



**WARNING**  
 THIS GAME MUST BE GROUNDED. FAILURE TO DO  
 SO MAY RESULT IN DESTRUCTION TO ELECTRONIC  
 COMPONENTS.

1	GENERAL INSTRUCTIONS
2	SWITCH ADJUSTMENTS
3—5	NO. 739—SPACE INVADERS—PICTURE
6—7	FLUORESCENT FIXTURE ASSEMBLY
8—9	FRONT DOOR ASSEMBLY
10—11	TRANSFORMER BOARD ASSEMBLY
12	ADDITIONAL PARTS LIST
13	GAME BOARD COMPONENTS LAYOUT
14	MOTHER BOARD COMPONENTS LAYOUT
15	POWER SUPPLY COMPONENTS LAYOUT
16	POWER SUPPLY SCHEMATIC
17	MONITOR SCHEMATIC — (MOTOROLA)
18	MONITOR SCHEMATIC — (WELLS-GARDNER)
19—20	WELLS-GARDNER REPLACEMENT PARTS LIST

---

# TABLE OF CONTENTS

## GENERAL INSTRUCTIONS FOR "SPACE INVADERS"

### INSTALLATION:

1. Remove shipping cleats located on bottom of cabinet.
2. Install 4 provided leg levelers to bottom of cabinet and level cabinet.
3. The power is controlled by a switch located on top of the cabinet. Plug into A.C. only, 115 volts, 60 cycles. In low line areas (105 volts or less), a boost in the output voltage of the transformer may be obtained by removing the wire from the 115 volt tap of the transformer and rewiring it to the 105 volt position.

### VOLTAGE CONTROL POTS:

Located on power supply board (P.C. A080-90400-F000) and are preset at the factory. These pots should not be tampered with unless the Distributor Service Department is contacted.

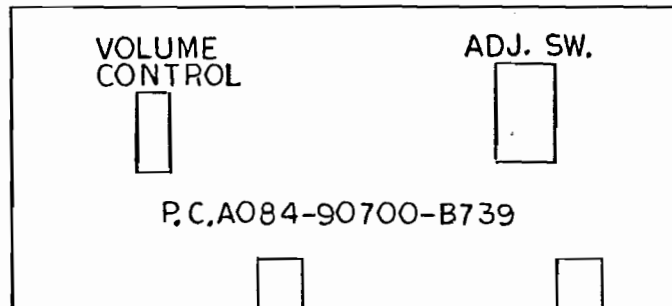
### MASTER VOLUME CONTROL:

Located on game logic board (P.C. A084-90700-B739) controls the volume of all sounds and may be varied as desired by rotating pots.

### ADJUSTMENT SWITCHES:

Located on game logic board (P.C. A084-90700-B739) and may be adjusted as indicated on separate instruction sheet in back box area.

1. No. of Missile Bases per game: Adjustable 3 to 6.
2. Bonus Missile Base: Awarded at 1,000 or 1,500 points.



### TO REMOVE CONTROL PANEL FOR SERVICE:

1. Open coin box door.
2. Unplug control panel jack located to the left of coin box opening.
3. Unlatch (2) clamps located on each side of cabinet.
4. Remove control panel for service.

NOTE - NO RAM AND ROM TEST

\*SWS 5, 6, 7 AND 8 ARE NOTUSED.

M051-00739-A010

6 BASES	OFF	OFF
5 BASES	OFF	ON
4 BASES	ON	OFF
3 BASES	ON	ON
	SW. 3	SW. 4

NUMBER OF BASES PER GAME

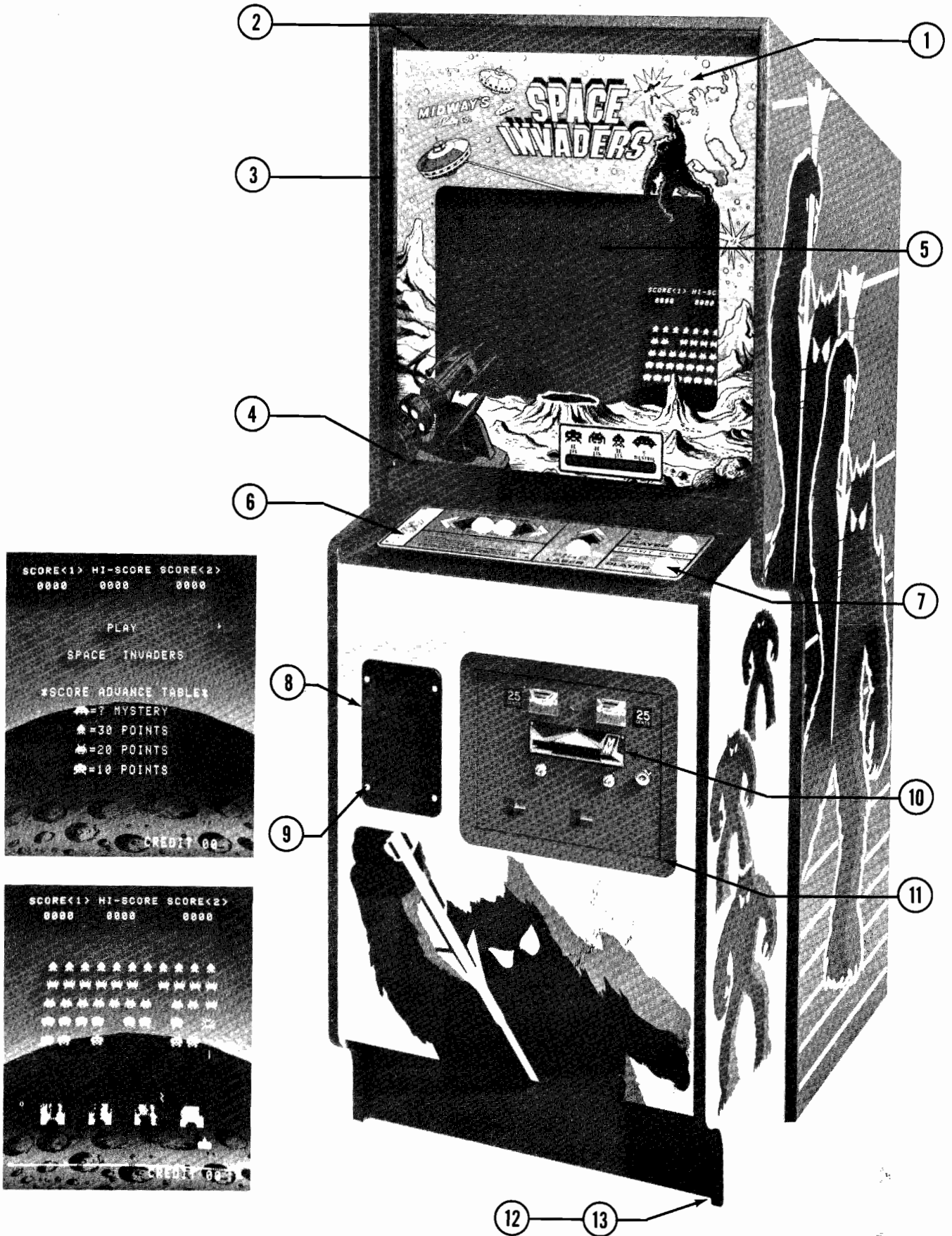
BONUS BASE AWARDED AT 1500 PTS.	ON
BONUS BASE AWARDED AT 1000 PTS.	OFF
	SW. 2

BONUS MISSILE BASE

COIN INFORMATION IS NOT DISPLAYED ON SCREEN	OFF
ON SCREEN	ON
COIN INFORMATION DISPLAYED	ON
1 COIN, 1 PLAYER	ON
2 COINS, 2 PLAYERS	OFF
	SW. 1

