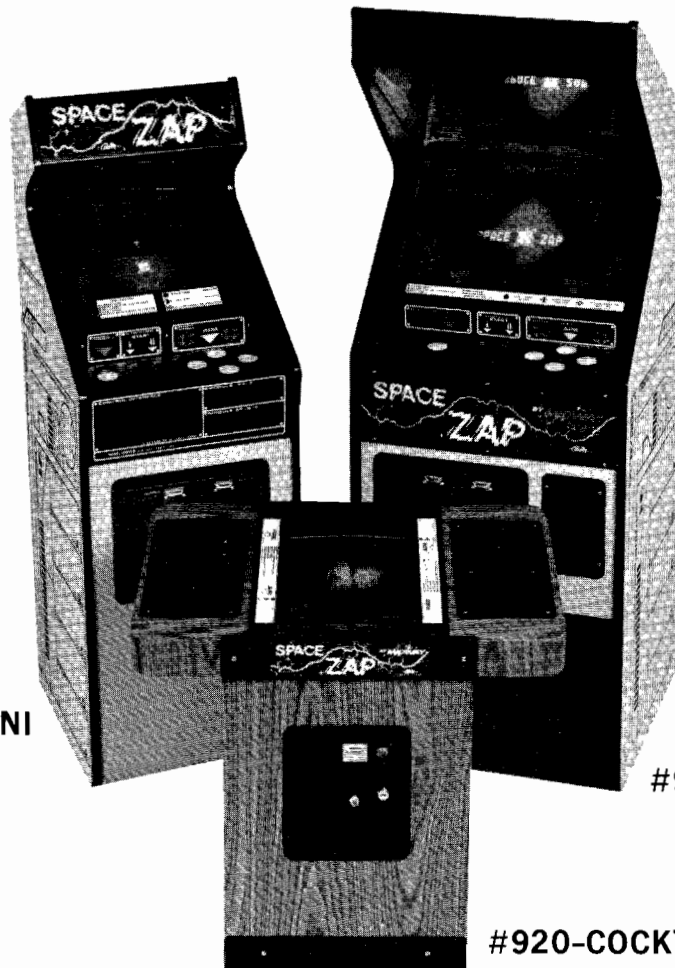


GAME NOS. 902, 908 & 920
OCTOBER, 1980

MIDWAY'S SPACE ZAP PARTS AND OPERATING MANUAL



#908-MINI

#902-UPRIGHT

#920-COCKTAIL



MIDWAY MFG. CO.

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WARNING

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

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GENERAL INSTRUCTIONS FOR SPACE ZAP MODELS

INSTALLATION

1. Remove shipping cleats located on bottom of cabinet.
2. Install four (4) provided leg levelers to bottom of cabinet and level cabinet.
3. The power is controlled by a switch located on the back of the cabinet in the top right hand corner for the Upright and Mini versions, and on the bottom of the cabinet below the second player for the cocktail model. Plug into A.C. only, 115 volts, 60 cycles.

LINE VOLTAGE SAFETY SWITCH

A line voltage safety switch has been provided for your protection. It is located on the right rear side of the cabinet. When the back door is removed, it opens the circuit to the line voltage. To restore power (when servicing) pull switch fully out.

VOLTAGE CONTROL POTS

Located on power supply board (P.C. A082-90411-A000) and are preset at the factory. These pots should not be tampered with unless the distributor service department is contacted.

TO SERVICE CONTROL PANEL ON UPRIGHT & MINI

1. Open coin box door.
2. Release two (2) clamps located above coin door opening.
3. Disconnect control cable jack before removing.

VOLUME CONTROL

Located on audio amplifier P.C. board controls the volume of all sound and may be varied as desired by rotating pot control.

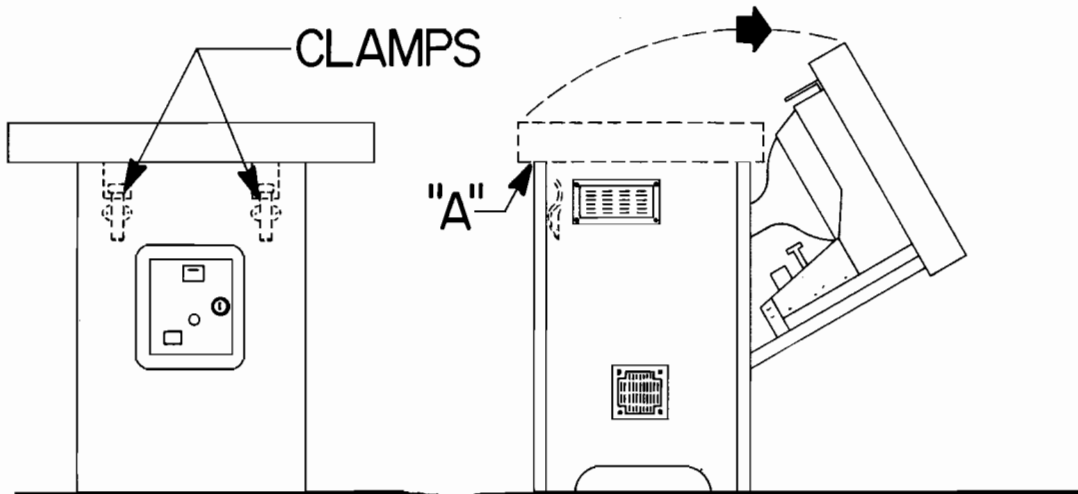
The audio amplifier board is located inside the front door for easv access.

