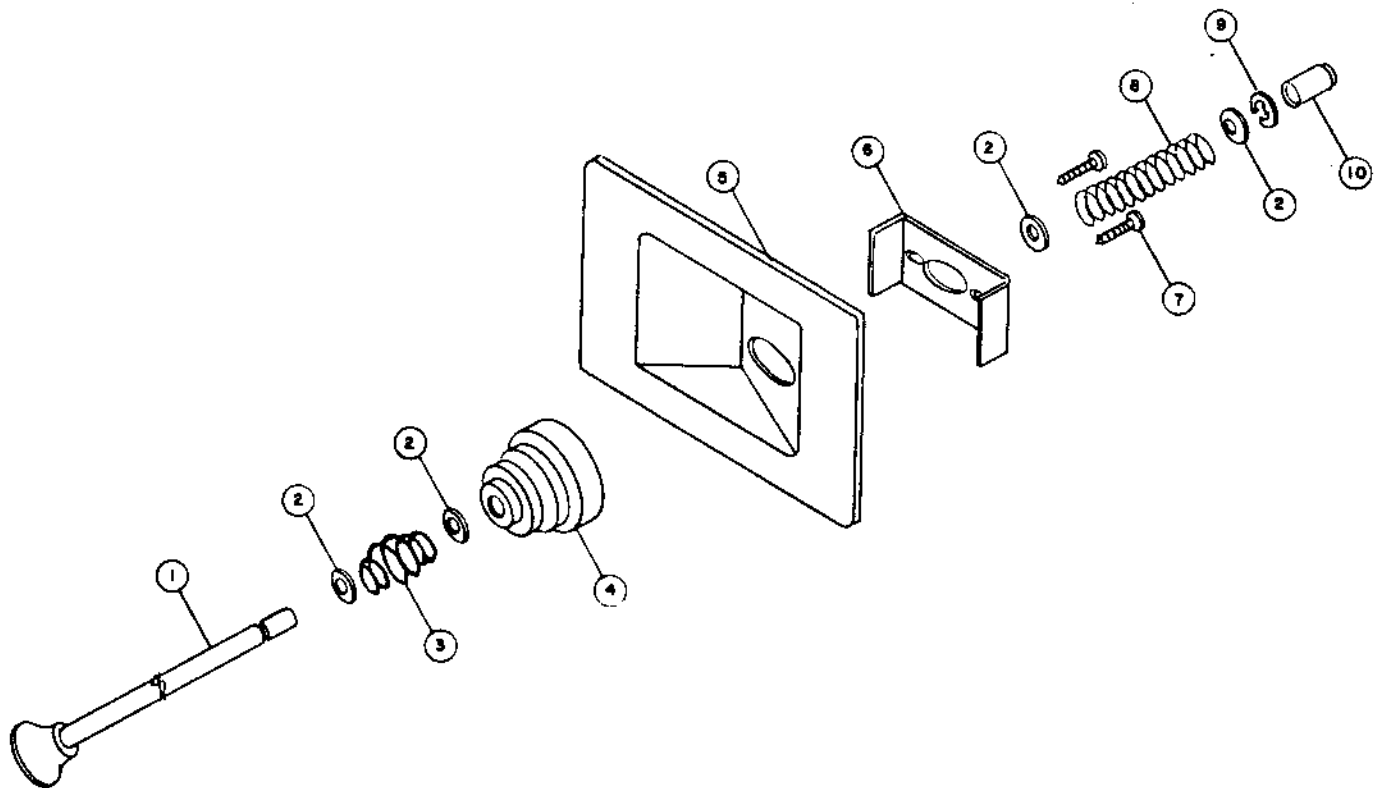
| <u>ITEM</u> | <u>PART NO.</u> | <u>DESCRIPTION</u>                         |
|-------------|-----------------|--------------------------------------------|
| 1           | 08-10001D       | TOP GLASS                                  |
| 2           | 03-20001D       | TOP GLASS MOULDING                         |
| 3           |                 | FLIPPER BUTTON & CREDIT BUTTON SEE PAGE 14 |
| 4           | 10-10011A       | SHOOTER ASSEM.                             |
| 5           | 04-00021        | LOUVER PLATE                               |
| 6           | 03-00003N       | COIN RETURN CUP                            |
| 7           | 10-00028N       | DOOR & FRAME ASSEM.                        |
| 8           | 08-20002A       | COIN DENOMINATOR                           |
| 9           | 03-00002C       | COIN ENTRY CASTING                         |
| 10          | 10-20001        | PLAYFIELD ASSEM.                           |
| 11          | 21-60002        | 5" SPEAKER                                 |

COIN ACCEPTOR & CHUTE ASSEM.



| <u>ITEM</u> | <u>PART NO.</u> | <u>DESCRIPTION</u>                     |
|-------------|-----------------|----------------------------------------|
| 1           | 10-00021C       | COIN REJECT CHUTE                      |
| 2           | 06-20003A       | REJECT ARM SPRING                      |
| 3           | 04-00051A       | REJECT ARM                             |
| 4           | 04-00035A       | CHUTE ALIGNMENT BRK'T.                 |
| 5           | 04-00050A       | REJECT ARM EXTENSION                   |
| 6           | 10-00027C       | CASH BOX MTG. BRK'T. ASSEM.            |
| 7           | 14-00003N       | COIN GUIDE BRK'T.                      |
| 8           | 14-00004N       | 25 CENT COIN SW. ASSEM. (SPECIFY COIN) |
| 9           | 14-30001N       | 25 CENT COIN ACCEPTOR                  |
| 10          | 10-00019B       | COIN TRACK                             |
| 11          | 05-40004A       | REJECT ROD                             |

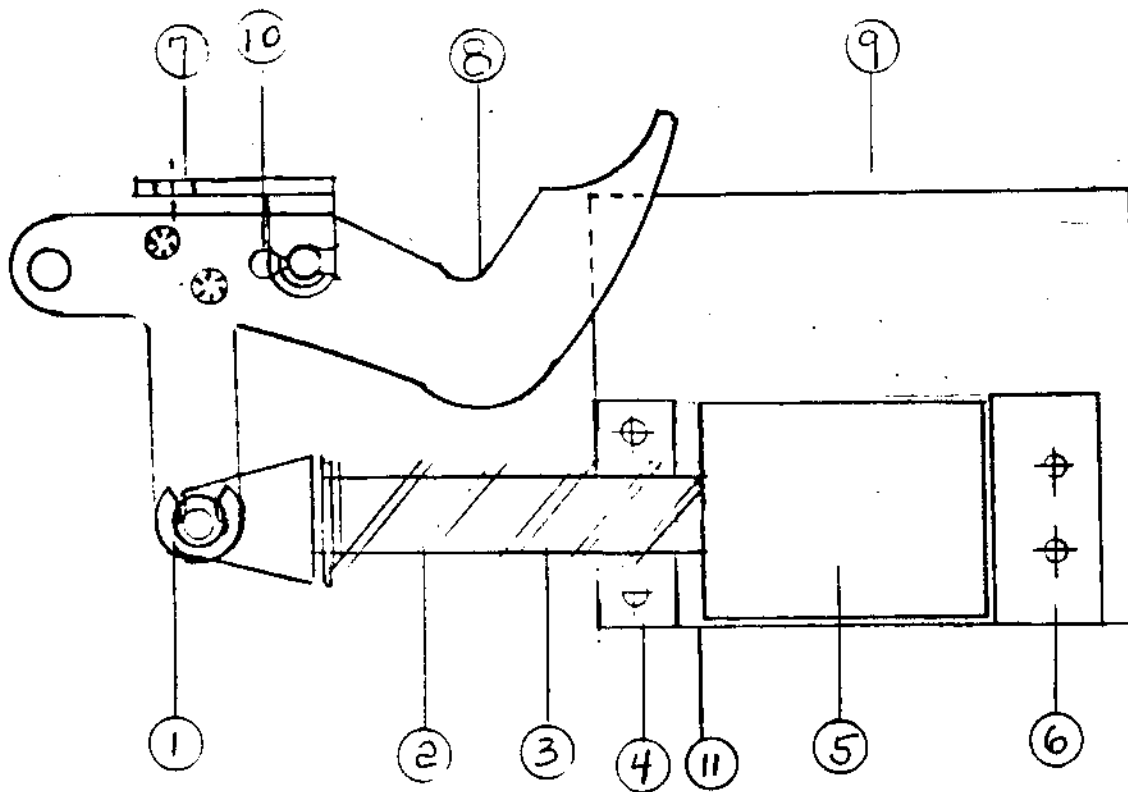
# BALL SHOOTER ASSEM.



| <u>ITEM</u> | <u>PART NO.</u> | <u>DESCRIPTION</u>                  |
|-------------|-----------------|-------------------------------------|
| 1           | 10-00015A       | SHOOTER KNOB-SHAFT ASSEM.           |
| 2           | 13-00004A       | STEEL WASHER                        |
| 3           | 06-30002A       | BARREL SPRING                       |
| 4           | 03-40010N       | BALL SHOOTER HOUSING                |
| 5           | 03-00001C       | SHOOTER CASTING                     |
| 6           | 04-00036A       | SHOOTER HOLD DOWN BRK'T             |
| 7           | 11-10003N       | NO.8X1 1/4 P.R. HD. S.M.S. TYPE "A" |
| 8           | 06-30003A       | SHOOTER SPRING                      |
| 9           | 17-10002A       | "E" RING                            |
| 10          | 08-30002N       | WHITE SHOOTER TIP                   |