ADJUSTMENT SWITCHES

**NO. 739 – SPACE INVADERS – PICTURE**



**NO. 739 – SPACE INVADERS – PICTURE**

***ORDER BY PART NUMBER ONLY***

<b>ITEM</b>	<b>PART N<sup>o</sup></b>	<b>DESCRIPTION</b>
	0017-00104-0022	#8 WASHER (4 TUBE, 4 CHASSIS)
	0017-00103-0061	#8-32 HEX LOCKNUT SEMS. (4 TUBE, 4 CHASSIS)
	0739-00902-0000	MIRROPANE MIRROR 24-13/16 x 23-3/4 x 1/4
	0739-00502-0000	LOCKING CLEAT (2 REQ'D.)
	0017-00101-0028	#8 x 3/4 HEX. HD. WD. SCR. (4 REQ'D.)
	0739-00102-0000	GLASS LOCK BRKTS. (2 REQ'D.)
	0739-00906-0000	SCREEN OVERLAY
	0739-00905-0000	CARDBOARD BEZEL
	A739-00010-0000	DAG SPRING ASSY.
	3000-17155-0000	GROUND STRAP
	0080-00101-0000	FISHPAPER SHIELD
	0017-00009-0033	BASIC CLAMP (2 REQ'D.)
	A739-00007-0000	DISPLAY INSERT
	0017-00031-0002	SOCKETS (5 REQ'D.)
	0017-00003-0052	LAMPS (5 REQ'D.)
	0017-00041-0037	SPONGE RUBBER TAPE - 24" LG.
	0586-00036-0000	ON-OFF SWITCH
	0567-00106-0100	SWITCH MTG. PLATE
	0017-00101-0025	#8 x 1/2 SLOT. HEX. HD. WD. SCR. (4 REQ'D.)

**NO. 739 – SPACE INVADERS – FLUORESCENT FIXTURE ASSEMBLY**

***ORDER BY PART NUMBER ONLY***

<b>ITEM</b>	<b>PART N<sup>o</sup></b>	<b>DESCRIPTION</b>
1	0017-00003-0046	18" FLUORESCENT LAMP (BLACK LIGHT)
2	0017-00021-0005	FLUORESCENT LOCKS (2 REQ'D.)
3	0017-00031-0015	LAMP HOLDERS (2 REQ'D.)
4	0017-00101-0521	#5 - 40 x 3/8 BINDER HD. M.S. (4 REQ'D.)
5	0017-00021-0078	BRASS FLUORESCENT TERM. (4 REQ'D.)
6	0017-00041-0013	GROMMETS (2 REQ'D.)
7	0017-00021-0096	2 TERMINAL JACK – FEMALE
8	0017-00003-0026	BALLAST
9	0017-00101-0593	#8-32 x 1/4 PAN HD. EXT. SEM. M.S. (2 REQ'D.)
10	0017-00021-0079	STARTER HOLDER
11	0017-00003-0019	STARTER
12	0017-00101-0528	#5-40 x 3/4 R.H.M.S. (2 REQ'D.)
13	0017-00101-0025	#8 x 1/2 HEX HD. WD. SCR. (4 REQ'D.)
14	A739-00015-0000	FLUORESCENT BRKT. WELDING ASSY.
		<u>NOT SHOWN LIST</u>
	0739-00901-00SC	PLANET ARTWORK
	0017-00101-0598	#8-32 x 5/16 HEX HD. S.T. M.S. (3 REQ'D.)

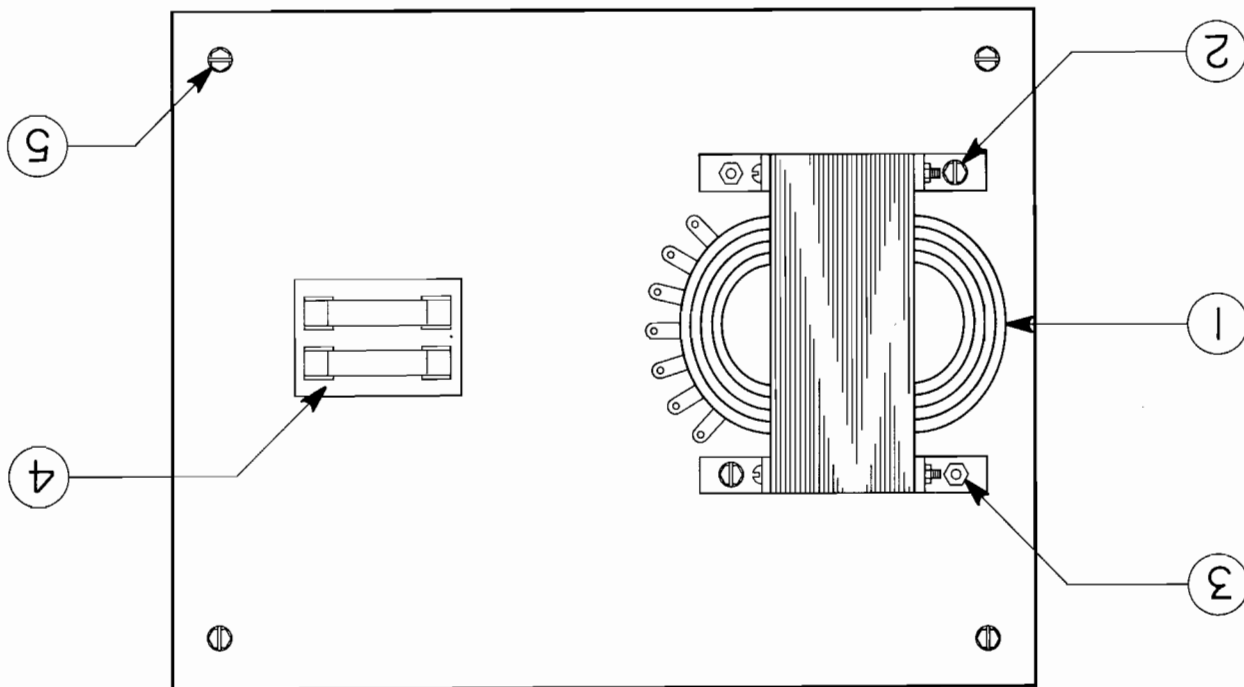
**NO. 739 – SPACE INVADERS – FRONT DOOR ASSY.**