WARNING: THIS EQUIPMENT GENERATES, USES, AND CAN RADIATE RADIO FREQUENCY ENERGY AND IF NOT INSTALLED AND USED IN ACCORDANCE WITH THE INSTRUCTIONS MANUAL, MAY CAUSE INTERFERENCE TO RADIO COMMUNICATIONS. AS TEMPORARILY PERMITTED BY REGULATION IT HAS NOT BEEN TESTED FOR COMPLIANCE TO SUBPART J OR PART 15 OF FCC RULES, WHICH ARE DESIGNED TO PROVIDE REASONABLE PROTECTION AGAINST SUCH INTERFERENCE. OPERATION OF THIS EQUIPMENT IN A RESIDENTIAL AREA IS LIKELY TO CAUSE INTERFERENCE IN WHICH CASE THE USER AT HIS OWN EXPENSE WILL BE REQUIRED TO TAKE WHATEVER MEASURES MAY BE REQUIRED TO CORRECT THE INTERFERENCE.

TO SERVICE MONITOR, GAME BOARD TRANSFORMER ASSY., CONTROL PANEL ASSY. ON COCKTAIL MODEL

1. Open coin box door and release two (2) clamps indicated on sketch below. Caution right clamp close to high voltage on monitor!
2. Grasp monitor mounting panel at "A" and open as indicated in sketch below. Latch slide will hold top in open position.
3. To close top, release latch by lifting latch slide.

CAUTION: Due to the weight of the monitor, extreme care must be exercised with opening cabinet for service.



ELECTRICAL BULLETIN:

FOR ALL APPARATUS COVERED BY THE CANADIAN STANDARDS ASSOCIATION (CSA) STANDARD C22.2 NO. 1, WHICH EMPLOYS A SUPPLY CORD TERMINATED WITH A POLARIZED 2-PRONG ATTACHMENT PLUG.

CAUTION:

TO PREVENT ELECTRIC SHOCK DO NOT USE THIS (POLARIZED) PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

ATTENTION:

POUR PREVENIR LES CHOCES ELECTRIQUES NE PAS UTILISER CETTE FICHE POLARISEE AVEC UN PROLONGATEUR. UNE PRISE DE COURANT OU UNE AUTRE SORTIE DE COURANT, SAUF SI LES LAMES PEUVENT ETRE INSEREES A FOND SANS EN LAISSER AUCUNE PARTIE A DECOUVERT.

SWITCH ADJUSTMENTS — SPACE ZAP

UPRIGHT & MINI

ADJUSTMENT SWITCHES

LEFT HAND COIN SLOT IS CONTROLLED BY SW. #1

SW. #1

OFF	1 COIN - 1 PLAY
ON	2 COINS - 1 PLAY

RIGHT HAND COIN SLOT IS CONTROLLED BY SW. #2 AND 3

SW. #2

SW. #3

OFF	OFF	1 COIN - 1 PLAY
ON	OFF	2 COINS - 1 PLAY
OFF	ON	1 COIN - 3 PLAYS
ON	ON	1 COIN - 5 PLAYS

NUMBER OF BASES PER GAME

SW. #7

ON	4 BASES
OFF	3 BASES

NOTE: SWITCHES 4, 5, 6, AND 8 ARE NOT USED

M051-00902-A007

COCKTAIL

ADJUSTMENT SWITCHES

SW. #2

SW. #3

OFF	OFF	1 COIN - 1 PLAY
ON	OFF	2 COINS - 1 PLAY
OFF	ON	1 COIN - 3 PLAYS
ON	ON	1 COIN - 5 PLAYS

NUMBER OF BASES PER GAME

SW. #7

ON	4 BASES
OFF	3 BASES

NOTE: SWITCHES 1, 4, 5, 6, AND 8 ARE NOT USED

M051-00920-A002

RAM-ROM TEST - SPACE ZAP

PLACING THE TEST SWITCH, (LOCATED ON THE AUDIO AMPLIFIER ASSEMBLY IN THE COIN BOX AREA) TO ON PERFORMS THE FOLLOWING FUNCTIONS:

- (1) REMOVES ALL ACCUMULATED CREDITS
- (2) TESTS THE SCREEN RAM
- (3) TESTS THE STATIC RAM
- (4) TESTS THE GAME ROM/EPROM
- (5) REPEATS ALL TESTS INDEFINITELY

PLACING THE TEST SWITCH IN THE OFF POSITION RETURNS THE GAME TO NORMAL OPERATION AFTER COMPLETION OF THE ROM TEST. IF YOU WERE TO TURN THE TEST SWITCH OFF DURING THE SCREEN RAM TEST, IT WOULD TAKE APPROXIMATELY 15 SECONDS BEFORE THE GAME WOULD RE-APPEAR.

THE GAME DOES A MODIFIED FORM OF RAM TEST UPON POWER-UP OR WHENEVER THE DOOR-SLAM SWITCH IS ACTIVATED. IF AN ERROR IS FOUND, THE PROGRAM CONTINUES THE TEST UNTIL THE ERROR IS CLEARED. THEREFORE, IT IS POSSIBLE THAT THE GAME WILL NEVER START AND/OR THERE MAY BE NO INDICATION OF ANYTHING ON THE SCREEN IF THERE IS A RAM ERROR.

ERROR INDICATIONS

IF ALL RAM AND ROM ARE GOOD, THE ONLY INDICATION WILL BE AN OCCASIONAL FLASH ON THE SCREEN (APPROXIMATELY EVERY 16 SECONDS). THIS INDICATES THAT IT HAS PASSED ALL TESTS AND IS STARTING THE TEST SEQUENCE OVER AGAIN.

IF AN ERROR IS FOUND IN THE SCREEN RAM, YOU WILL SEE THE FLASH ON THE SCREEN FOLLOWED BY FLASHING RANDOM HORIZONTAL BARS. IT WILL THEN CYCLE THROUGH THE TEST AGAIN UNTIL THE ERROR IS CLEARED.