# BALL KICKER ASSY

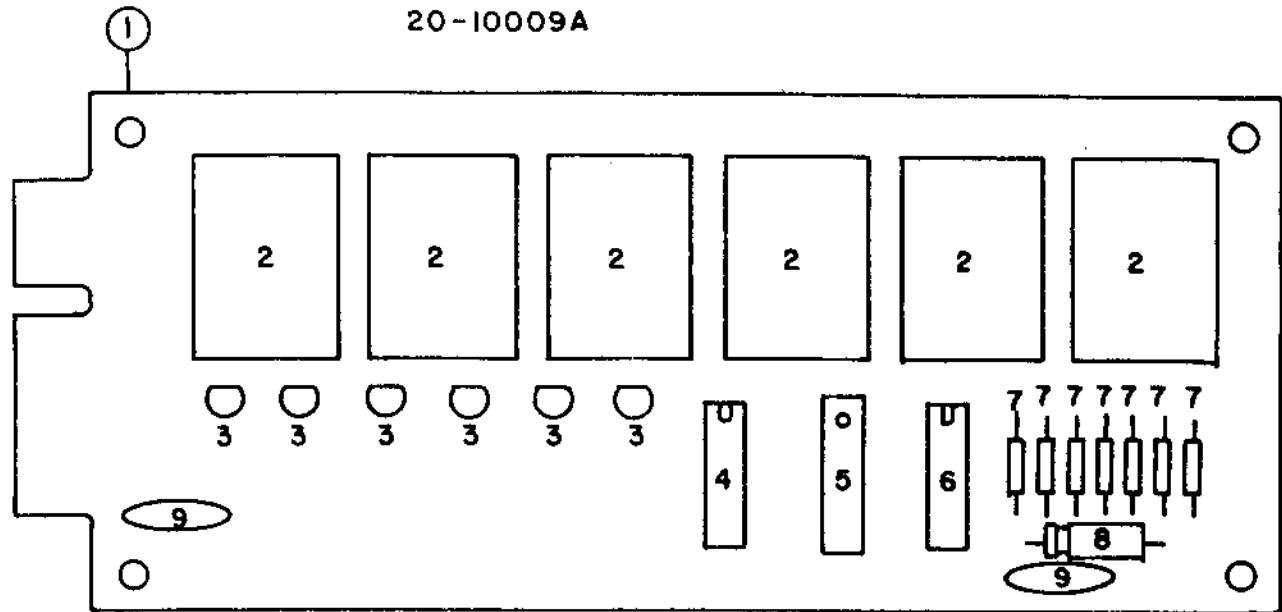
10-10563



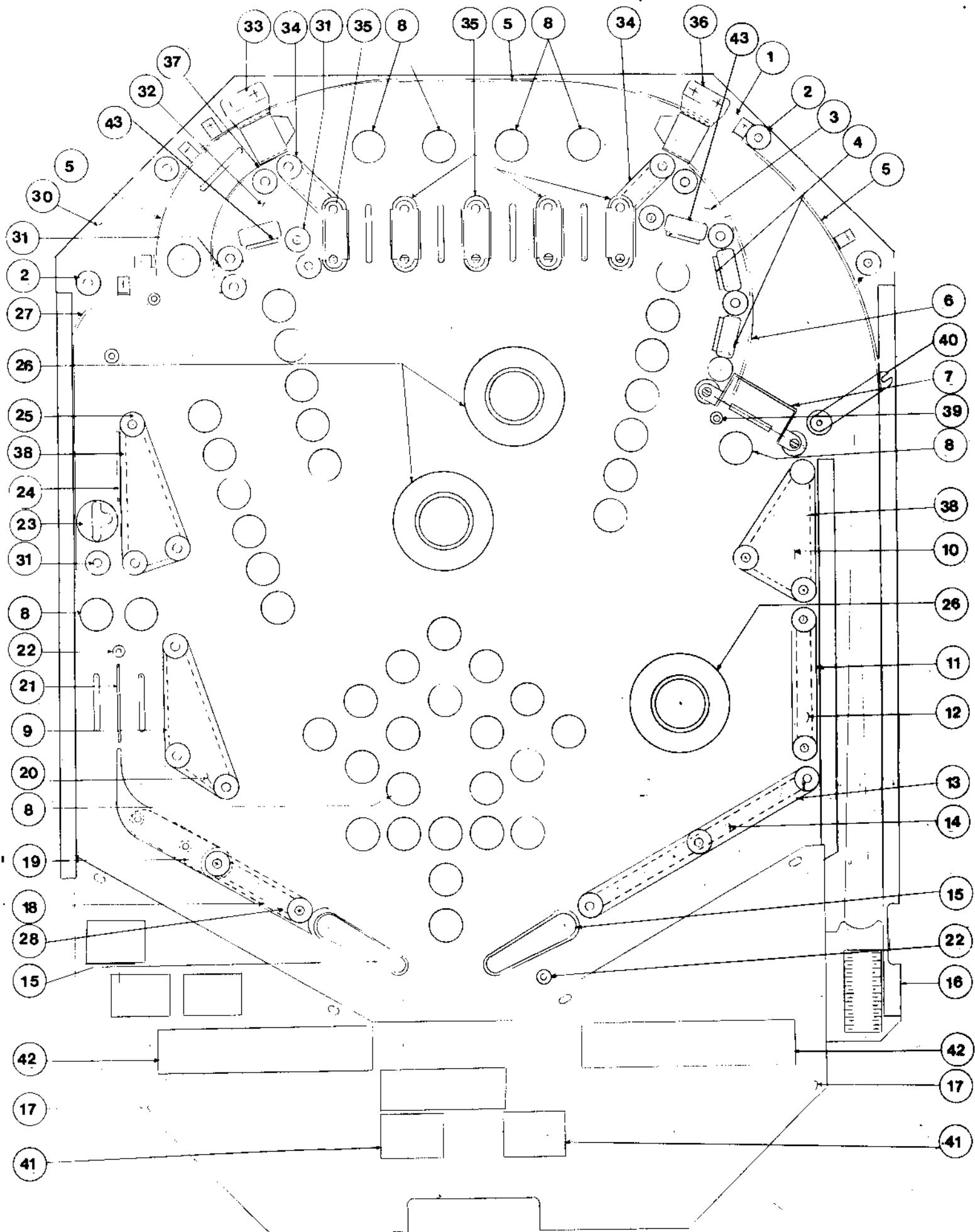
|    |          |                        |
|----|----------|------------------------|
| 1  | 17-10003 | "E" RING               |
| 2  | 06-30004 | PLUNGER RETURN SPRING  |
| 3  | 10-10001 | PLUNGER LINK ASSY      |
| 4  | 04-00008 | COIL SUPPORT           |
| 5  | 21-50005 | SOLENOID               |
| 6  | 10-00009 | PLUNGER                |
| 7  | 10-00005 | ARM MTG. BRK'T ASSY    |
| 8  | 10-10558 | BALL KICKER ASSY       |
| 9  | 04-01192 | BALL KICKOUT MTG BRK'T |
| 10 | 17-20001 | SPRING CLIP            |
| 11 | 11-40008 | SOLENOID TUBE          |

# BDU-1 BACKGLASS DISPLAY UNIT

20-10009A

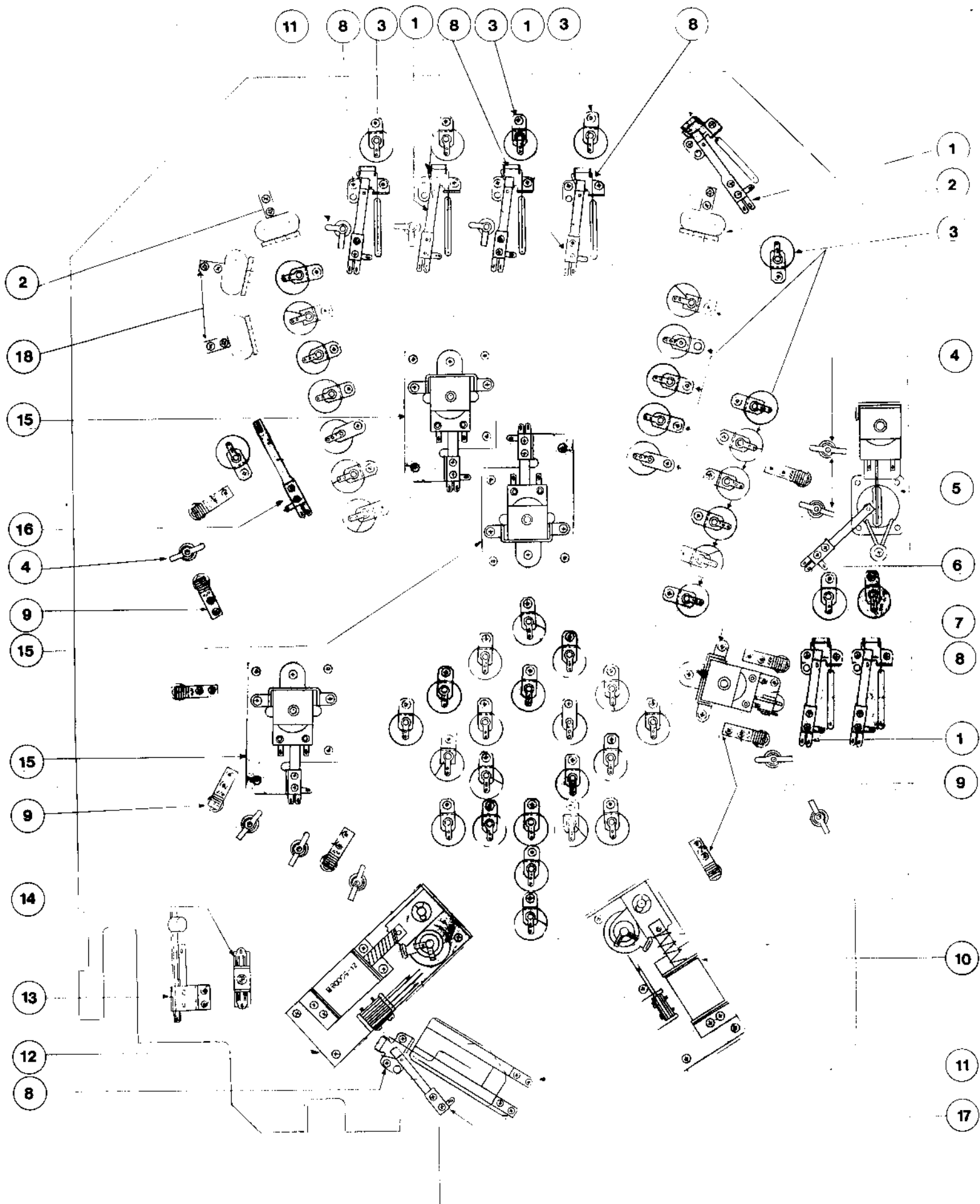


| <u>ITEM</u> | <u>PART NO.</u> | <u>DESCRIPTION</u>                          |
|-------------|-----------------|---------------------------------------------|
| 1           | 20-00008B       | BDU-1 P.C. BOARD                            |
| 2           | 31-20002N       | .8" 7 SEGMENT DISPLAY                       |
| 3           | 25-10006N       | MPSA13 DARLINGTON TRANSISTOR                |
| 4           | 26-00002N       | 74LS379 INTEGRATED CIRCUIT                  |
| 5           | 26-00001N       | 74LS48 INTEGRATED CIRCUIT                   |
| 6           | 26-00003N       | 2003 INTEGRATED CIRCUIT                     |
| 7           | 23-00001N       | 22 OHM $\pm$ 5%, 1/4 WATT RESISTOR          |
| 8           | 24-10001N       | 10 MFD, 16 VOLT AXIAL LYTIC CAP             |
| 9           | 24-00001N       | .01 MFD $\pm$ 10%, 50 VOLT CERAMIC DISC CAP |