***ORDER BY PART NUMBER ONLY***

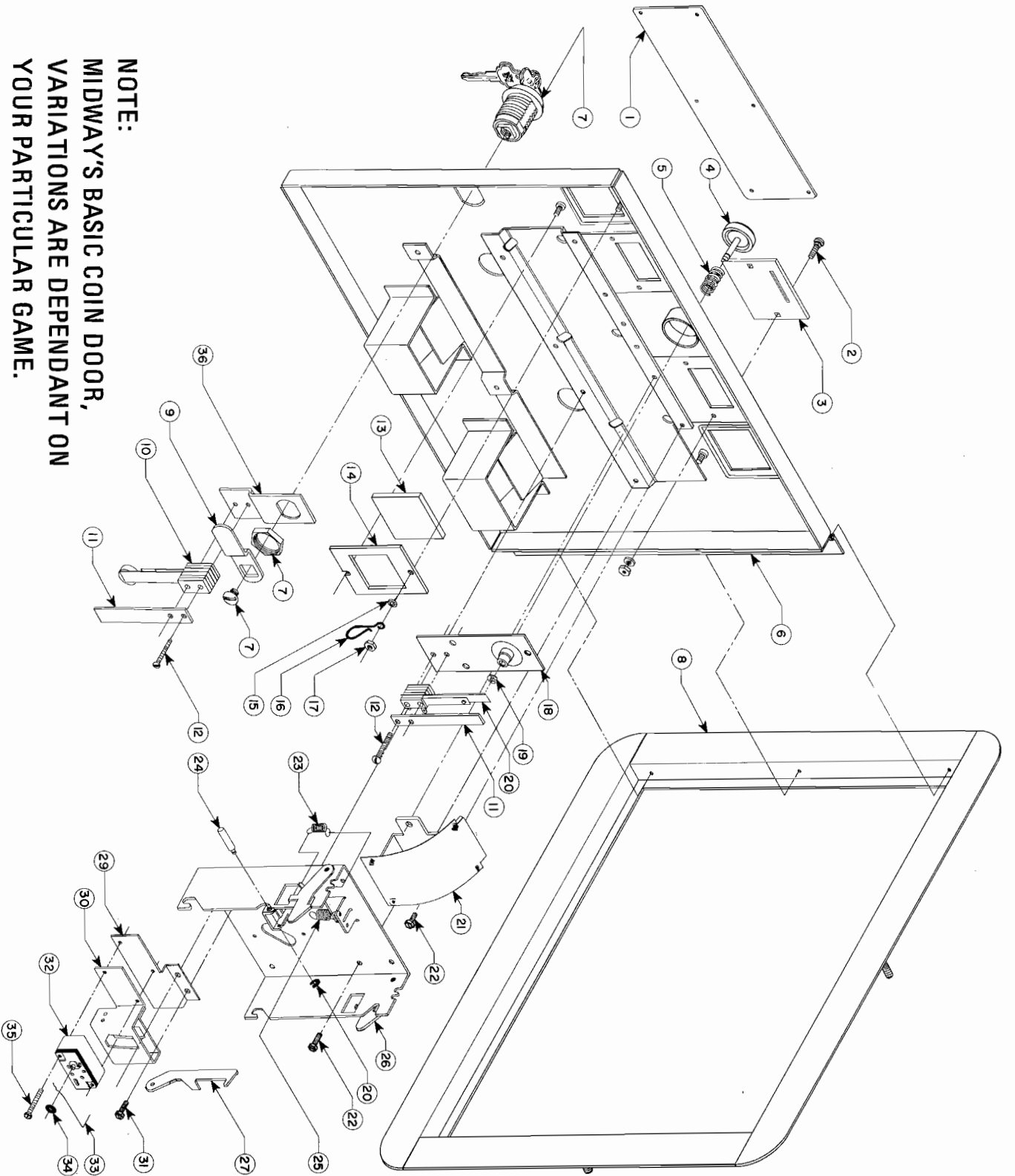
<b>ITEM</b>	<b>PART NO</b>	<b>DESCRIPTION</b>
1	0090-00902-0000	DRESS PLATE
	0090-00902-0100	DRESS PLATE (W/O PRESS BUTTON TO START GAME)
2	0017-00101-0552	#6-32 x 1/4 CARRIAGE BOLT (2)
3	0090-00117-0300	COIN ENTRY PLATE (25¢)
4	0090-00906-0000	PLASTIC START BUTTON
5	0010-00007-0000	COMPRESSION SPRING
6	0090-00013-0200	DOOR ASSY. DOUBLE ENTRY
7	0017-00005-0050	DOOR LOCK & KEY WITH SCREW & NUT
8	0090-00002-02BR	DOUBLE DOOR FRAME
9	0017-00005-0041	421 N.S. CAM
10	0090-00901-0000	DOOR SWITCH
11	0090-00126-0100	SWITCH BACKUP PLATE
12	0017-00101-0528	#5-40 x 3/4" LNG. M.S.
13	0090-00903-0040	25¢ WINDOW
14	0090-00143-0000	COIN PLEX RETAINER
15	0017-00104-0002	SPLIT LOCK WASHER
16	0017-00007-0019	KEY HOOK
17	0017-00103-0005	#6-32 HEX NUT
18	0090-00010-0000	SW. PLATE & OILLITE ASSY.
19	0017-00100-0018	"E" RING
20	0090-00131-0000	SWITCH
21	0090-00104-0000	TOP & BTM. COIN CHUTE W/BRKT. ASSY.
22	0017-00101-0598	#8-32 x 5/16 SCREW
23	0010-00181-0100	SPRING
24	0090-00129-0000	PIVOT POST
25	0010-00134-0000	SPRING
26	0090-00008-0000	ACCEPTOR FRAME ASSY.
27	0093-00155-0000	REJECTOR LEVER
28	0017-00100-0012	"E" RING
29	0093-00151-0000	COIN GUIDE MTG. BRACKET
30	0090-00005-0000	COIN GUIDE ASSY.
31	0017-00101-0555	#6-32 x 5/16 SCREW
32	0017-00005-0039	COIN SWITCH
33	0010-00557-2500	TRIP WIRE
34	0017-00007-0132	PUSH-ON RING (BIK)
35	0017-00101-0507	#4-36 x 3/4 SCREW
36	0090-00128-0000	SWITCH BRKT. – DOOR TILT