IF AN ERROR IS FOUND IN THE STATIC RAM, THERE WILL BE SHORT BURSTS OF FLASHING HORIZONTAL BARS DISPLAYED ON THE SCREEN. IT WILL THEN CYCLE THROUGH THE SCREEN RAM TEST AND THE STATIC RAM TEST AGAIN UNTIL THE ERROR IS CLEARED. THE CYCLE TIME IS APPROXIMATELY 3 SECONDS.

RAM-ROM TEST - SPACE ZAP

A BAD ROM/EPROM IS INDICATED BY A NUMBER 1, 2, 3, 4, 5, 6, 7, OR 8 DISPLAYED ON THE SCREEN. IF MORE THAN ONE ROM/EPROM IS BAD BOTH NUMBERS WILL APPEAR ON THE SCREEN.

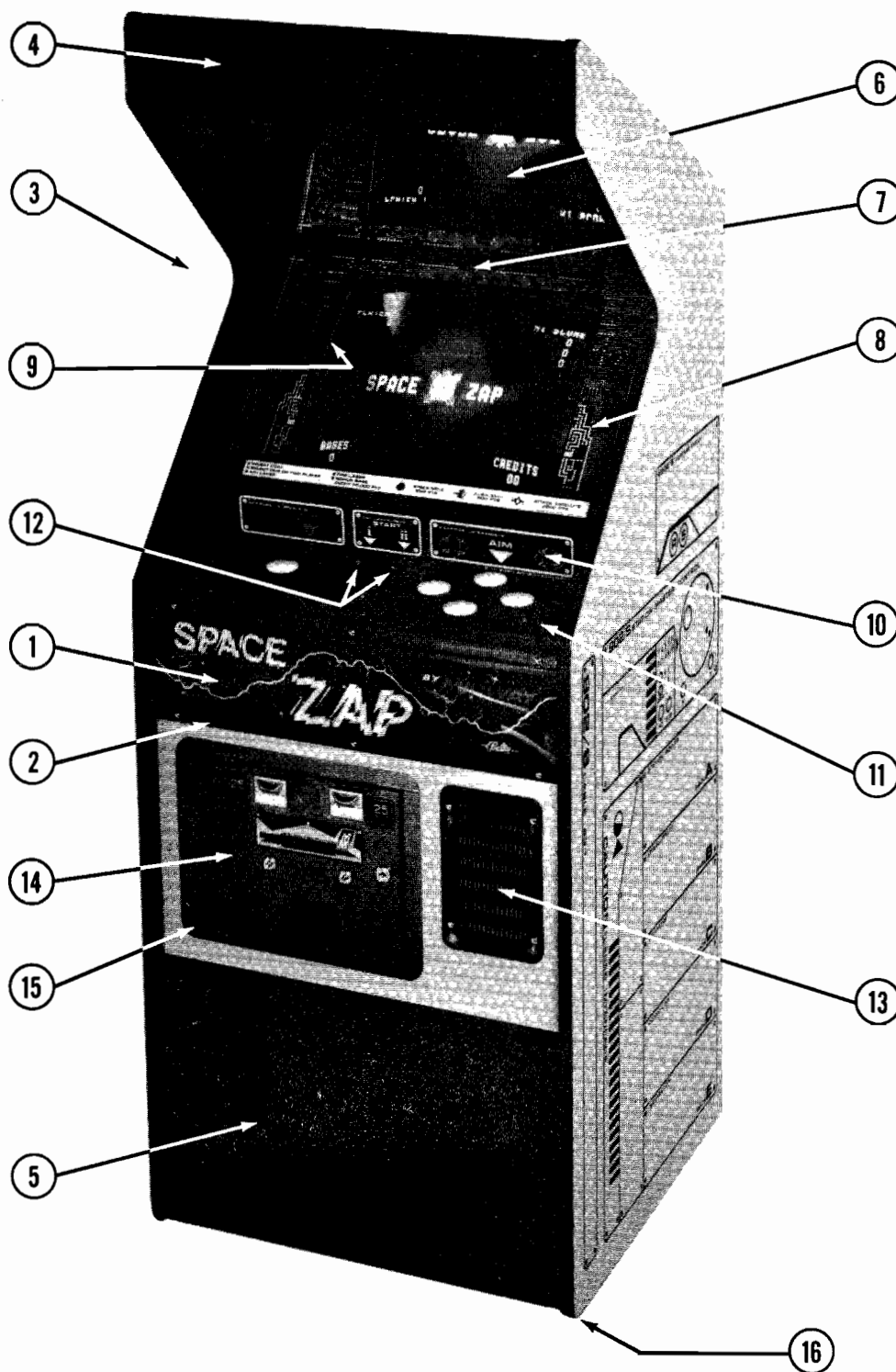
IF YOU HAVE 8 2K ROMS/EPROMS

NUMBER DISPLAYED	BAD ROM/EPROM IN SOCKET
1	X1
2	X2
3	X3
4	X4
5	X5
6	X6
7	X7
8	X8

IF YOU HAVE 4 4K ROMS/EPROMS

NUMBER DISPLAYED	BAD ROM/EPROM IN SOCKET
1	X1
2	X1
3	X3
4	X3
5	X5
6	X5
7	X7
8	X7

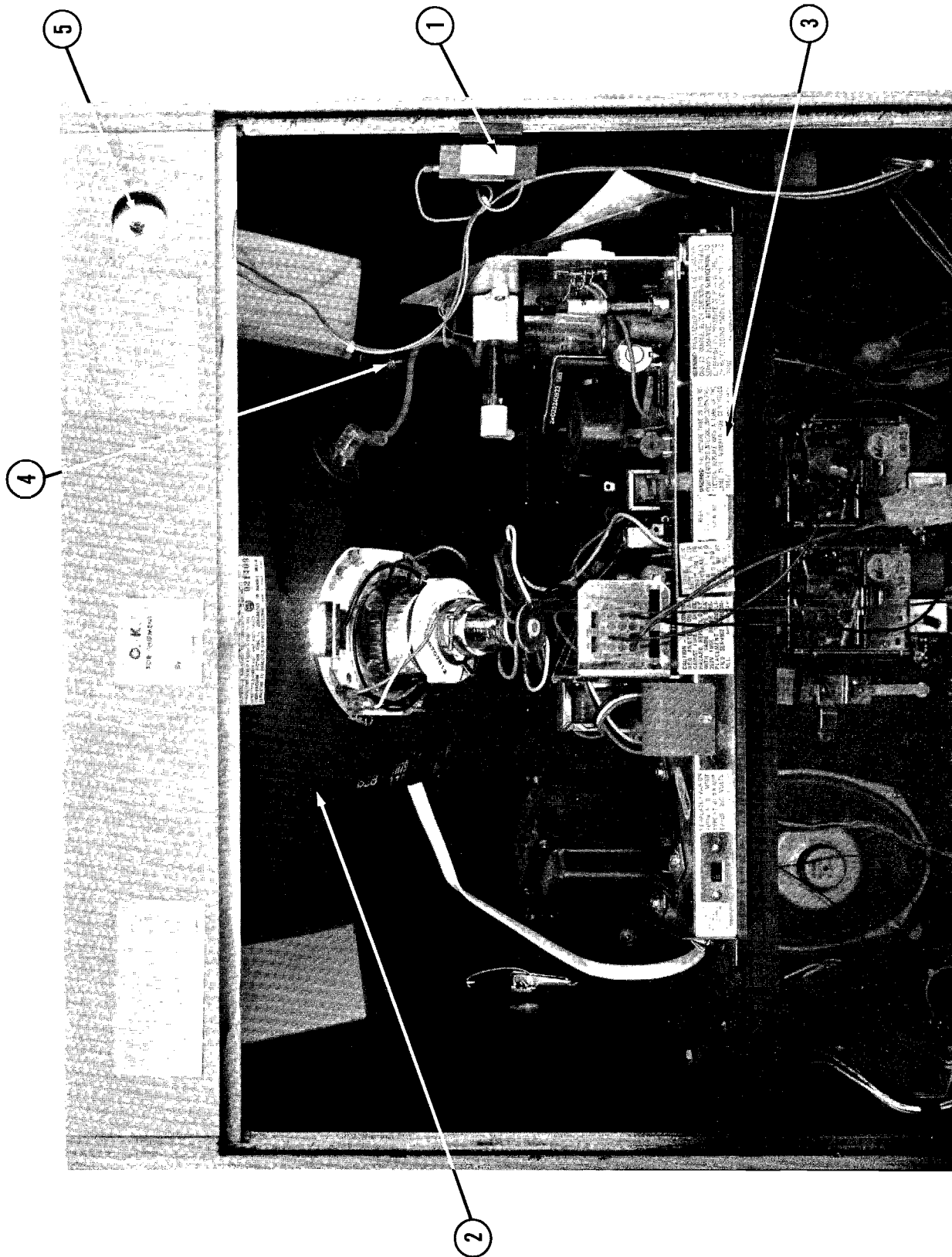
NO. 902 - SPACE ZAP UPRIGHT - FRONT PICTURE



NO. 902 - SPACE ZAP UPRIGHT - FRONT PICTURE
ORDER BY PART NUMBER ONLY

ITEM	PART N ^o	DESCRIPTION
1	0902-00903-00XF	DECORATIVE LEXAN
2	0902-00105-00XF	LEXAN SUPPORT BRKT. (2 REQ'D.)
	0017-00101-0118	#8-32 x 1-1/8 CARRIAGE BOLTS (6 REQ'D.)
	0017-00103-0080	#8-32 HEX NUT W/SEMS (6 REQ'D.)