# TOP PLAYFIELD

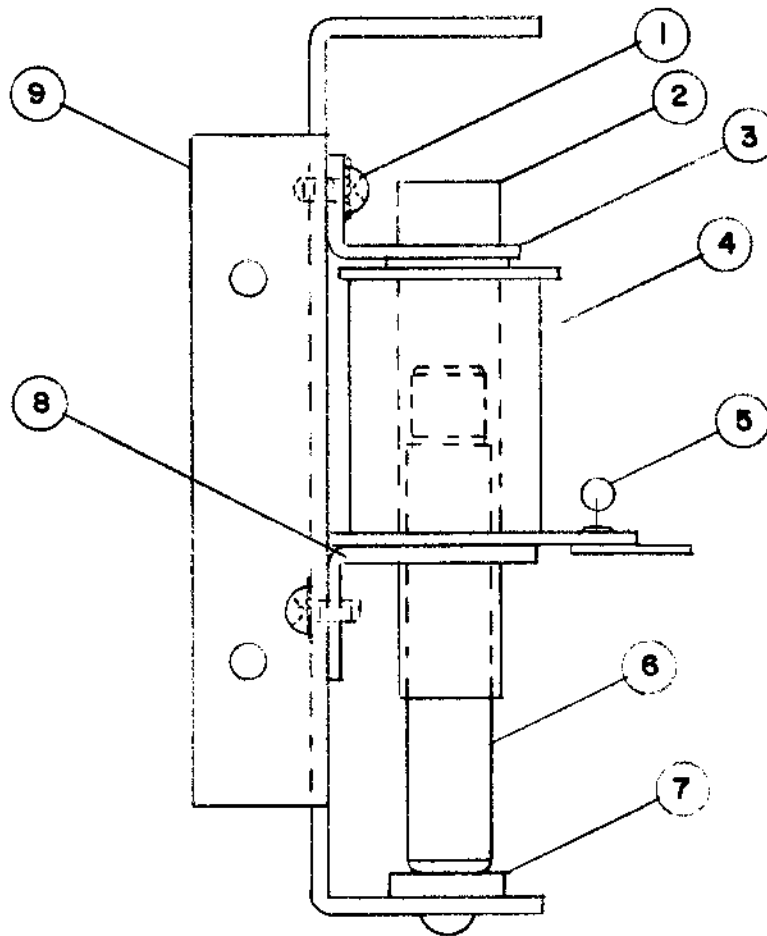
| ITEM | PART NO. | DESCRIPTION          | ITEM | PART NO. | DESCRIPTION                |
|------|----------|----------------------|------|----------|----------------------------|
| 1    | 08-00172 | OVERLAY              | 29   | 08-30005 | 1" I.D. RUBBER RING        |
| 2    | 03-40033 | 5/8" POST RED        | 30   | 08-00166 | OVERLAY                    |
| 3    | 08-00173 | OVERLAY              | 31   | 03-30004 | 5/16" I.D. RUBBER RING     |
| 4    | 10-10137 | STAND UP TARGET      | 32   | 08-00167 | OVERLAY                    |
| 5    | 04-01190 | BALL RUN             | 33   | 10-00004 | LEFT BALL GATE ASS'Y       |
| 6    | 06-00085 | BALL GUIDE WIRE      | 34   | 08-30006 | 1½" ID RUBBER RING         |
| 7    | 10-10550 | SPINNER TARGET ASS'Y | 35   | 03-40067 | 1½" PLASTIC BALL GUIDE RED |
| 8    | 03-40020 | 1" INSERT WHITE      | 36   | 10-00003 | RIGHT BALL GATE ASS'Y      |
|      | 03-40022 | YELLOW               | 37   | 06-00086 | BALL GUIDE WIRE            |
|      | 03-40045 | BLUE                 | 38   | 08-30009 | 2½" ID RUBBER RING         |
|      | 03-40054 | GREEN                | 39   | 08-30015 | MINI POST SCREW TYPE       |
|      | 03-40065 | RED                  | 40   | 04-00373 | GATE BRACKET               |
|      | 03-40044 | AMBER                |      | 06-00047 | WIRE GATE                  |
| 9    | 08-30013 | 3" I.D. RUBBER RING  | 41   | 20-10009 | BDU-1 CREDIT MATCH DISPLAY |
| 10   | 08-00174 | OVERLAY              | 42   | 20-10064 | BDU-2 DISPLAY              |
| 11   | 08-30012 | 2" I.D. RUBBER RING  | 43   | 10-10564 | STAND UP TARGET            |
| 12   | 08-00175 | OVERLAY              |      |          |                            |
| 13   | 08-30010 | 3½" I.D. RUBBER RING |      |          |                            |
| 14   | 08-00176 | OVERLAY              |      |          |                            |
| 15   | 08-30001 | FLIPPER RUBBER       |      |          |                            |
| 16   | 04-00025 | SHOOTER GAUGE        |      |          |                            |
| 17   | 08-00165 | BOTTOM DISPLAY ARCH  |      |          |                            |
| 18   | 08-30014 | 1½" I.D. RUBBER RING |      |          |                            |
| 19   | 08-00171 | OVERLAY              |      |          |                            |
| 20   | 08-00169 | OVERLAY              |      |          |                            |
| 21   | 06-00022 | BALL GUIDE WIRE      |      |          |                            |
| 22   | 08-30032 | MINI POST            |      |          |                            |
| 23   | 03-40070 | KICK OUT HOLE COVER  |      |          |                            |
| 24   | 06-00022 | BALL GUIDE WIRE      |      |          |                            |
| 25   | 08-00168 | OVERLAY              |      |          |                            |
| 26   | 03-40091 | SUN BURST CAP        |      |          |                            |
| 27   | 04-01189 | BALL GUIDE           |      |          |                            |
| 28   | 08-00170 | BOTTOM BALL GUIDE    |      |          |                            |



# BOTTOM PLAYFIELD

| <u>ITEM</u> | <u>PART NO.</u> | <u>DESCRIPTION</u>           |
|-------------|-----------------|------------------------------|
| 1           | 22-00007        | ROLLOVER SW                  |
| 2           | 10-10564        | STAND UP TARGET              |
| 3           | 29-60002        | LAMP SOCKET LONG -2 TYPE     |
| 4           | 29-60005        | MINI LAMP SOCKET STAPLE TYPE |
| 5           | 21-50005        | BALL KICKOUT ASSY            |
| 6           | 10-10560        | BALL KICKOUT ASSY            |
| 7           | 10-00009        | SLING SHOT ASSY              |
| 8           | 10-10016        | ROLLOVER WIRE FORM ASSY      |
| 9           | 10-00120        | SLING SHOT SW                |
| 10          | 10-10081        | LEFT FLIPPER ASSY            |
| 11          | 10-00051        | RUNWAY BALL GUIDE            |
| 12          | 10-10082        | RIGHT FLIPPER ASS'Y          |
| 13          | 10-00026        | TILT SW ASSY                 |
| 14          | 30-10002        | FUSE HOLDER                  |
| 15          | 10-10004        | POWER BUMPER ASS'Y           |
| 16          | 22-00006        | SPINNER SW                   |
| 17          | 10-10017        | BALL EJECTOR WIRE FORM ASSY  |
| 18          | 10-10137        | STAND UP TARGET              |

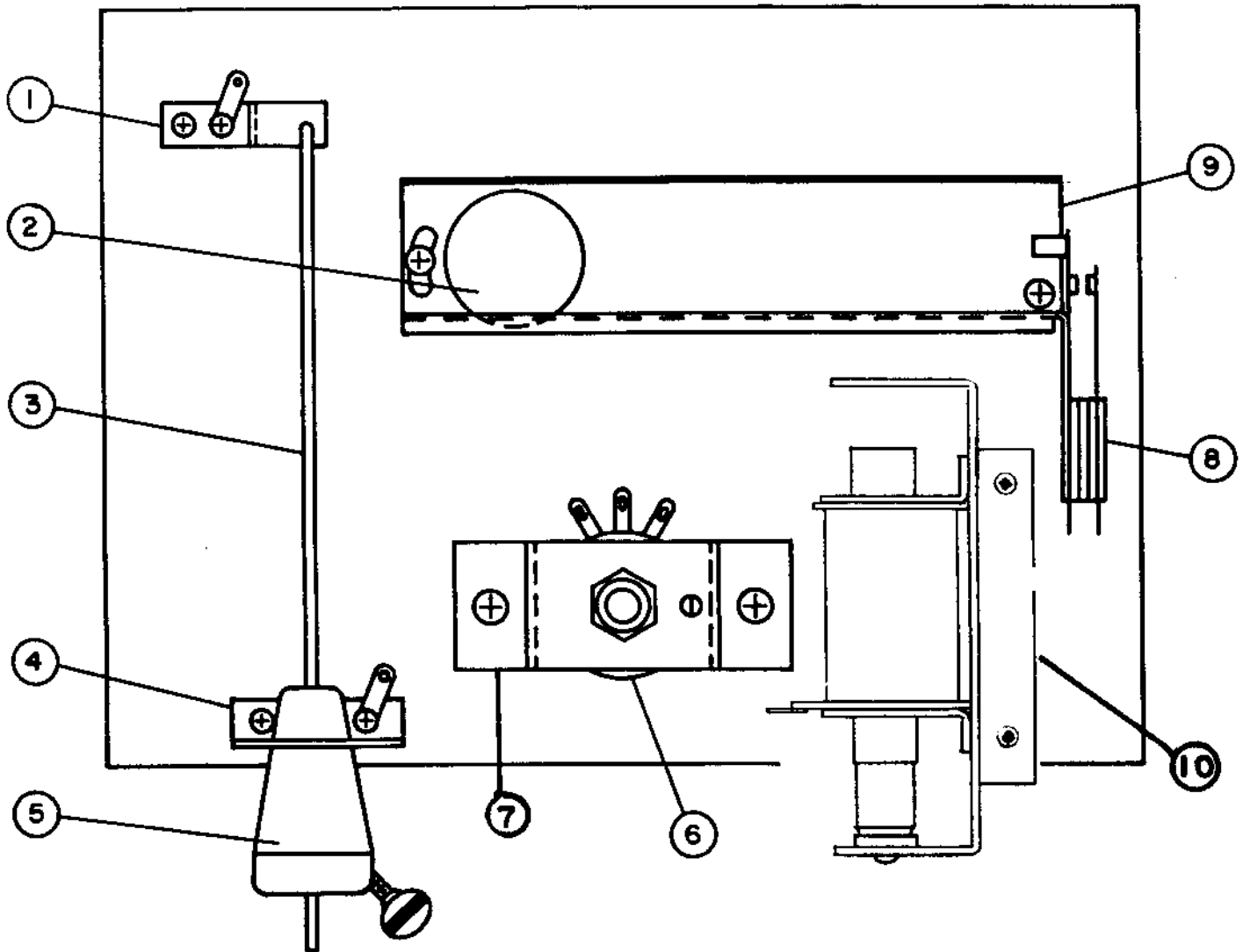
# KNOCKER ASSEM.



| <u>ITEM</u> | <u>PART NO.</u> | <u>DESCRIPTION</u>      |
|-------------|-----------------|-------------------------|
| 1           | 11-40004N       | 6-32 X 3-8 R.P.H. SEMS  |
| 2           | 03-40012N       | SOLENOID TUBE           |
| 3           | 04-00052A       | FRONT COIL STOP         |
| 4           | 21-50003B       | SOLENOID                |
| 5           | 25-00001N       | 1N4004 DIODE            |
| 6           | 10-00013A       | PLUNGER ASSEM.          |
| 7           | 08-30003A       | RUBBER BUMPER           |
| 8           | 04-00008A       | COIL SUPPORT BRK'T      |
| 9           | 04-00028B       | KNOCKER COIL MTG. BRK'T |