MIDWAY MFG. CO.  
A BALLY COMPANY

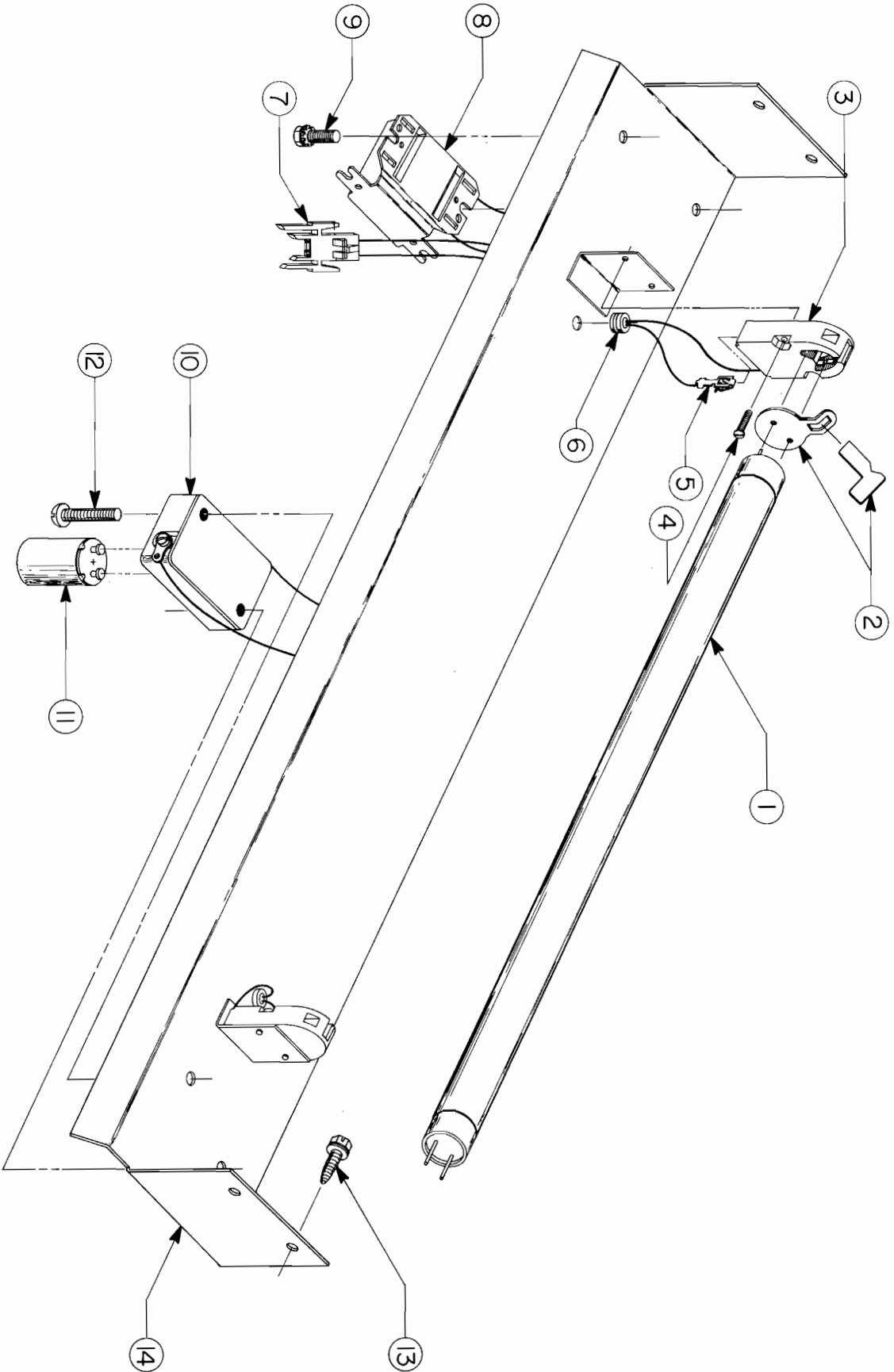


NO. 739 - SPACE INVADERS - TRANSFORMER BOARD ASSY.



**NOTE:**  
MIDWAY'S BASIC COIN DOOR,  
VARIATIONS ARE DEPENDANT ON  
YOUR PARTICULAR GAME.

**NO. 739 - SPACE INVADERS - FLUORESCENT FIXTURE ASSEMBLY**



**MIDWAY MFG. CO.**  
A BALLY COMPANY

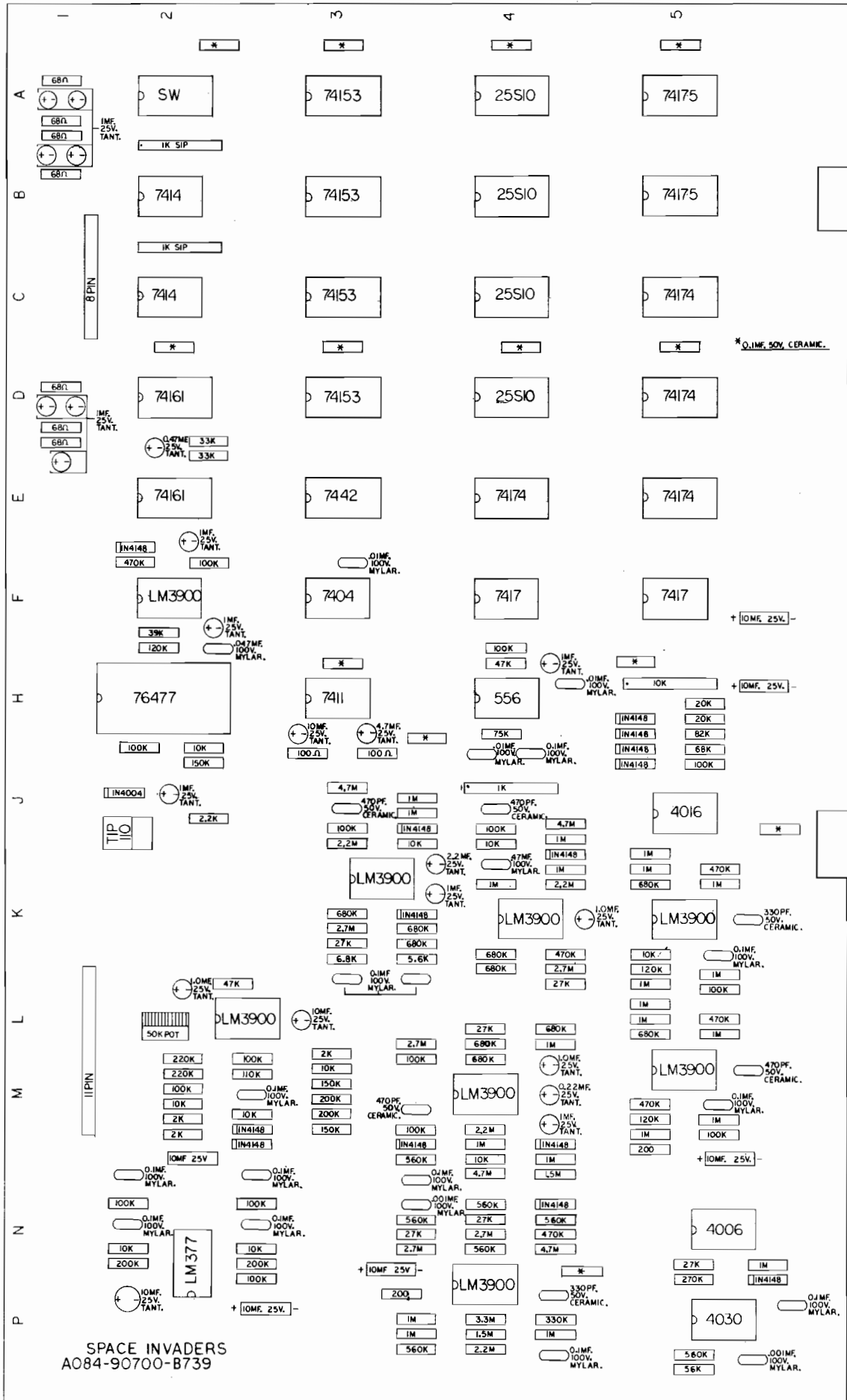
ORDER BY PART NUMBER ONLY

ITEM	PART NO	DESCRIPTION
1	0739-00903-01SC	DISPLAY PLEX - 26-5/16 x 24-7/8 x 3/16
2	0537-00903-0015	GLASS CHANNEL - 24-1/4" LG.
3	0537-00903-0011	GLASS CHANNEL - 26-1/4" LG. (2 REQ'D.)
4	0629-00902-0100	GLASS LIFT CHANNEL
5	0739-00900-00SC	BACKGROUND SCENERY CARD
6	0739-00904-00SC	DECORATIVE PLATE
	0017-00101-0639	#8-32 x 1-1/4 CARRIAGE BOLTS (4 REQ'D.)
	0017-00104-0022	#8 WASHER (4 REQ'D.)
	0017-00103-0061	#8-32 HEX LOCKNUT SEMS. (4 REQ'D.)
7	A739-00012-0000	PUSH BUTTON ASSY. (5 REQ'D.)
	0017-00009-0384	BUTTON (5 REQ'D.)
	0017-00009-0376	HOUSING (5 REQ'D.)
	0010-00593-0000	SPRING (5 REQ'D.)
	0017-00104-0028	FLAT WASHER (10 REQ'D.)
	0017-00100-0025	"E" RING (5 REQ'D.)
	0017-00103-0054	PAL NUT (5 REQ'D.)
	0586-00107-0000	MTG. BRKT. (5 REQ'D.)
	0586-00036-0000	SWITCH ASSY. (5 REQ'D.)
	0017-00101-0521	#5-40 x 3/8 R.H.M.S. (5 REQ'D.)
	0020-00202-0000	SWITCH PLATE (5 REQ'D.)
8	0017-00009-0393	SPEAKER GRILL & HARDWARE
	0017-00003-0187	SPEAKER
9	0017-00101-0642	#8-32 x 1-1/2 CARRIAGE BOLTS M.S. (4 REQ'D.)
10	A090-00020-02GR	DOUBLE ENTRY COIN DOOR ASSY.
11	A090-00002-02GR	COIN DOOR FRAME
	0017-00101-0555	#6-32 x 5/16 HEX HD. S.M.S. (3 REQ'D.)
12	0017-00102-0048	LEG LEVELERS (4 REQ'D.)
13	0017-00103-0026	LEG LEVELER NUTS (4 REQ'D.)
	NOT SHOWN LIST	
	0017-00003-0164	19" CATHODE RAY TUBE (C.R.T.)
	0017-00003-0212	19" MONITOR CHASSIS
	0592-00104-0100	CHASSIS MTG. BRKT. - R.H.
	0592-00104-0200	CHASSIS MTG. BRKT. - L.H.
	0161-00100-0000	T.V. MTG. WASHER (4 REQ'D.)
	0017-00101-0639	#8-32 x 1-1/4 CARRIAGE BOLT (4 TUBE, 4 CHASSIS)