3	0902-00900-00XF	DECORATIVE SIDE PANEL (2 REQ'D.) (NOT SHOWN IN PICTURE)
4	0902-00901-0000	DECORATIVE BELLOWS - UPPER
5	0902-00902-0000	DECORATIVE BELLOWS - LOWER
6	0902-00904-0000	REAR SURFACE MIRROR
7	A902-00004-00XF	GLASS SUPPORT ASSY.
8	0902-00907-00XF	VIEWING GLASS
	0905-00903-0100	GLASS EDGE CHANNEL 14 1/2 IN. (2 REQ'D.)
9	0902-00906-0000	BEZEL
	0889-00903-0000	COLOR OVERLAY
10	0902-00100-00XF	GLASS RETAINING BRKT.
11	0902-00102-00XF	SHELF OVERLAY
12	0017-00032-0051	SWITCH - BUTTON (2 REQ'D.)
13	0017-00003-0187	SPEAKER 6 x 9
	0017-00009-0393	SPEAKER GRILL W/HARDWARE
14	A090-00020-2001	DOUBLE ENTRY COIN DOOR ASSY.
	A090-00057-0000	COIN DOOR COUNTER METER ASSY.
15	0090-00002-02GR	COIN DOOR FRAME
	0017-00101-0555	#6-32 x 5/16 HEX HD. S.M.S. (3 REQ'D.) (MOUNTS COIN DOOR TO FRAME)
16	0017-00102-0048	LEG LEVELERS (4 REQ'D.)
	0017-00103-0026	LEG LEVELER NUTS (4 REQ'D.)
	0017-00009-0488	LEG LEVELER MTG. PLATE (4 REQ'D.)
		NOT SHOWN LIST
	0603-00131-0000	STRIKE (2 REQ'D.)
	0017-00009-0033	BASSICK CLAMP (2 REQ'D.)
	A902-00005-0000	LIGHT TRAY ASSY. (BEHIND ITEM 1)
	0017-00003-0210	LAMP #257 14V .27A (5 REQ'D.)
	0017-00031-0002	LAMP HOLDER (5 REQ'D.)