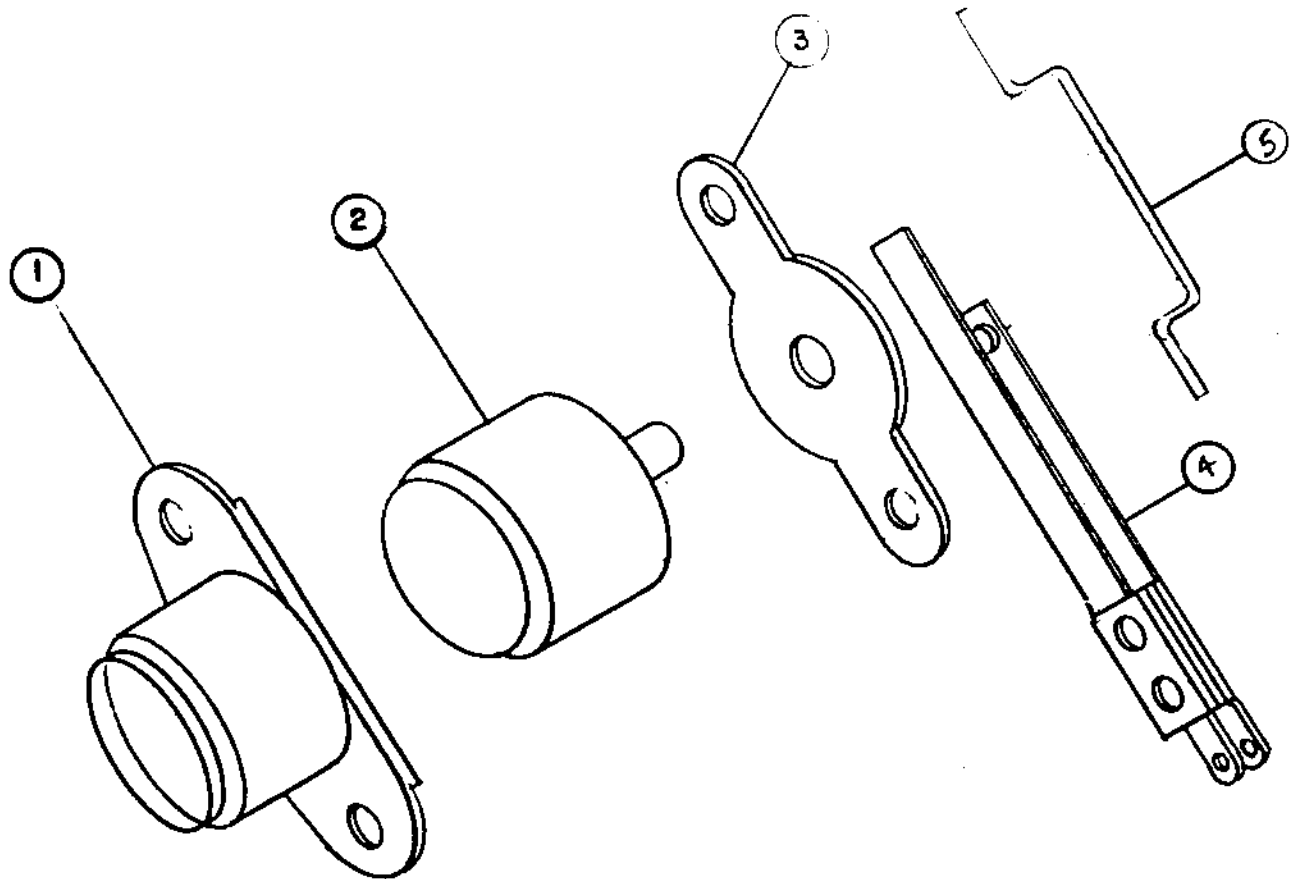
# TILT BLOCK ASSEMBLY

10-10159A



| <u>ITEM</u> | <u>PART NO.</u> | <u>DESCRIPTION</u>          |
|-------------|-----------------|-----------------------------|
| 1           | 04-40002A       | TILT PLUMB BOB HANGER       |
| 2           | 07-40001N       | STEEL BALL                  |
| 3           | 06-00002A       | TILT PLUMB BOB WIRE         |
| 4           | 04-40001A       | TILT CONTACT PLATE          |
| 5           | 03-10001A       | TILT PLUMB BOB              |
| 6           | 04-00438A       | VOLUME CONTROL MTG. BRACKET |
| 7           | 27-00004N       | VOLUME CONTROL              |
| 8           | 22-00003N       | SWITCH                      |
| 9           | 04-00027B       | ROLL TILT CAGE              |
| 10          | 10-10003        | KNOCKER ASSEM.              |

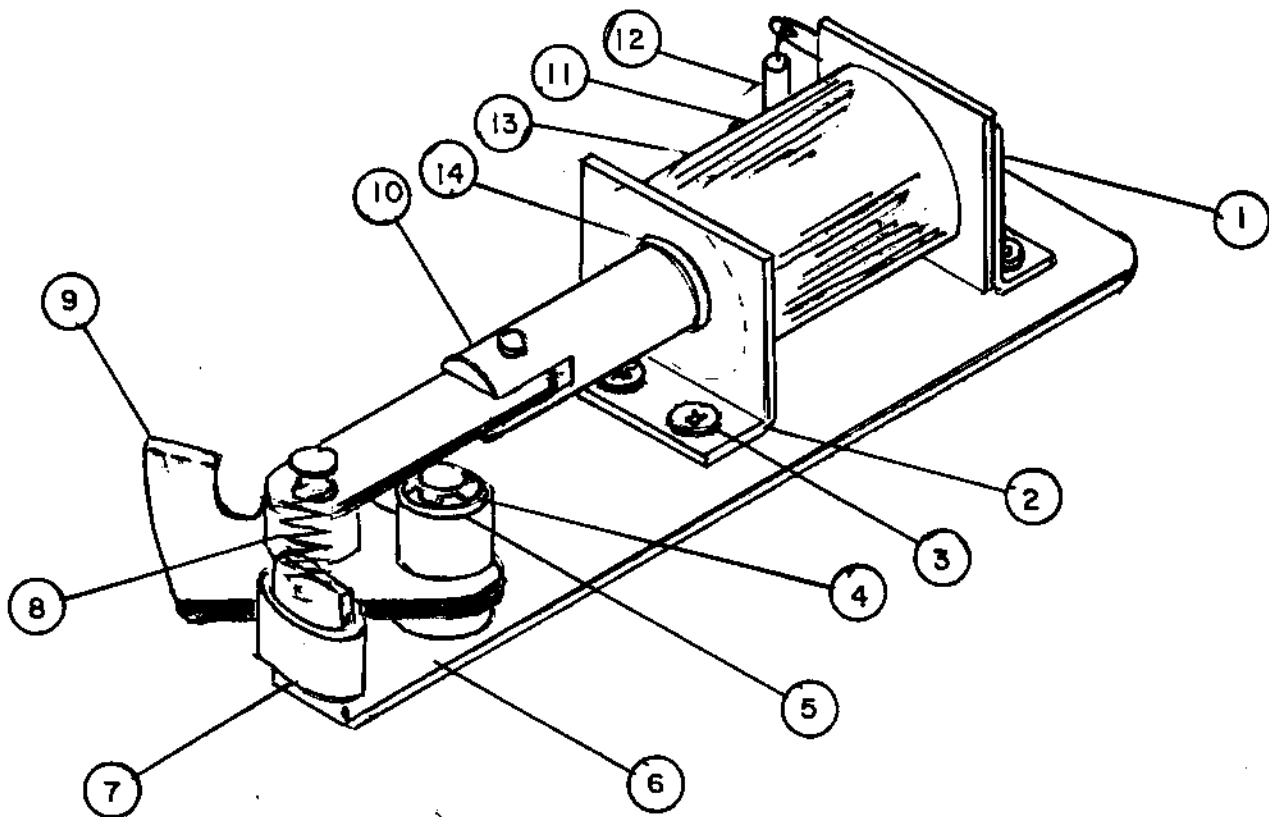
FLIPPER BUTTON  
CREDIT BUTTON  
ASSEM.



| <u>ITEM</u> | <u>PART NO.</u> | <u>DESCRIPTION</u>     |
|-------------|-----------------|------------------------|
| 1           | 03-40014N       | FLIPPER BUTTON HOUSING |
| 2           | 03-40013N       | FLIPPER BUTTON         |
| 3           | 04-00019A       | FLIPPER BUTTON PLATE   |
| 4           | 22-00009N       | FLIPPER SWITCH         |
|             | 22-00012        | CREDIT SWITCH          |
| 5           | 04-01188        | SWITCH GUARD           |

BALL KICKOUT ASSEM.

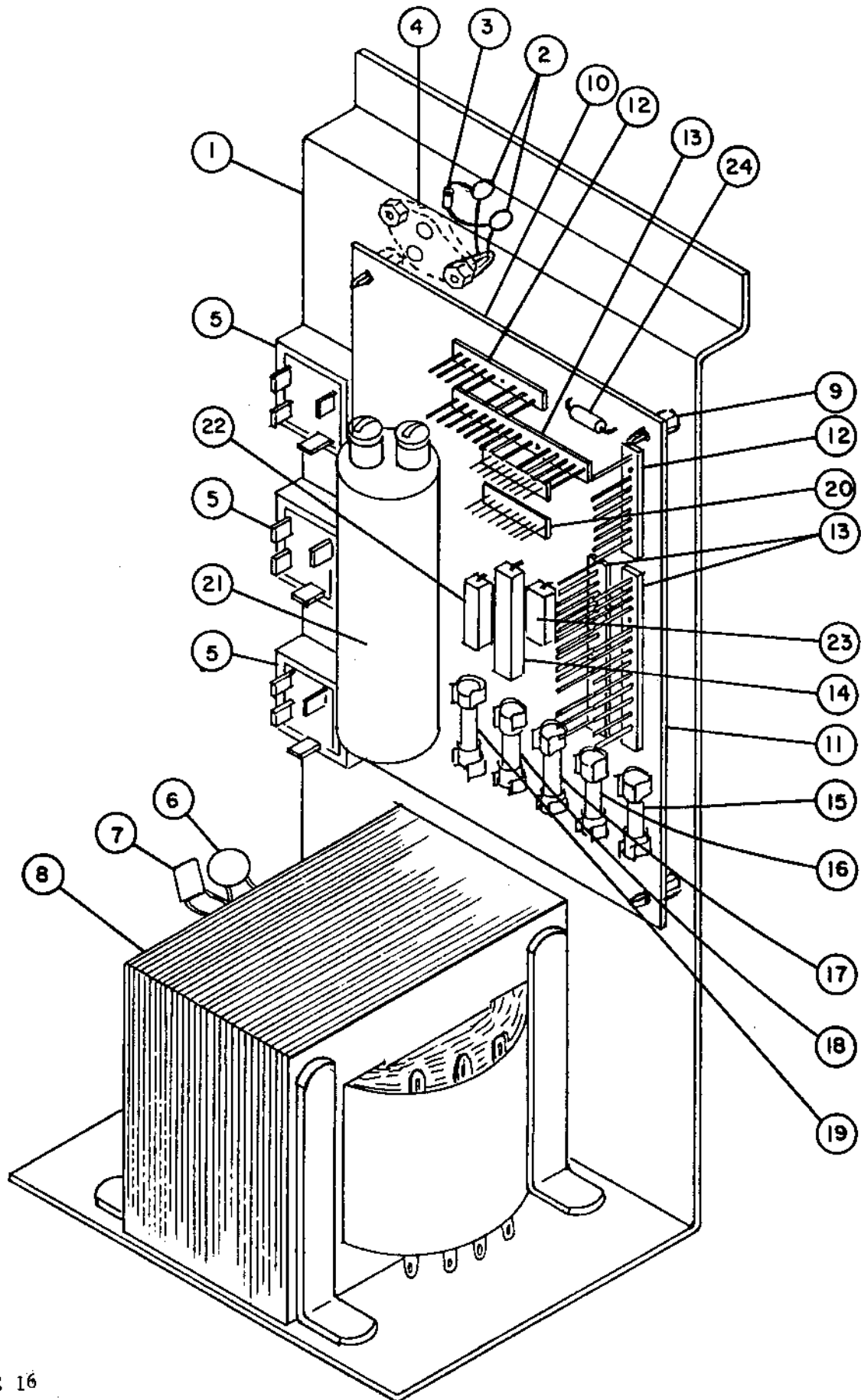
10-10007B



| <u>ITEM</u> | <u>PART NO.</u> | <u>DESCRIPTION</u>                      |
|-------------|-----------------|-----------------------------------------|
| 1           | 10-00009A       | PLUNGER STOP ASSEM.                     |
| 2           | 04-00052A       | FRONT COIL STOP                         |
| 3           | 11-40003N       | 6-32 X 1-4 P.R.H.M.S. SEMS              |
| 4           | 17-10001A       | "E" RING                                |
| 5           | 13-00001A       | BRASS WASHER                            |
| 6           | 10-00001A       | MTG. PLATE ASSEM.                       |
| 7           | 32-10001A       | BALL KICKOUT BUMPER                     |
| 8           | 06-20002A       | SPRING                                  |
| 9           | 10-00002A       | CAM ARM ASSEM.                          |
| 10          | 10-10008A       | KICKOUT PLUNGER ASSEM.                  |
| 11          | 21-50005B       | SOLENOID                                |
| 12          | 25-00001N       | IN4004 DIODE                            |
| 13          | 10-10045N       | SOLENOID ASSEM. INCLUDES ITEMS 11,12,14 |
| 14          | 03-40008A       | SOLENOID TUBE                           |