NO. 739 – SPACE INVADERS – TRANSFORMER BOARD ASSY.

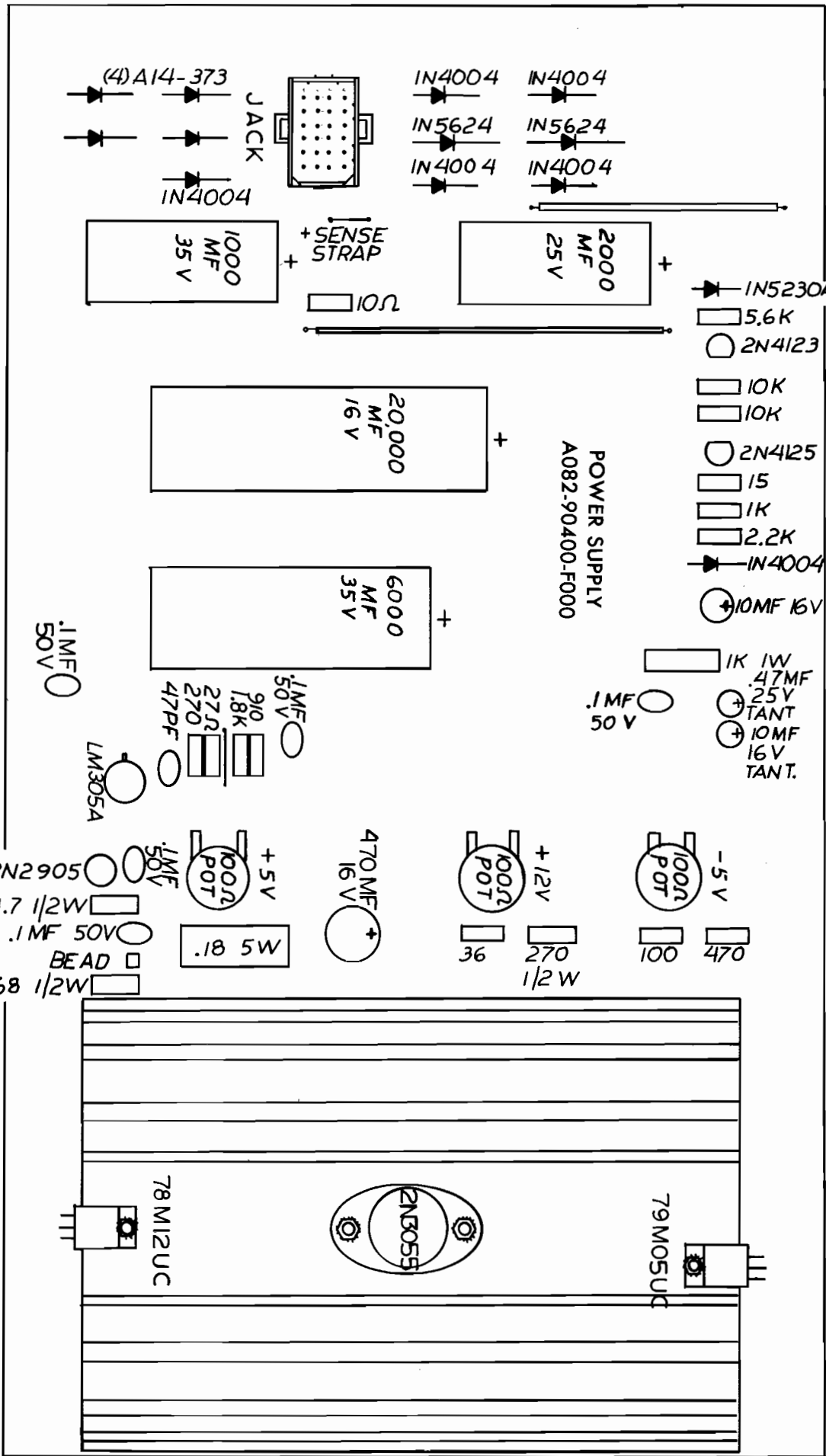
*ORDER BY PART NUMBER ONLY*

ITEM	PART N <sup>o</sup>	DESCRIPTION
1	MT00-00058-A000 MT00-00059-A000	TRANSFORMER – 60 CYCLE - OR - TRANSFORMER – 50 CYCLE – (FOREIGN)
2	0017-00101-0025	#8 x 1/2 SLOT. HEX HD. S.M.S. (2 REQ'D.)
3	0017-00101-0692	#8-32 x 7/8 CARRIAGE BOLTS (2 REQ'D.)
	0017-00103-0008	WITH #-32 HEX NUT (2 REQ'D.)
4	0720-00001-0200	FUSE BLOCK ASSY. (2 POSITION)
5	0017-00101-0030	#8 x 1" HEX HD. WD. SCREW (4 REQ'D.)
	0017-00101-0017	#6 x 1/2 HEX HD. S.M.S. (4 REQ'D.)
		<u>NOT SHOWN</u>
	0017-00003-0064	LINE CORD – NOT SHOWN
	A630-00015-0000	TRANSFORMER BOARD ASSY. – COMPLETE