NO. 902 - SPACE ZAP UPRIGHT - REAR PICTURE (TOP HALF)

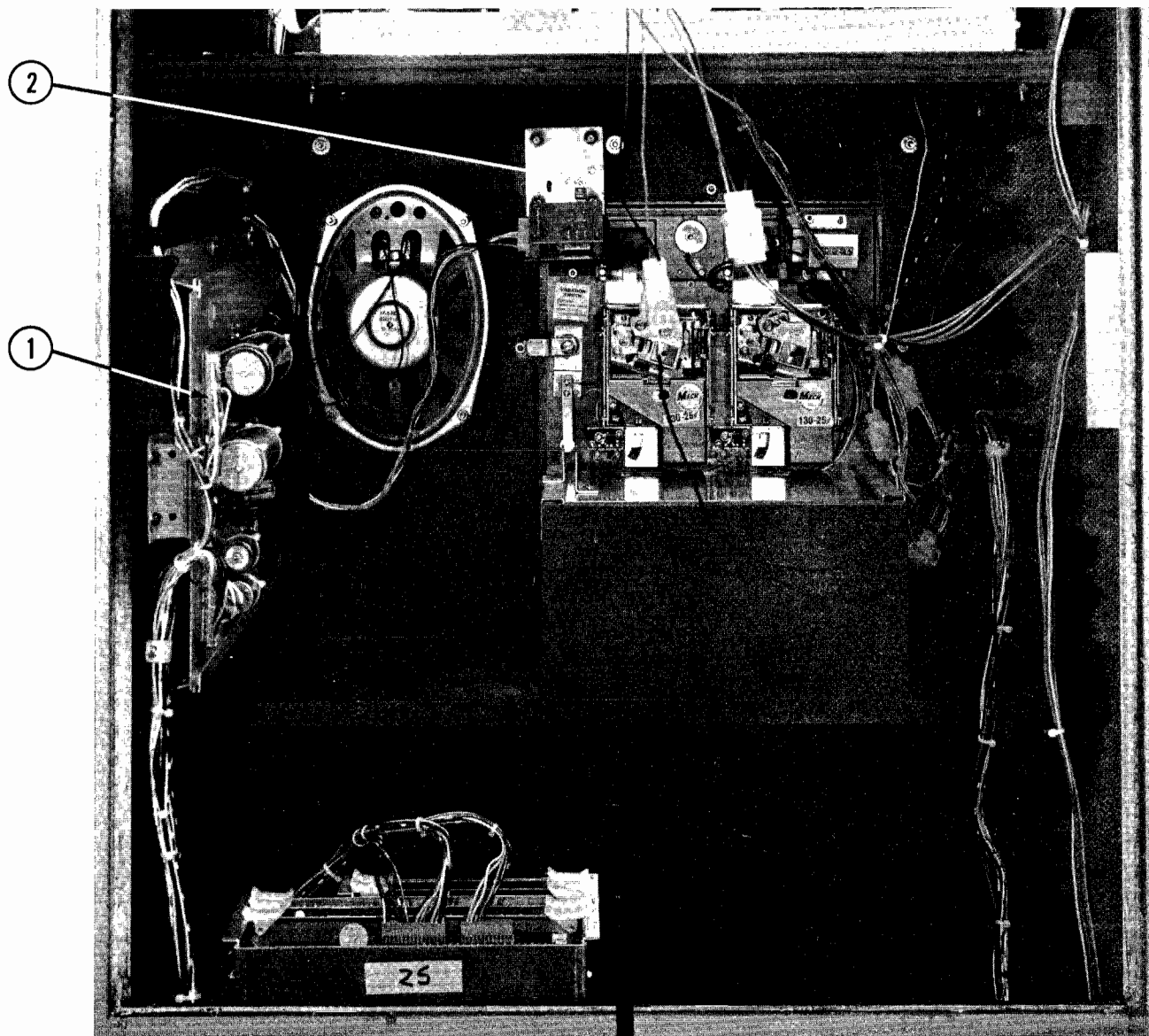


NO. 902 - SPACE ZAP UPRIGHT - REAR PICTURE (TOP HALF)

ORDER BY PART NUMBER ONLY

ITEM	PART NO	DESCRIPTION
1	A151-00026-0000	INTERLOCK SWITCH & BRKT ASSY.
2	0017-00003-0164	19" CATHODE RAY TUBE (C.R.T.)
3	0017-00003-0198	19" MONITOR CHASSIS
	0592-00104-0100	CHASSIS MTG. BRKT. - RIGHT
	0592-00104-0200	CHASSIS MTG. BRKT. - LEFT
	0902-00506-0000	CHASSIS SUPPORT SHELF
	A739-00010-0000	DAG SPRING ASSY.
	3000-17155-0000	GROUND STRAP
4	0017-00101-0637	#8-32 x 1 CARRIAGE BOLTS (4 TUBE, 4 CHASSIS)
	0017-00104-0022	#8 FLAT WASHER (4 TUBE, 4 CHASSIS)
	0017-00103-0061	#8-32 HEX NUT (4 TUBE, 4 CHASSIS)
5	0017-00032-0083	ON/OFF SWITCH
	0567-00106-0100	SWITCH MTG. PLATE

NO. 902 - SPACE ZAP UPRIGHT - REAR PICTURE (BOTTOM HALF)