PSU-I POWER SUPPLY UNIT

10-10075C



PSU-1 POWER SUPPLY UNIT

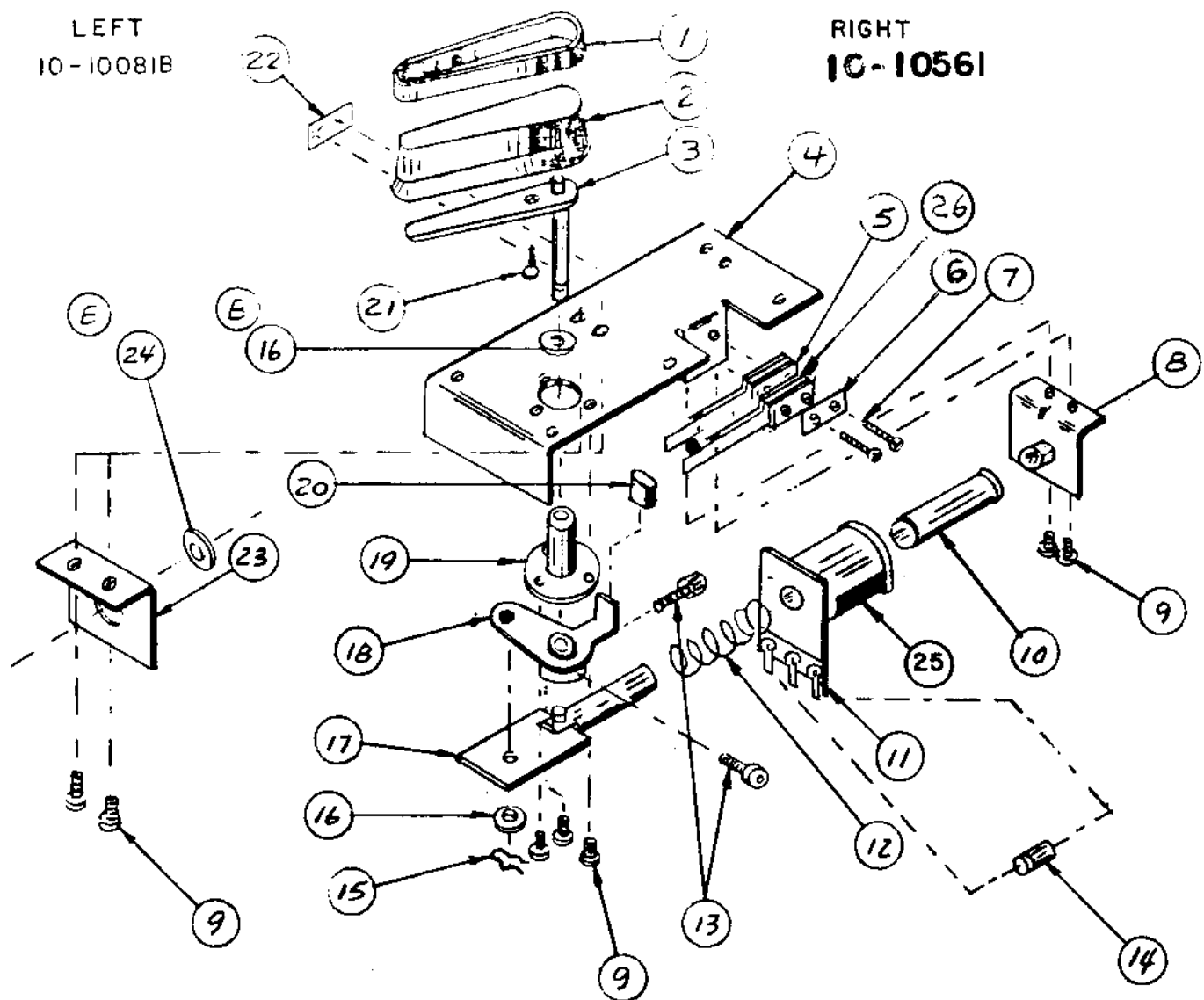
10-10075C

| ITEM | PART NO.  | DESCRIPTION                                            |
|------|-----------|--------------------------------------------------------|
| 1    | 04-20020C | PSU MOUNTING BRACKET                                   |
| 2    | 24-30002N | 10 MFD $\pm 10\%$ , 16 V DIPPED TANTALUM CAP           |
| 3    | 25-00001N | IN4004 DIODE                                           |
| 4    | 26-50001N | LM323K VOLTAGE REGULATOR                               |
| 5    | 25-00003N | 25 AMP, 200 PIV BRIDGE RECTIFIER                       |
| 6    | 25-90002N | 50 VAC VARISTOR                                        |
| 7    | 24-20001N | .1 MFD $\pm 10\%$ , 100 V MYLAR CAP                    |
| 8    | 21-30003C | UNIVERSAL TRANSFORMER                                  |
| 9    | 17-30003N | BOARD SUPPORT                                          |
| 10   | 20-10013A | PSU-1 P.C. BOARD ASS'Y. (INCLUDES<br>ITEMS 11 THRU 24) |
| 11   | 20-00011B | P.C. BOARD                                             |
| 12   | 29-00007N | SL-156 HEADER (9 PIN)                                  |
| 13   | 29-00004N | SL-156 HEADER (15 PIN)                                 |
| 14   | 23-50001N | 5 OHM $\pm 10\%$ , 10 WATT RESISTOR                    |
| 15   | 30-00006N | 20 AMP, 32 V FUSE                                      |
| 16   | 30-00004N | 10 AMP, 125 V FUSE                                     |
| 17   | 30-00005N | 15 AMP, 32 V FUSE                                      |
| 18   | 30-00002N | 5AMP, 125 V 3 AG FUSE                                  |
| 19   | 30-00003N | 3 AMP, 125 V 3 AG SLO-BLO FUSE                         |
| 20   | 29-00001N | CIS HEADER (9 PIN)                                     |
| 21   | 24-10005N | 11,000 MFD, 25 V LYTIC                                 |
| 22   | 23-40001N | .47 OHM $\pm 10\%$ , 5 WATT RESISTOR                   |
| 23   | 23-40002  | 700 OHM $\pm 10\%$ , 5 WATT RESISTOR                   |
| 24   | 23-20002N | 100 OHM, $\pm 5\%$ , 1 WATT RESISTOR                   |

# LEFT-RIGHT FLIPPER ASSEM.

LEFT  
10-10081B

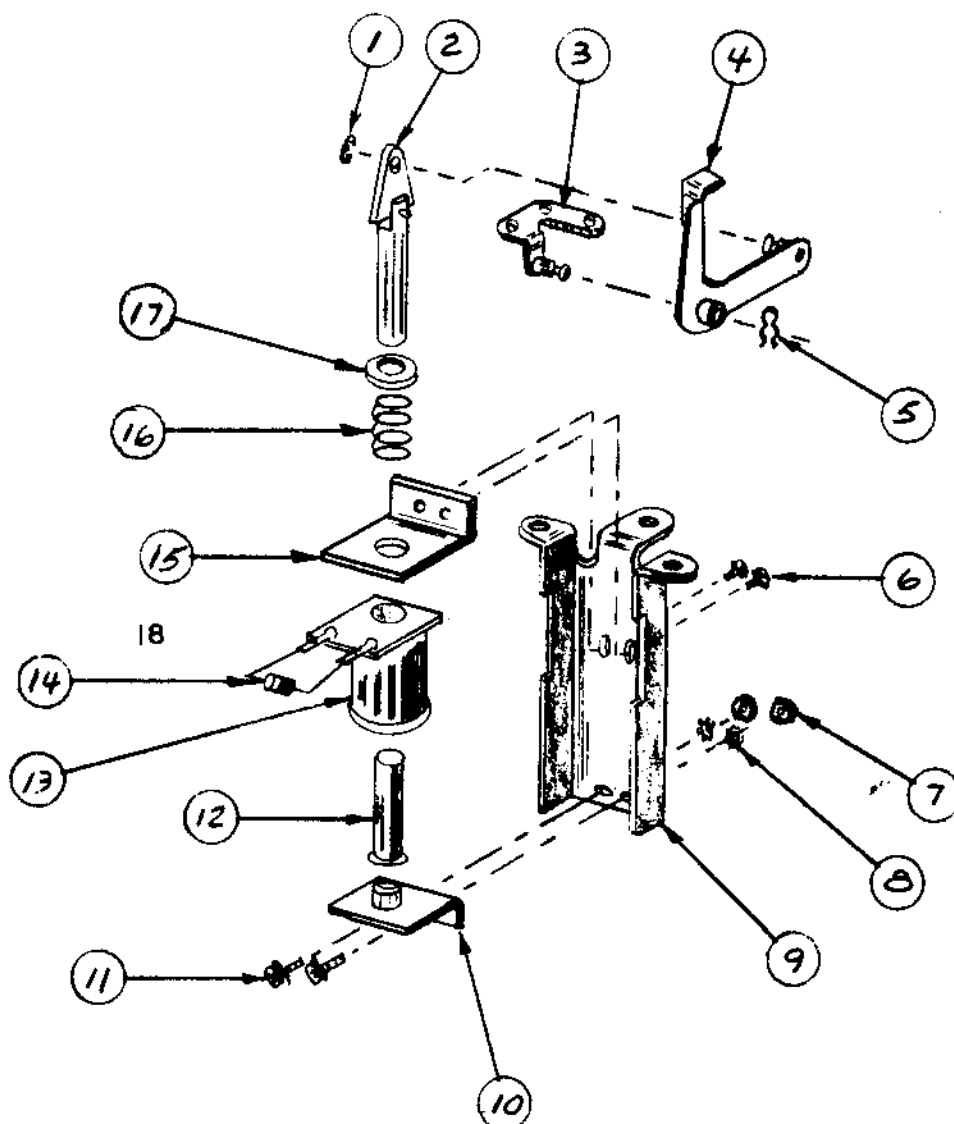
RIGHT  
10-10561



| ITEM | PART NO.  | DESCRIPTION                                 | ITEM | PART NO.  | DESCRIPTION            |
|------|-----------|---------------------------------------------|------|-----------|------------------------|
| 1    | 08-30001N | FLIPPER RUBBER                              | 13   | 11-20001N | 10/32 SOC.HD.SET SCREW |
| 2    | 03-40009N | FLIPPER                                     | 14   | 25-00001N | 1N4004 DIODE           |
| 3    | 10-00010A | FLIPPER SHOE ASS'Y                          | 15   | 17-20001A | SPRING CLIP            |
| * 4  | 04-00030C | LEFT FLIPPER MTG. PL.                       | 16   | 13-00001A | BRASS WASHER           |
| 5    | 22-00002N | FLIPPER BREAK SW.                           | 17   | 10-10002A | FLIPPER PLUNGER ASS'Y  |
| 6    | 17-90001N | TENSION PLATE                               | 18   | 10-00011A | LEFT FLIPPER ARM ASS'Y |
| 7    | 11-10019N | N0.4X5/8S.R.H.S.M.S.TYPE'B'                 | "    | 10-00012A | RIGHT " " "            |
| 8    | 10-00009A | PLUNGER STOP ASS'Y                          | 19   | 03-40001A | FLIPPER BUSHING        |
| 9    | 11-40003N | 6/32X1/4P.R.H.M.S.SEMS                      | 20   | 32-10002A | INSULATOR              |
| 10   | 03-40022N | SOLENOID TUBE                               | 21   | 11-10002N | 6/32X1/2 P. TRUSS HD.  |
| 11   | 21-50008B | SOLENOID                                    | 22   | 12-20002N | SPEED NUT              |
| 12   | 06-30004A | PLUNGER RETURN SP.                          | 23   | 04-00052A | FRONT COIL STOP        |
| * 13 | 04-00031C | RIGHT FLIPPER PLATE                         | 24   | 13-00009N | CURVED SPRING WASHER   |
| 25   | 10-10085N | SOLENOID ASS'Y. WITH DIODE PLUS ITEMS 10-11 |      |           |                        |
| 26   | 22-00005  | SHIFT LANE SW.                              |      |           |                        |