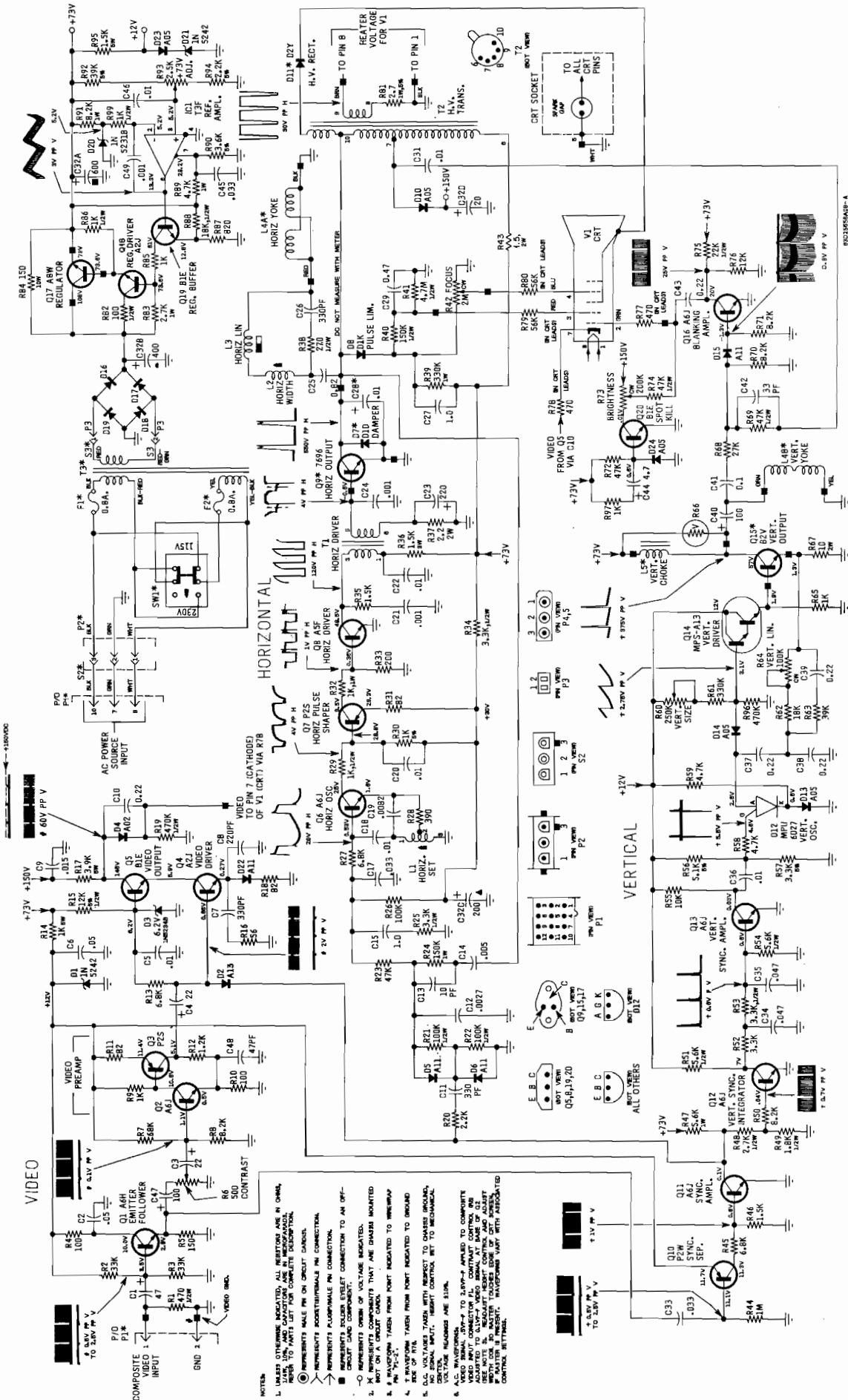


SPACE INVADERS  
A084-90700-B739

COMPONENT LAYOUT PART NO. M051-00739-A004



POWER SUPPLY



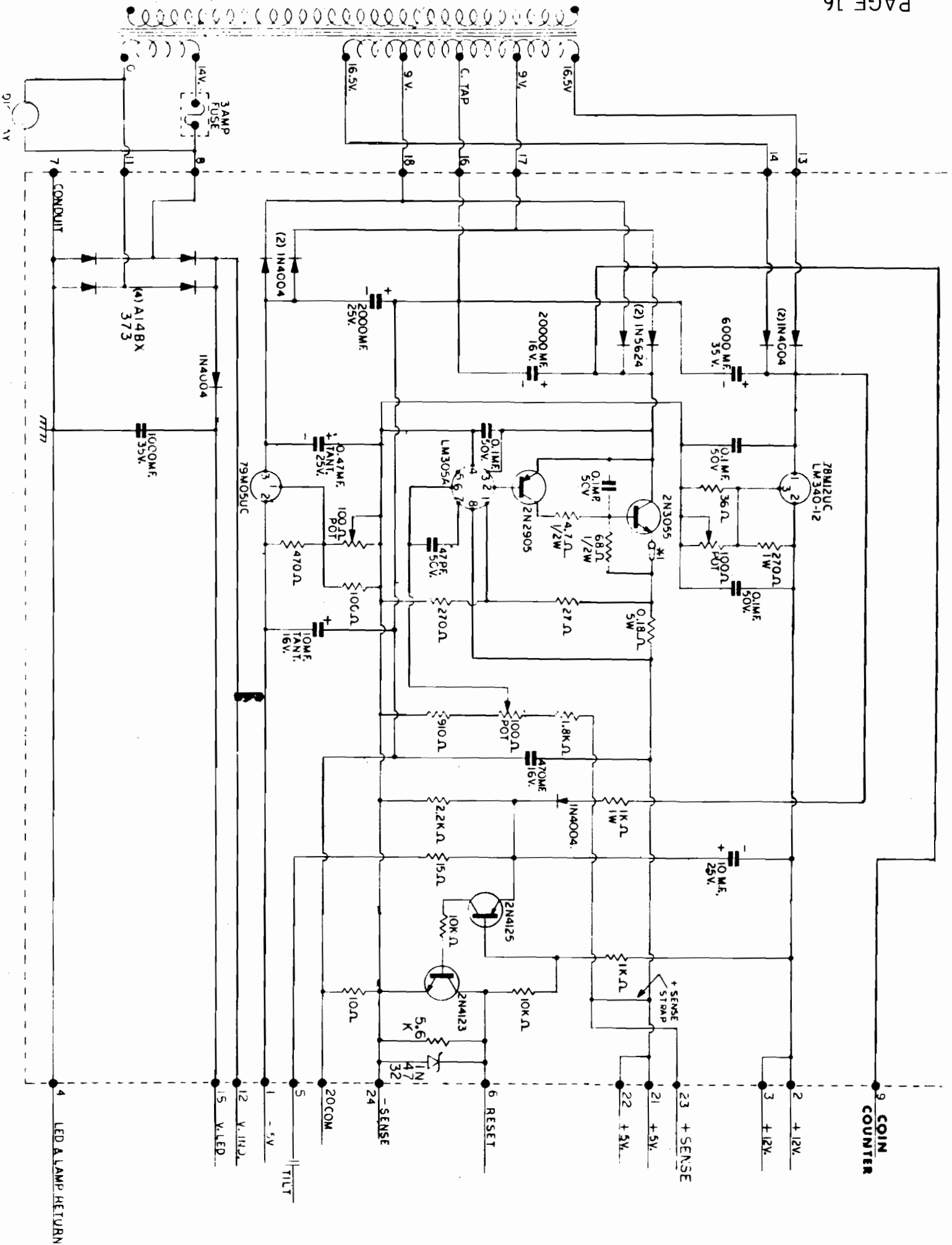
M5000-155, M7000-155 - Diagram Schematic