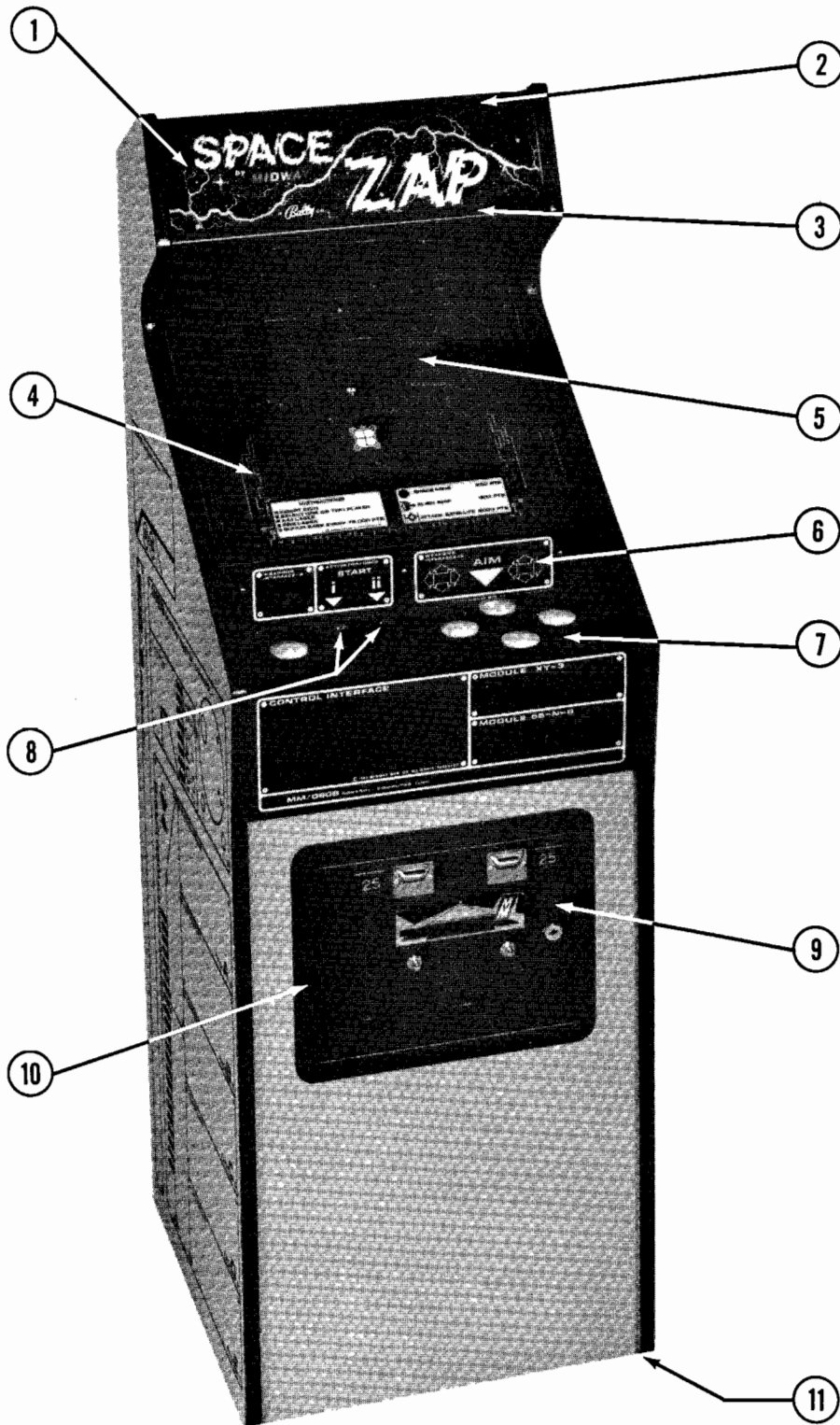


NO. 902 - SPACE ZAP UPRIGHT - REAR PICTURE (BOTTOM HALF)

ORDER BY PART NUMBER ONLY

ITEM	PART N ^o	DESCRIPTION
1	A082-90411-A000 0624-00902-0100 0624-00902-0300	POWER SUPPLY P.C. BD. ASSY. P.C. SUPPORT BRKT. 12 IN. (2 REQ'D.) P.C. SUPPORT BRKT. 2-1/2 IN. (2 REQ'D.)
2	A902-00022-0000	SINGLE AUDIO AMP. BD. & BRKT. ASSY.
		<p>ADDITIONAL PARTS LIST</p> <p>A089-00001-0000 CABLE ASSY. - FRONT DOOR</p> <p>A089-00004-0000 COIN DOOR CABLE ASSY.</p> <p>A902-00017-0000 HIGH VOLTAGE CABLE ASSY.</p> <p>A902-00018-0000 LOW VOLTAGE CABLE ASSY.</p> <p>A902-00016-0000 CONTROL SHELF CABLE ASSY.</p> <p>A902-00011-0000 LIGHT TRAY CABLE ASSY.</p> <p>A623-00013-0000 COIN BOX COVER ASSY.</p> <p>A624-00001-0000 COIN BOX GUIDE BRKT. ASSY.</p> <p>0624-00101-0000 COIN BOX GUIDE BRKT.</p> <p>0017-00101-0628 #8-32 x 3/4 CARRIAGE BOLT (4 REQ'D.)</p> <p>0017-00104-0022 #8 STL. WASHER (4 REQ'D.)</p> <p>0017-00103-0061 #8-32 LOCK NUT SEMS (4 REQ'D.)</p> <p>0017-00009-0477 MOLDED CASH BOX</p> <p>A151-00029-0000 LOCK ASSY. - BACK DOOR</p> <p>0017-00009-0490 VENT SCREEN (4 REQ'D.)</p>