# SLING SHOT ASSEM.

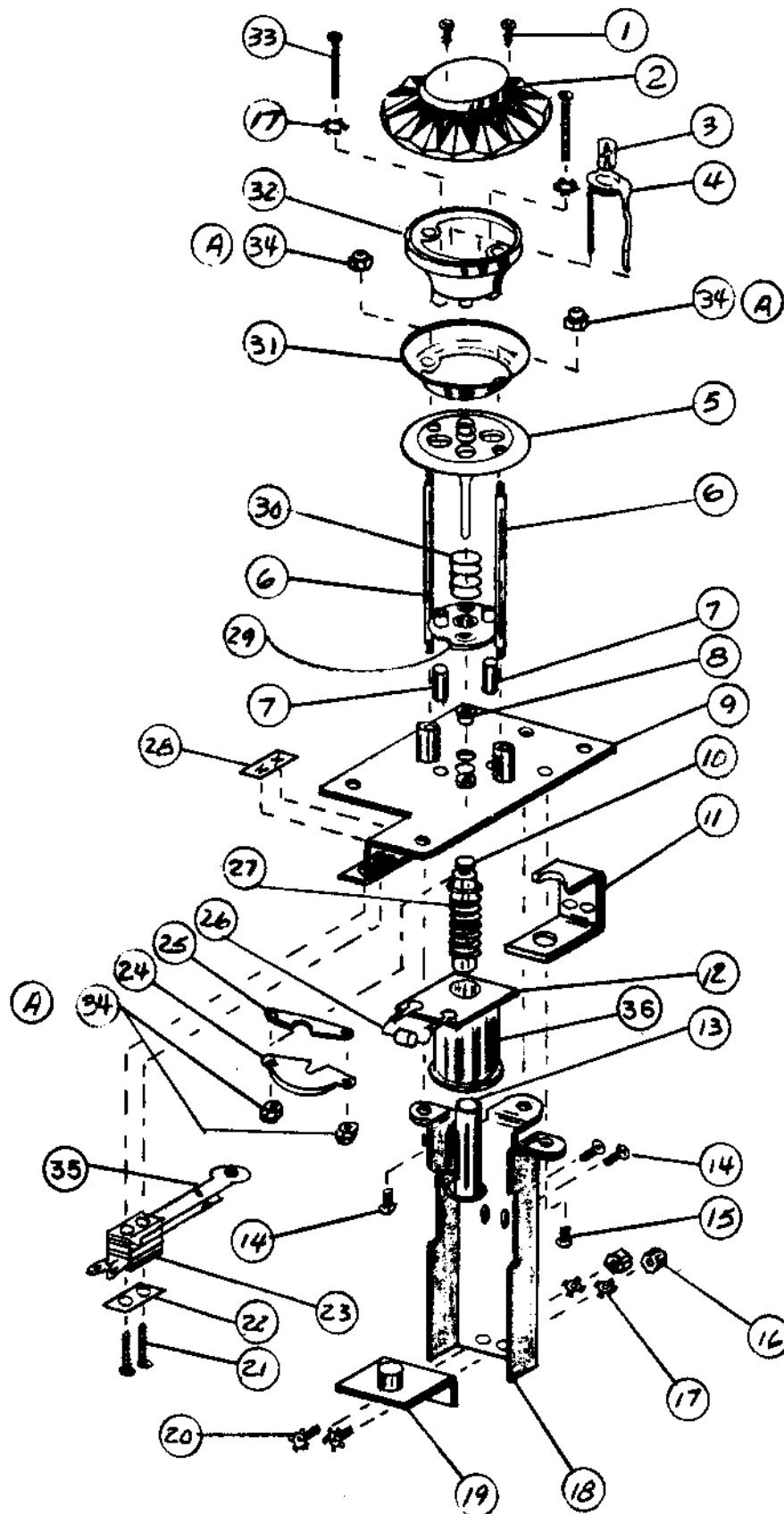
10-10009B



| ITEM | PART NO.  | DESCRIPTION              | ITEM | PART NO.  | DESCRIPTION              |
|------|-----------|--------------------------|------|-----------|--------------------------|
| 1    | 17-10003A | "E" RING                 | 10   | 10-00009A | PLUNGER STOP BRK'T       |
| 2    | 10-10001A | PLUNGER-LINK ASS'Y       | 11   | 11-40004N | 6/32 x 3/8 P.R. HD. SEMS |
| 3    | 10-00005A | ARM MTG. BRK'T ASS'Y     | 12   | 03-40008N | SOLENOID TUBE            |
| 4    | 10-00006A | SLING SHOT ARM ASS'Y     | 13   | 21-50003  | SOLENOID                 |
| 5    | 17-20001A | SPRING CLIP              | 14   | 25-00001N | IN4004 DIODE             |
| 6    | 11-40003N | 6/32 x 1/4 P.R. HD. SEMS | 15   | 04-00008A | COIL SUPPORT BRK'T       |
| 7    | 12-00002N | 6/32 HEX NUT             | 16   | 06-30004A | PLUNGER RETURN SPRING    |
| 8    | 13-10002N | NO. 6 EXT. T. LOCKWASHER | 17   | 13-00003A | STEEL WASHER             |
| 9    | 04-00026B | COIL MTG. BRK'T          | 18   | 10-10039N | SOLENOID ASS'Y INCL.     |
|      |           |                          |      |           | ITEMS 12-12-14 PAGE 19   |

# POWER BUMPER

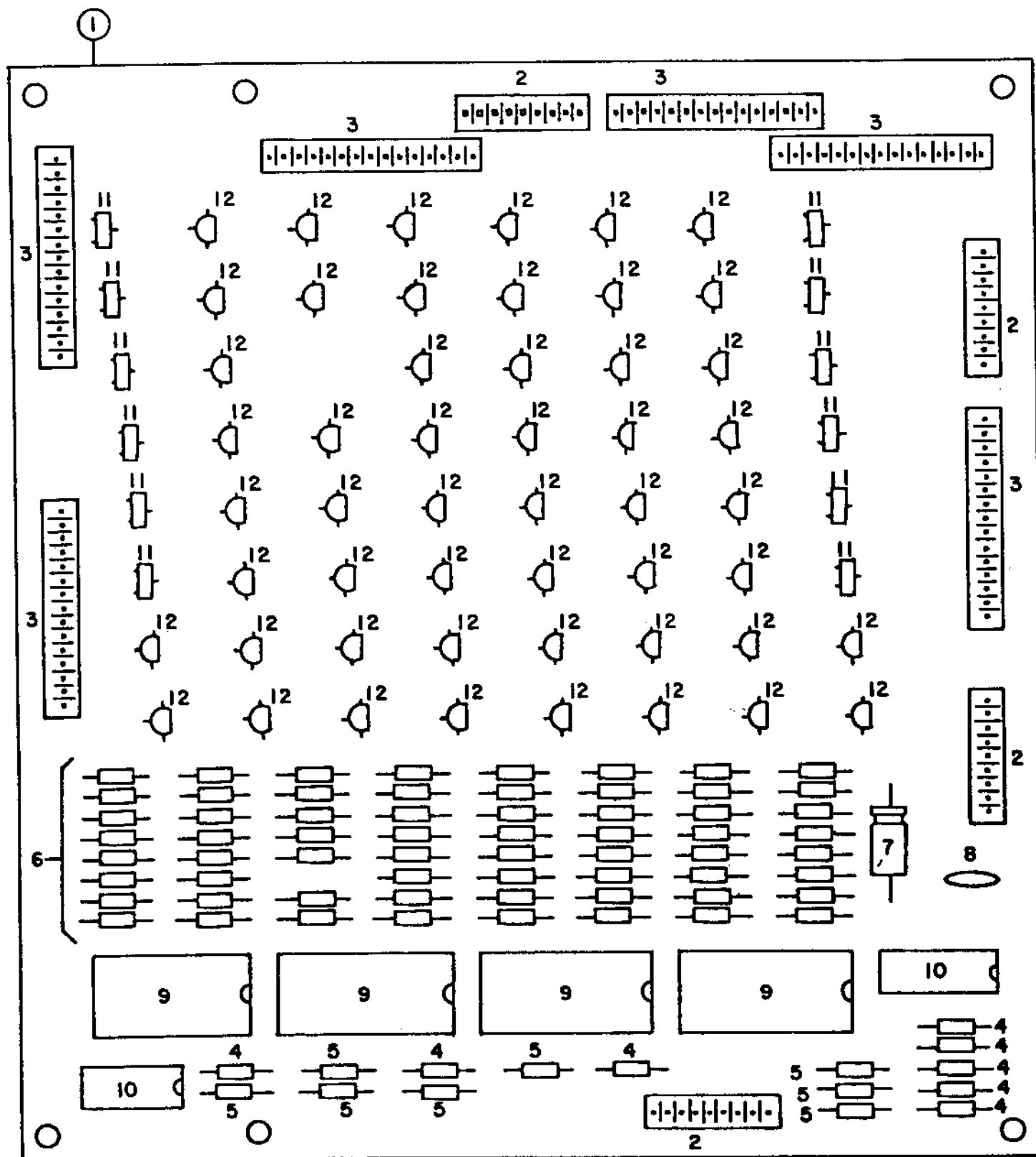
10-10004B



POWER BUMPER ASSEM.

| <u>ITEM</u> | <u>PART NO.</u> | <u>DESCRIPTION</u>           |
|-------------|-----------------|------------------------------|
| 1           | 11-10001N       | NO.4X1/2 P.R.HD. S.M.S.      |
| 2           | 03-4009I        | SUNBURST CAP                 |
| 3           | 31-00001N       | NO.47 LAMP                   |
| 4           | 29-60001N       | BUMPER LAMP SOCKET           |
| 5           | 03-40005N       | WAFER                        |
| 6           | 05-40001A       | POWER BUMPER ROD             |
| 7           | 32-40002A       | " " SPACER                   |
| 8           | 32-40003A       | SNAP BUSHING                 |
| 9           | 10-00008A       | BUMPER MTG. PLATE ASS'Y      |
| 10          | 05-70002A       | POWER BUMPER PLUNGER         |
| 11          | 04-00011A       | " " COIL STOP                |
| 12          | 21-50001B       | SOLENOID                     |
| 13          | 03-40008N       | " TUBE                       |
| 14          | 11-40003N       | 6/32X1/4 P.R.HD. M.S. SEMS   |
| 15          | 11-40002N       | 8/32X1/4 P.R.HD. M.S. SEMS   |
| 16          | 12-00002N       | 6/32 HEX NUT                 |
| 17          | 13-10002N       | NO.6 EXT. TOOTH LOCKWASHER   |
| 18          | 04-00026B       | COIL MTG. BRK'T              |
| 19          | 10-00009A       | PLUNGER STOP ASS'Y           |
| 20          | 11-40004A       | 6/32X3/8 P.R.HD. M.S. SEMS   |
| 22          | 17-90001A       | TENSION PLATE                |
| 23          | 22-00001N       | POWER BUMPER SWITCH          |
| 24          | 04-30003A       | FIBER PLUNGER ARM            |
| 25          | 04-10002A       | STAINLESS PLUNGER ARM        |
| 26          | 25-00001N       | 1N4004 DIODE                 |
| 27          | 06-30005A       | BUMPER PLUNGER RETURN SPRING |
| 28          | 12-20002N       | SPEED NUT                    |
| 29          | 03-40006N       | BUMPER BASE                  |
| 30          | 06-30001A       | POWER BUMPER SPRING          |
| 31          | 04-10001A       | " " RING                     |
| 32          | 03-40004N       | " " BODY                     |
| 33          | 11-40001N       | 6/32X1 1/4 P.R.HD. M.S.      |
| 34          | 12-10001N       | 6/32 ELASTIC STOP NUT        |