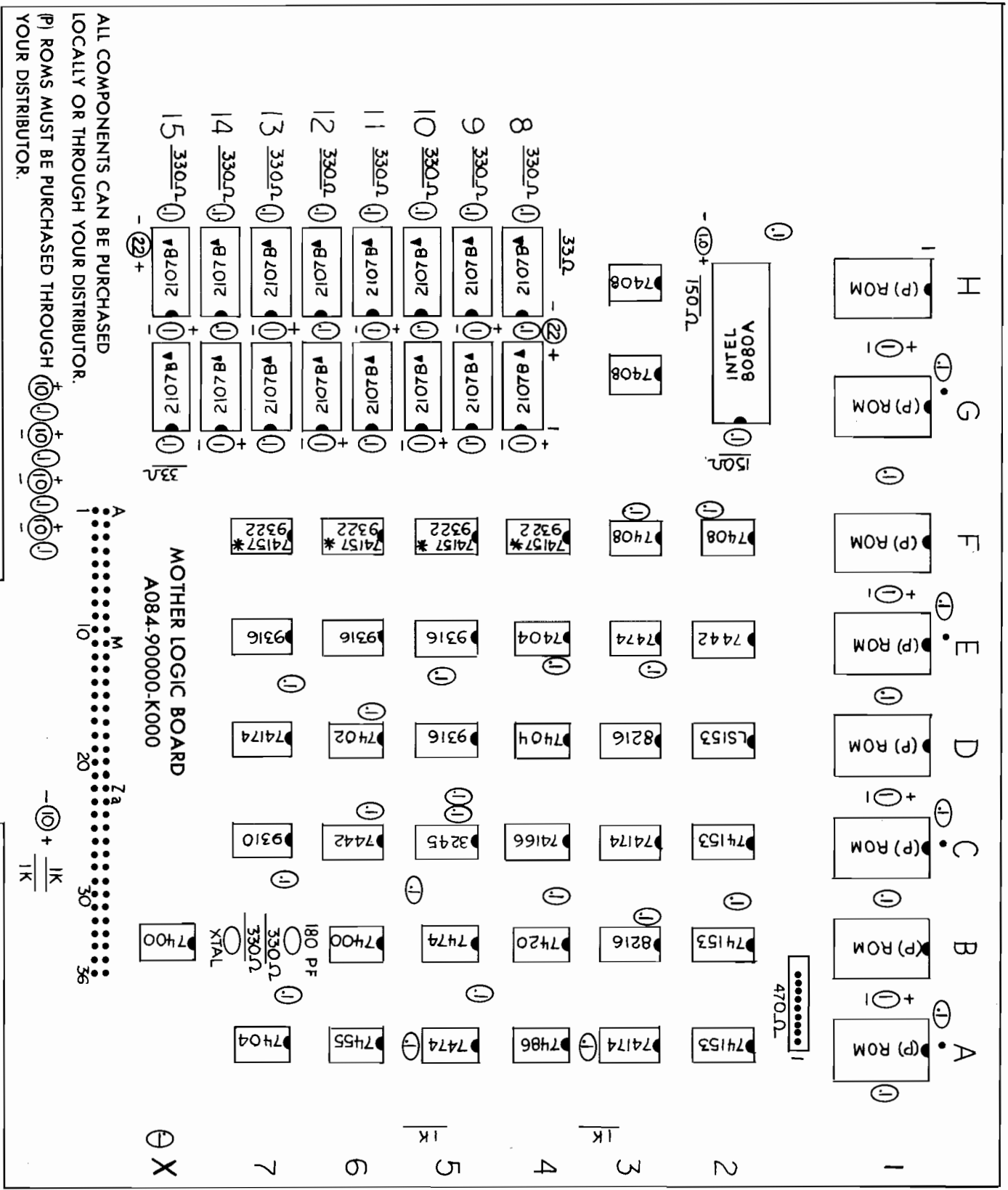


# NOTES

---

This space is provided for personal notes



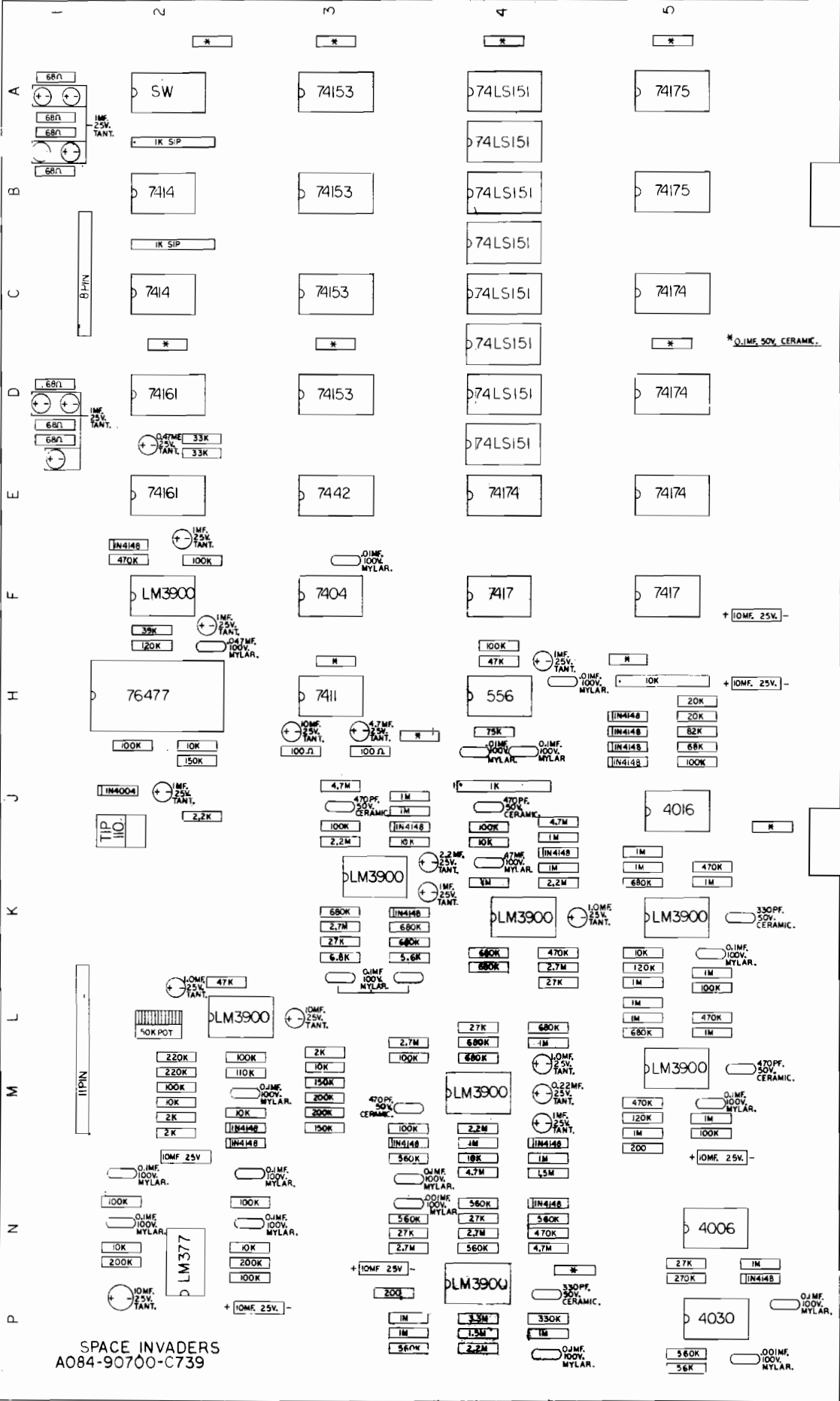


ALL COMPONENTS CAN BE PURCHASED  
LOCALLY OR THROUGH YOUR DISTRIBUTOR.  
[P] ROMS MUST BE PURCHASED THROUGH  
YOUR DISTRIBUTOR.