NO. 908 - SPACE ZAP MINI - FRONT PICTURE

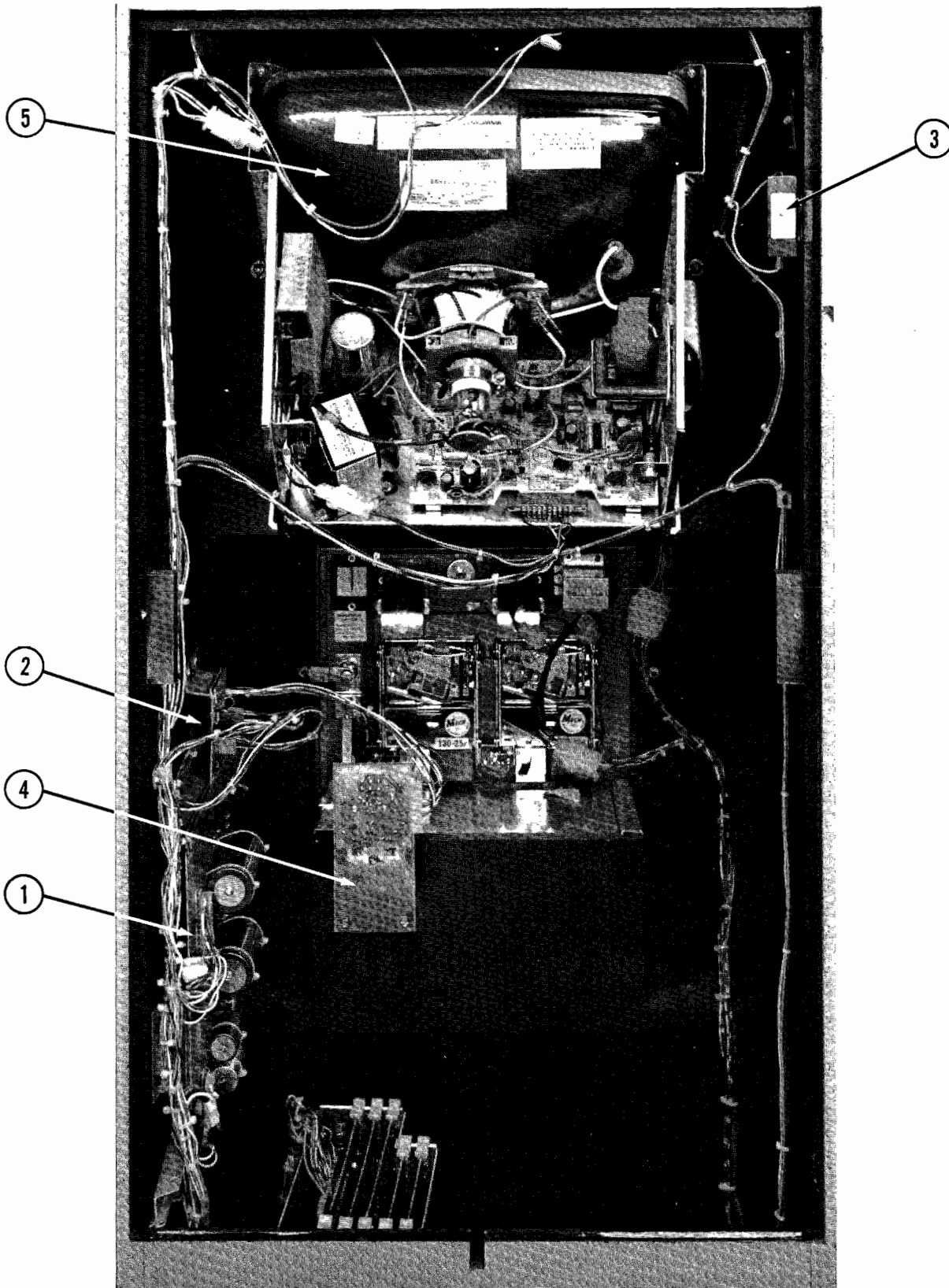


NO. 908 - SPACE ZAP MINI - FRONT PICTURE

ORDER BY PART NUMBER ONLY

ITEM	PART N ^o	DESCRIPTION
1	0908-00900-00XF	DISPLAY PLEXI
2	0905-00115-00XF	TOP BRKT.
3	0905-00116-00XF	BOTTOM BRKT.
4	0908-00901-00XF	VIEWING GLASS
	0905-00903-0100	GLASS EDGE CHANNEL 14-1/2 IN. (2 REQ'D.)
5	0905-00907-0000	BEZEL
	0889-00903-0000	COLOR OVERLAY
6	0908-00100-00XF	GLASS CLAMPING PLATE
7	0908-00101-00XF	SHELF OVERLAY
8	0017-00032-0051	SWITCH - BUTTON (2 REQ'D.)
9	A090-00020-2001	DOUBLE ENTRY COIN DOOR ASSY.
	A090-00057-0000	COIN DOOR COUNTER METER ASSY.
10	0090-00002-02GR	COIN DOOR FRAME
	0017-00101-0555	#6-32 x 5/16 HEX HD. S.M.S. (3 REQ'D.) (MOUNTS COIN DOOR TO FRAME)
11	0017-00003-0259	SPEAKER 6 x 9
	0017-00009-0393	SPEAKER GRILL W/HARDWARE
	A762-00021-0000	SPEAKER CABLE
12	0017-00102-0048	LEG LEVELERS (4 REQ'D.)
	0017-00103-0026	LEG LEVELER NUTS (4 REQ'D.)
	0017-00009-0488	LEG LEVELER MTG. PLATE (4 REQ'D.)
		<u>NOT SHOWN LIST</u>
	A905-00014-0000	LIGHT TRAY ASSY. (BEHIND ITEM 1)
	0017-00003-0219	LAMP #194 14V .27A WEDGE (5 REQ'D.)
	0017-00031-0030	WEDGE BASE LAMP SOCKET (5 REQ'D.)
	0603-00131-0000	STRIKE (2 REQ'D.)
	0017-00009-0033	BASSICK CLAMP (2 REQ'D.)