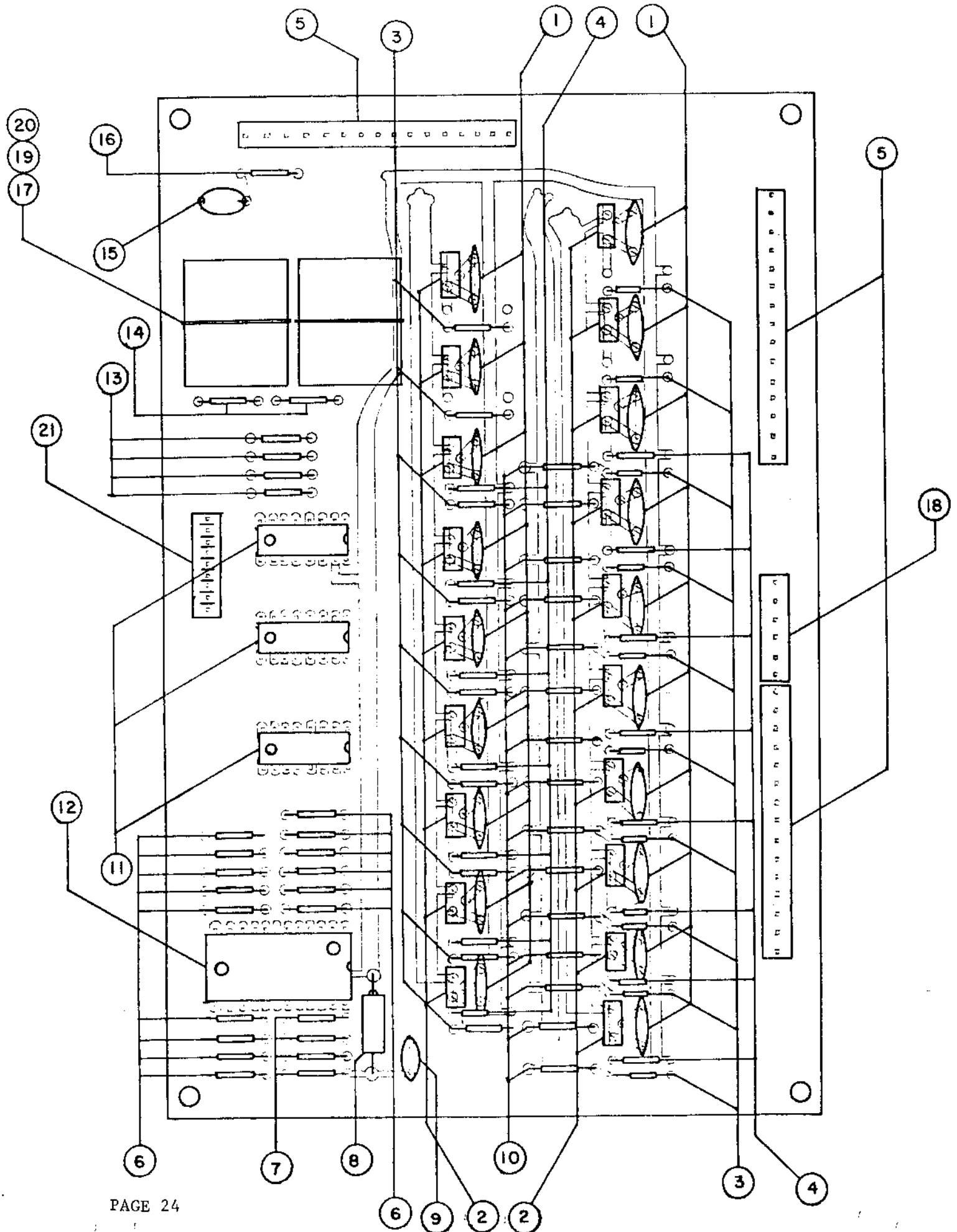
# LDU-2 LAMP DRIVER UNIT



LDU-2 LAMP DRIVER UNIT  
20-10012C

| <u>ITEM</u> | <u>PART NO.</u> | <u>DESCRIPTION</u>                    |
|-------------|-----------------|---------------------------------------|
| 1           | 20-00010C       | LDU-2 P.C. BOARD                      |
| 2           | 29-00001N       | CIS HEADER (9 PIN)                    |
| 3           | 29-00002N       | CIS HEADER (15 PIN)                   |
| 4           | 23-00009N       | 2.2 M OHM $\pm$ 5%, 1/4 WATT RESISTOR |
| 5           | 23-00007N       | 22 K OHM $\pm$ 5%, 1/4 WATT RESISTOR  |
| 6           | 23-00004N       | 2.2 K OHM $\pm$ 5%, 1/4 WATT RESISTOR |
| 7           | 24-10001N       | 10 MFD, 16 VOLT AXIAL LYTIC CAP       |
| 8           | 24-00001N       | .01 MFD $\pm$ 10% CERAMIC DISC CAP    |
| 9           | 26-10001N       | 4514 INTEGRATED CIRCUIT               |
| 10          | 26-10002N       | 4050 INTEGRATED CIRCUIT               |
| 11          | 25-20002N       | MCR 106-1 SCR                         |
| 12          | 25-20001N       | 2N5060 SCR                            |

# SDU-1- SOLENOID DRIVER



SDU - 1 — SOLENOID DRIVER

20-10002B

| <u>ITEM</u> | <u>PART NO.</u> | <u>DESCRIPTION</u>                            |
|-------------|-----------------|-----------------------------------------------|
| 1           | 24-00002N       | .002mfd. $\pm 10\%$ , 1KV. CERAMIC DISC CAP   |
| 2           | 25-10002N       | RCA 121 OR SE 9301 TRANSISTOR                 |
| 3           | 25-00001N       | 1N4004 DIODE                                  |
| 4           | 23-00002N       | 330 ohm $\pm 5\%$ , 1/4 WATT RESISTOR         |
| 5           | 29-00004N       | 15 PIN HEADER                                 |
| 6           | 23-00003N       | 1.2K ohm $\pm 5\%$ , 1/4 WATT RESISTOR        |
| 7           | 23-00008N       | 100K ohm $\pm 5\%$ , 1/4 WATT RESISTOR        |
| 8           | 24-10001N       | 10mfd. 16 VOLT AXIAL LYTIC CAP                |
| 9           | 24-00001N       | .01mfd. $\pm 10\%$ , 50 VOLT CERAMIC DISC CAP |
| 10          | 23-10001N       | 470 ohm $\pm 5\%$ , 1/2 WATT RESISTOR         |
| 11          | 26-00005N       | CA3081 OR ULN2081 I.C.                        |
| 12          | 26-00004N       | 74154 INTEGRATED CIRCUIT                      |
| 13          | 23-00005N       | 4.7K ohm $\pm 5\%$ , 1/4 WATT RESISTOR        |
| 14          | SEE 3           |                                               |
| 15          | 24-20001N       | .1mfd. $\pm 10\%$ , 100 VOLT MYLAR CAP        |
| 16          | 23-00006N       | 100 ohm $\pm 5\%$ , 1/4 WATT RESISTOR         |
| 17          | 21-00001N       | 4 PDT 24 VDC RELAY                            |
| 18          | 29-00003N       | 6 PIN HEADER                                  |
| 19          | 29-50001N       | RELAY SOCKET                                  |
| 20          | 06-90001N       | RELAY HOLD DOWN SPRING                        |
| 21          | 29-00001N       | 9 PIN HEADER                                  |



# MPU-2 MICRO PROCESSOR UNIT

| <u>ITEM</u> | <u>PART NO.</u> | <u>DESCRIPTION</u>             | <u>ITEM</u> | <u>PART NO.</u> | <u>DESCRIPTION</u>   |
|-------------|-----------------|--------------------------------|-------------|-----------------|----------------------|
| 1           | 20-00029C       | MPU-2 P.C. BOARD               | 31          | 22-10003N       | PUSHBUTTON SWITCH    |
| 2           | 29-00002N       | 15 PIN HEADER                  | 32          | 31-10001N       | LED                  |
| 3           | 29-00001N       | 9 PIN HEADER                   | 33          | 22-50001N       | DIP SLIDE SWITCH     |
| 4           | 23-00020N       | 47K OHM $\frac{1}{4}$ W. RES.  | 34          | 21-90001N       | CRYSTAL (2.4576 MHZ) |
| 5           | 23-00008N       | 100K OHM $\frac{1}{4}$ W. RES. | 35          | 26-00011N       | 74LS123 I.C.         |
| 6           | 23-00006N       | 100 OHM $\frac{1}{4}$ W. RES.  | 36          | 26-60001N       | LM339 I.C.           |
| 7           | 23-00016N       | 220K OHM $\frac{1}{4}$ W. RES. | 37          | 26-00007N       | 74LS04 I.C.          |
| 8           | 23-00004N       | 2.2K OHM $\frac{1}{4}$ W. RES. | 38          | 26-00006N       | 74LS00 I.C.          |
| 9           | 23-00013N       | 3.3 OHM $\frac{1}{4}$ W. RES.  | 39          | 26-00010N       | 74LS32 I.C.          |
| 10          | 23-00002N       | 330 OHM $\frac{1}{4}$ W. RES.  | 40          | 26-30001N       | HM 6551-9 CMOS I.C.  |
| 11          | 23-00007N       | 22K OHM $\frac{1}{4}$ W. RES.  | 41          | 29-50005N       | 22 PIN I.C. SOCKET   |
| 12          | 23-00021N       | 120K OHM $\frac{1}{4}$ W. RES. | 42          | 26-30010N       | N CHANNEL RAM, 6810  |
| 13          | 23-00011N       | 1K OHM $\frac{1}{4}$ W. RES.   | 43          | 29-50004N       | 24 PIN I.C. SOCKET   |
| 14          | 23-00005N       | 4.7K OHM $\frac{1}{4}$ W. RES. | 44          | 26-40002N       | Z-80 CTC             |
| 15          | 23-00010N       | 270 OHM $\frac{1}{4}$ W. RES.  | 45          | 29-50003N       | 28 PIN I.C. SOCKET   |
| 16          | 23-00012N       | 1.5K OHM $\frac{1}{4}$ W. RES. | 46          | 26-40001N       | Z-80 CPU             |
| 17          | 24-00005N       | .1 MFD 25V CER. CAP            | 47          | 29-50002N       | 40 PIN I.C. SOCKET   |
| 18          | 21-40002N       | RF CHOKE                       | 48          | NOT USED        |                      |
| 19          | 24-30001N       | 1 MFD 35V DIP. TAN. CAP.       | 49          | 26-30255        | MOD 830 AB ROM       |
| 20          | 24-00003N       | .001 MFD 100V CER. CAP         | 50          | 26-30256        | MOD 830 C ROM        |
| 21          | 24-00001N       | 220 PFD 100V CER. CAP          | 51          | 26-40003N       | 8255 PIA             |
| 22          | 24-10001N       | 10 MFD, 16V AX. LYTIC CAP      | 52          | 26-00004N       | 74154 I.C.           |
| 23          | 24-10004N       | 22 MFD, 16V AX. LYTIC CAP      | 53          | 26-00009N       | 7417 I.C.            |
| 24          | 23-20002N       | 100 OHM $\frac{1}{4}$ W. RES.  | 54          | 26-00012N       | 74LS138 I.C.         |
| 25          | 25-00002N       | 1N4148 DIODE                   | 55          | 26-00002N       | 74LS379 I.C.         |
| 26          | 25-00001N       | 1N4004 DIODE                   | 56          | 26-00008N       | 7416 I.C.            |
| 27          | 25-30003N       | 1N959B ZENER DIODE             | 57          | 24-00001N       | .01 MFD 50V CER. CAP |
| 28          | 25-10003N       | 2N4403 TRANSISTOR              | 58          | 26-10004N       | 74C32 I.C.           |
| 29          | 25-10004N       | 2N3904 TRANSISTOR              | 59          | 23-00019N       | 8.2K OHM RES.        |
| 30          | 21-90002N       | BATTERY (3.6V NI CAD)          | 60          | 23-00024N       | 56K OHM RES.         |
|             |                 |                                | 61          | 23-00015N       | 10K OHM RES.         |