NO. 739 - SPACE INVADERS - ADDITIONAL PARTS LIST

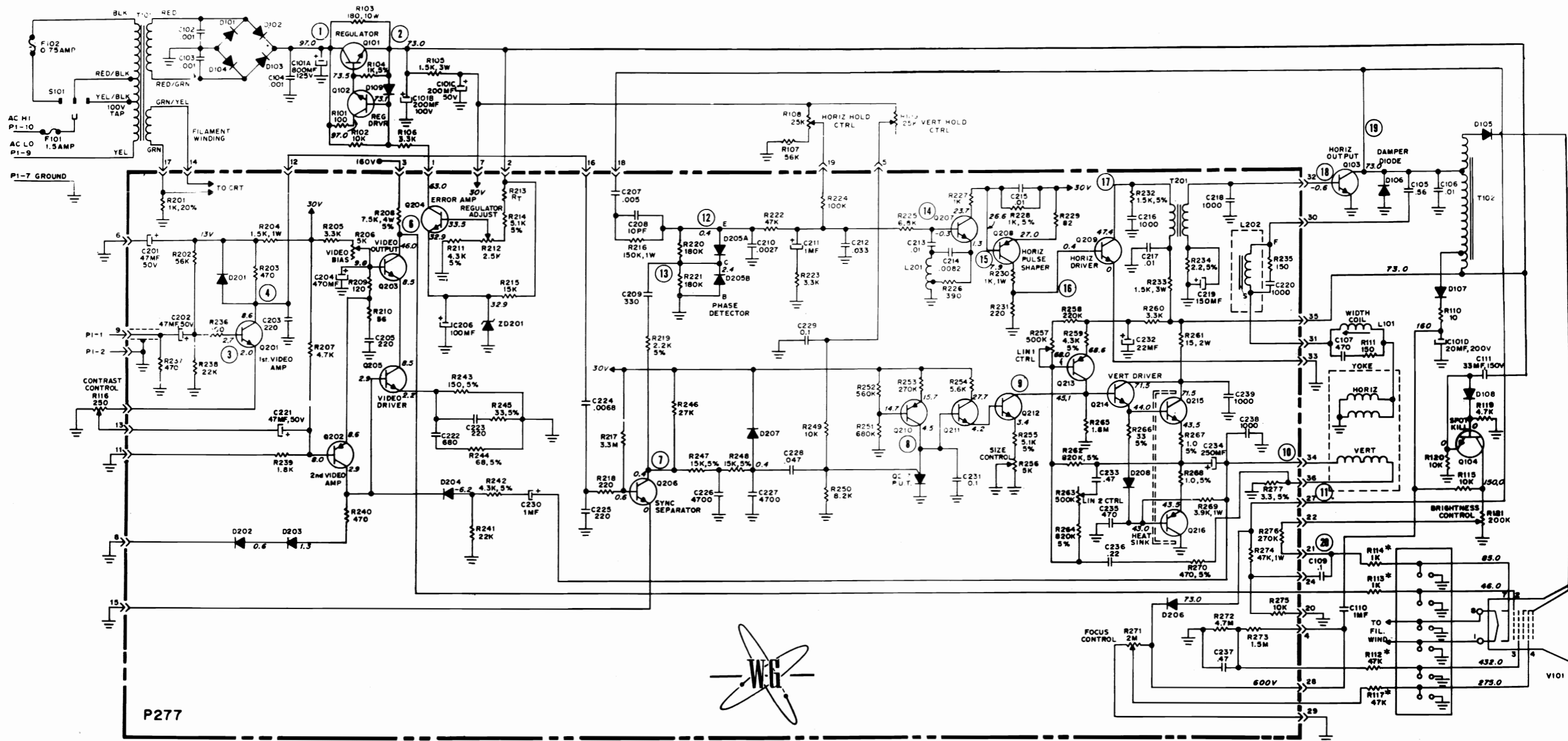
ORDER BY PART NUMBER ONLY

ITEM	PART No	DESCRIPTION
	A739-00014-0000	LOWER BACK DOOR ASSY.
	A739-00013-0000	UPPER BACK DOOR ASSY.
	A097-00001-0000	LOCK ASSY. (1 UPPER, 1 LOWER)
	0618-00117-0000	VENT SCREEN (2 UPPER, 2 LOWER)
	A623-00110-0000	COIN BOX ASSY.
	A623-00013-0000	COIN BOX COVER ASSY.
	A624-00001-0000	COIN BOX GUIDE BRKT. ASSY.
	0624-00101-0000	COIN BOX GUIDE BRKT.
	0017-00101-0628	#8-32 x 3/4 CARRIAGE BOLTS (4 REQ'D.)
	0017-00104-0022	#8 STL. WASHER (4 REQ'D.)
	0017-00103-0061	#8-32 LOCKNUT SEMS. (4 REQ'D.)
	0017-00003-0102	COUNTER METER (MOUNTED ON COIN DOOR)
	M052-00190-0001	WIDE TRANSPARENT TAPE (ORANGE) - 13" x 1"
	0017-00009-0009	TURN BUTTONS (2 REQ'D.)
	0017-00101-0017	#6 x 1/2 HEX HD. BLK. WD. SCREW (2 REQ'D.)
	0603-00131-0000	STRIKE (2 REQ'D.)
	0017-00101-0028	#8 x 3/4 HEX HD. BLK. WD. SCR. (4 REQ'D.)
	0017-00003-0225	"CHEAT" INTERLOCK SWITCH
	0625-00133-0080	INTERLOCK SW. MOUNTING BRKT.
	0017-00101-0028	#8 x 3/4 HEX HD. BLK. WD. SCR. (2 REQ'D.)
	A084-90700-B739	GAME BOARD ASSY.
	A084-90000-K000	MOTHER BOARD ASSY.
	A082-90400-F000	POWER SUPPLY ASSY.
	A630-00015-0000	TRANSFORMER BOARD ASSY.
	0597-00012-0100	P.C. SUPPORT BRKT. ASSY. - RIGHT
	0597-00012-0200	P.C. SUPPORT BRKT. ASSY. - LEFT
	0624-00902-0100	P.C. SUPPORT BRKT. - 12" (4 REQ'D.)
	0624-00902-0300	P.C. SUPPORT BRKT. - 2-1/2" (4 REQ'D.)
	0017-00101-0017	#6 x 1/2 HEX HD. WD. SCR. (20 REQ'D.)
	0017-00104-0037	3/4 O.D. x 3/16 I.D. x 1/16 STL. WASHER (20 REQ'D.)
	0017-00009-0419	PIN EXTRACTOR TOOL (PIN POPPER)



SPACE INVADERS  
A084-90700-C739

COMPONENT LAYOUT PART NO. M051-00739-8004



P277



NOTES:

1. VOLTAGE MAY VARY WITH CONTROL SETTING.
2. LINE VOLTAGE MAINTAINED AT 120VAC, 50/60Hz.
3. ALL D.C. VOLTAGES  $\pm 10\%$  MEASURED FROM POINT INDICATED TO CHASSIS USING HIGH IMPEDANCE METER WITH NO SIGNAL INPUT. CONTRAST AND BRIGHTNESS CONTROLS AT MAXIMUM; ALL OTHER CONTROLS IN NORMAL OPERATING POSITION.
4. WITH INTERNAL NUMBER INDICATES LOCATION OF WAVE FORM READING.

# WELLS - GARDNER ELECTRONICS

CORPORATION

2701 N. KILDARE AVE. • CHICAGO, ILL. 60639 • ALBANY 2-8220

TELEX 25-3286

NOTES:

- \* INDICATES RESISTORS LOCATED IN PICTURE TUBE LEAD ASSEMBLY.
- RESISTANCE VALUES IN OHMS, 1/2 WATT, 10% UNLESS OTHERWISE NOTED. K=1,000 M=1,000,000
- CAPACITANCE VALUES OF 1 OR LESS ARE IN MICROFARADS. ABOVE 1 IN PICOFARADS UNLESS OTHERWISE NOTED.

MODEL No.  
V1001-5734