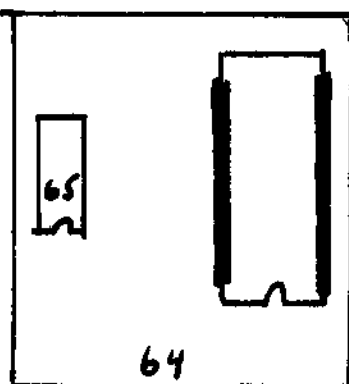


## MSU-2

## MICRO SOUND UNIT

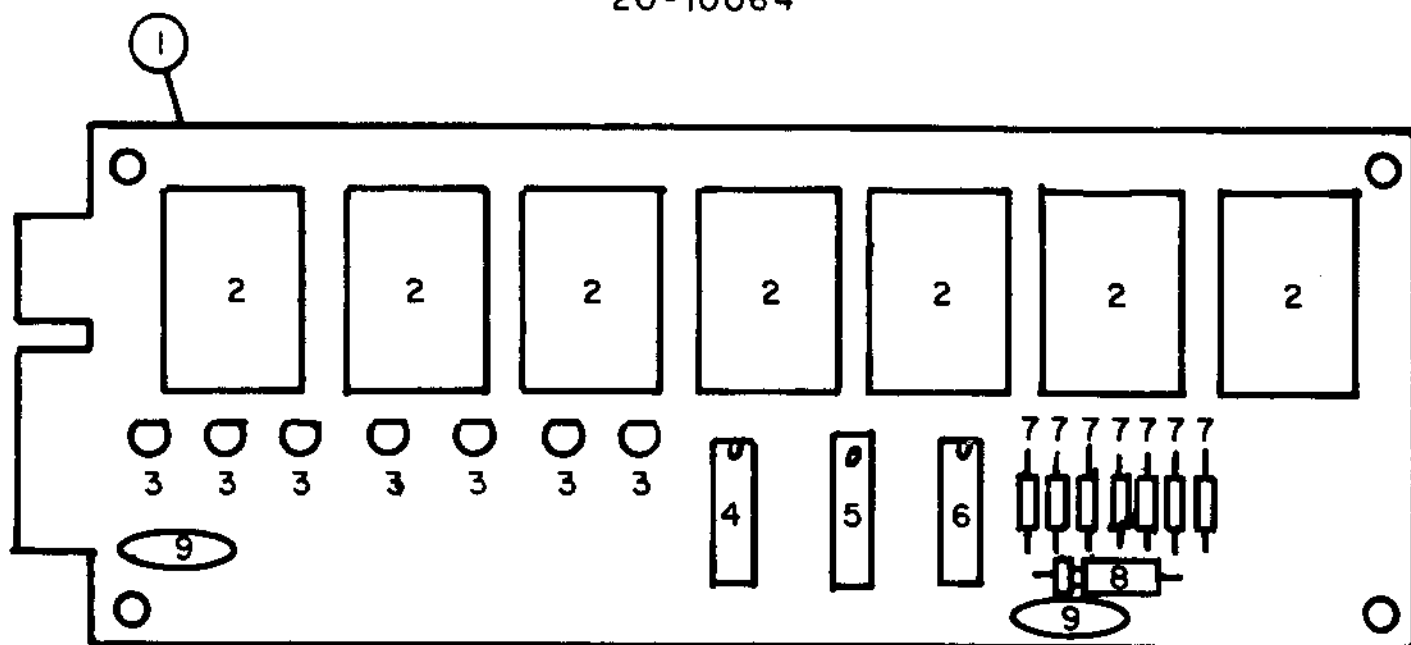
20-10143

| ITEM | PART NO.  | DESCRIPTION                              | ITEM | PART NO.  | DESCRIPTION                         |
|------|-----------|------------------------------------------|------|-----------|-------------------------------------|
| 1    | 20-00051B | P.C. BOARD                               | 32   | 24-20001N | .1MFD $\pm$ 10%, 100V MYLAR CAP     |
| 2    | 23-00011N | 1K OHM $\pm$ 5%, $\frac{1}{4}$ W. RES.   | 33   | 24-20003N | .01 MFD $\pm$ 10% 100V MYLAR CAP    |
| 3    | 23-00003N | 1.2 OHM $\pm$ 5%, $\frac{1}{4}$ W. RES.  | 34   | 24-20008N | .00047 MFD $\pm$ 10% 100V MYLAR CAP |
| 4    | 23-00004N | 2.2K OHM $\pm$ 5%, $\frac{1}{4}$ W. RES. | 35   | 24-20009N | .047 MFD $\pm$ 10% 100V MYLAR CAP   |
| 5    | 23-00006N | 100 OHM $\pm$ 5%, $\frac{1}{4}$ W. RES.  | 36   | 24-20010N | .22 MFD $\pm$ 10% 100V MYLAR CAP    |
| 6    | 23-00007N | 22K OHM $\pm$ 5%, $\frac{1}{4}$ W. RES.  | 37   | 24-30001N | 1 MFD $\pm$ 10% 35Z DIP. TAN. CAP   |
| 7    | 23-00008N | 100K OHM $\pm$ 5%, $\frac{1}{4}$ W. RES. | 38   | 24-30002N | 10 MFD $\pm$ 10% 16V DIP. TAN. CAP  |
| 8    | 23-00009N | 2.2M OHM $\pm$ 5%, $\frac{1}{4}$ W. RES. | 39   | 21-90004N | 3.579 MHZ CRYSTAL                   |
| 9    | 23-00010N | 270 OHM $\pm$ 5%, $\frac{1}{4}$ W. RES.  | 40   | 25-00002N | IN4148 DIODE                        |
| 10   | 23-00013N | 3.3K OHM $\pm$ 5%, $\frac{1}{4}$ W. RES. | 41   | 25-10003N | 2N4403 TRANSISTOR                   |
| 11   | 23-00014N | 6.8K OHM $\pm$ 5%, $\frac{1}{4}$ W. RES. | 42   | 25-10004N | 2N3904 TRANSISTOR                   |
| 12   | 23-00015N | 10K OHM $\pm$ 5%, $\frac{1}{4}$ W. RES.  | 43   | 25-30003N | 1N959B ZENER DIODE                  |
| 13   | 23-00016N | 220K OHM $\pm$ 5%, $\frac{1}{4}$ W. RES. | 44   | 26-00008N | 7416 I.C.                           |
| 14   | 23-00020N | 47K OHM $\pm$ 5%, $\frac{1}{4}$ W. RES.  | 45   | 26-00009N | 7417 I.C.                           |
| 15   | 23-00022N | 2.7 OHM $\pm$ 5%, $\frac{1}{4}$ W. RES.  | 46   | 26-00011N | 74LS123 I.C.                        |
| 16   | 23-00025N | 1M OHM $\pm$ 5%, $\frac{1}{4}$ W. RES.   | 47   | 26-00012N | 74LS138 I.C.                        |
| 17   | 23-00026N | 27K OHM $\pm$ 5%, $\frac{1}{4}$ W. RES.  | 48   | 26-00027N | 7474 I.C.                           |
| 18   | 23-00027N | 3.3M OHM $\pm$ 5%, $\frac{1}{4}$ W. RES. | 49   | 26-00037N | 74121 I.C.                          |
| 19   | 23-00031N | 470K OHM $\pm$ 5%, $\frac{1}{4}$ W. RES. | 50   | 26-30010N | 6810 NMOS RAM                       |
| 20   | 23-00035N | 470 OHM $\pm$ 5%, $\frac{1}{4}$ W. RES.  | 51   | 26-40004N | 6821 PIA                            |
| 21   | 23-00047N | 3.9K OHM $\pm$ 5%, $\frac{1}{4}$ W. RES. | 52   | 26-40005N | 6808 CPU                            |
| 22   | 21-40002N | .22 OH 2A RF CHOKE                       | 53   |           | NOT USED                            |
| 23   | 24-00001N | .01 MFD $\pm$ 10% 50V CER. CAP           | 54   | 26-60003N | LM380 I.C.                          |
| 24   | 24-00004N | 680 PF $\pm$ 10% 100V CER. CAP           | 55   | 26-60004N | 555 I.C.                            |
| 25   | 24-00005N | .1 MFD $\pm$ 25V CER. CAP                | 56   | 26-30254  | MOD 830 SOUNDS ROM                  |
| 26   | 24-00003N | .001 MFD $\pm$ 10% 100V CER CAP          | 57   |           | NOT USED                            |
| 27   | 24-00016N | 39 PF $\pm$ 10% 50V CER. CAP             | 58   | 29-00004N | AMP SL-156 15 PIN HEADER            |
| 28   | 24-10001N | 10 MFD 16V AX. LYTIC CAP                 | 59   | 29-50002N | 40 PIN I.C. SOCKET                  |
| 29   | 24-10003N | 150 MFD, 25V AX. LYTIC CAP               | 60   | 29-50003N | 28 PIN I.C. SOCKET                  |
| 30   | 24-10004N | 22 MFD 16V AX. LYTIC CAP                 | 61   | 29-50004N | 24 PIN I.C. SOCKET                  |
| 31   | 24-10006N | 250 MFD, 15V NP LYTIC CAP                | 62   | 31-10001N | LED                                 |
|      |           |                                          | 63   | 24-30003N | 22 MFD $\pm$ 10% 10V DIP. TAN.      |
|      |           |                                          | 64   | 20-10142  | DAA-1 ASSEMBLY                      |
|      |           |                                          | 65   | 26-60022  | D TO A CONVERTER                    |



# BDU-2 BACKGLASS DISPLAY UNIT

20-10064



| <u>ITEM</u> | <u>PART NO.</u> | <u>DESCRIPTION</u>                     |
|-------------|-----------------|----------------------------------------|
| 1.          | 20-00057B       | BDU-2 P.C. BOARD                       |
| 2           | 31-20002N       | .8" 7 SEGMENT DISPLAY                  |
| 3           | 25-10006N       | MPSA13 DARLINGTON TRANSISTOR           |
| 4           | 26-00002N       | 74LS379 INTEGRATED CIRCUIT             |
| 5           | 26-00001N       | 74LS48 " "                             |
| 6           | 26-00003N       | 2003 " "                               |
| 7           | 23-00001N       | 22 OHM 5%, 1/4 WATT RESISTOR           |
| 8           | 24-10001N       | 10MFD, 16 VOLT AXIAL LYTIC CAP.        |
| 9           | 24-00001N       | .01 MFD 10%, 50 VOLT CERAMIC DISC CAP. |

# SOLE NOID SPECIFICATION CHART

| A              | B                  | C                  | D                  | E               | F                             |                        |
|----------------|--------------------|--------------------|--------------------|-----------------|-------------------------------|------------------------|
| COIL<br>NUMBER | BOBBIN             | TUBE               | WIRE<br>GAGE-TYPE  | NUMBER<br>TURNS | RESISTANCE                    | DESIGN<br>VOLTAGE      |
| 21-50001B      | 03-40002N<br>1.562 | 03-40008N<br>1.686 | No. 24<br>MAGNET   | 850             | 4.75 $\Omega$                 | 24 V.D.C.              |
| 21-50002B      | 03-40002N<br>1.562 | 03-40008N<br>1.686 | No. 25<br>NO. 27   | 400<br>1000     | 2.8 $\Omega$<br>13.4 $\Omega$ | 24 V.D.C.              |
| 21-50003B      | 03-40002N<br>1.562 | 03-40008N<br>1.686 | NO. 25             | 1050            | 7.45 $\Omega$                 | 24 V.D.C.              |
| 21-50004B      | 03-40002N<br>1.562 | 03-40027N          | NO. 29             | 2000            | 33.8 $\Omega$                 | 24 V.D.C.              |
| 21-50005B      | 03-40002N<br>1.562 | 03-40008N<br>1.686 | NO. 27             | 1400            | 15.4 $\Omega$                 | 24 V.D.C.              |
| 21-50006B      | "                  | "                  | NO. 28             | 1800            | 25.8 $\Omega$                 | 24 V.D.C.              |
| 21-50007B      | 03-40037B          | 03-40038A          | NO. 24             | 1000            | 8 $\Omega$                    | 24 V.D.C.              |
| 21-50008B      | 03-40002N          | 03-40008N          | NO - 22<br>NO - 30 | 375<br>800      | 1.2 $\Omega$<br>21.5 $\Omega$ | 24 V.D.C.<br>24 V.D.C. |
| 21-50009B      | 03-40037B          | 03-40038A          | NO - 23            | 1100            | 6.2 $\Omega$                  | 24 V.D.C.              |
|                |                    |                    |                    |                 |                               |                        |
|                |                    |                    |                    |                 |                               |                        |