NO. 908 - SPACE ZAP MINI - BACK PICTURE

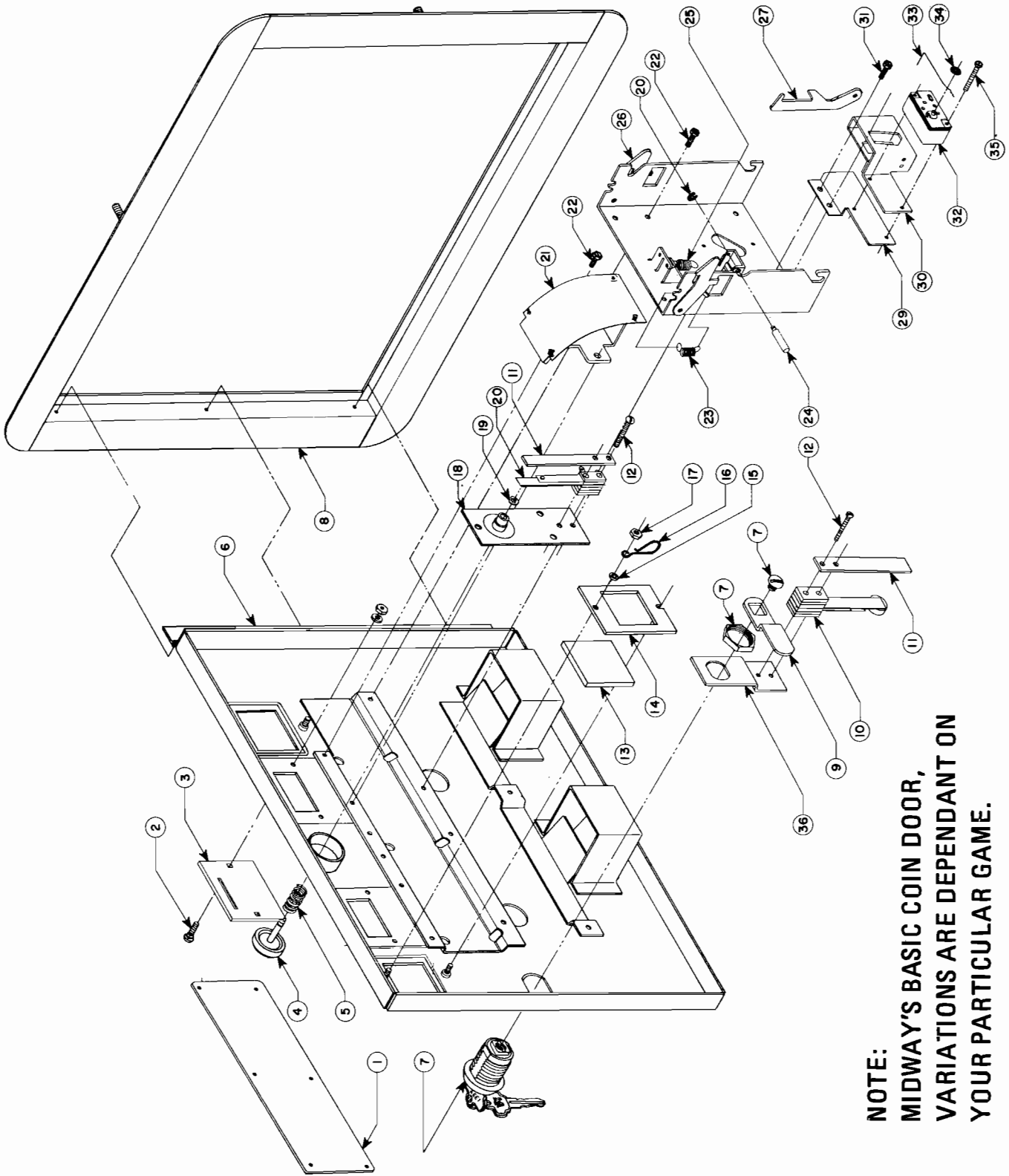


NO. 908 - SPACE ZAP MINI - BACK PICTURE

ORDER BY PART NUMBER ONLY

ITEM	PART N ^o	DESCRIPTION
1	A082-90411-A000	POWER SUPPLY PCB ASSY.
2	A082-91373-B000	COMPOSITE SYNC. PCB ASSY.
	0624-00902-0100	P.C. SUPPORT BRKT. 12 IN. (2 REQ'D.)
	0624-00902-0300	P.C. SUPPORT BRKT. 2-1/2 IN. (3 REQ'D.)
3	A151-00026-0000	INTERLOCK SWITCH & BRKT. ASSY.
4	A902-00022-0000	SINGLE AUDIO AMP. BD. & BRKT. ASSY.
5	0017-00003-0330	15'' MONITOR - COMPLETE
	0905-00127-0000	T.V. MTG. STRAP (2 REQ'D.)
		<u>ADDITIONAL PARTS LIST</u>
	A089-00004-0000	COIN DOOR CABLE ASSY.
	A908-00012-0000	CONTROL SHELF CABLE ASSY.
	A908-00010-0000	POWER CABLE ASSY.
	A908-00011-0000	LOW VOLTAGE CABLE ASSY.
	A908-00014-0000	DISPLAY LIGHT CABLE ASSY.
	A624-00001-0000	COIN BOX GUIDE BRKT. ASSY.
	0624-00101-0000	COIN BOX GUIDE BRKT.
	A905-00026-0000	COIN BOX COVER ASSY.
	0017-00101-0628	#8-32 x 3/4 CARRIAGE BOLT (4 REQ'D.)
	0017-00104-0022	#8 STL. WASHER (4 REQ'D.)
	0017-00103-0061	#8-32 LOCK NUT W/SEMS (4 REQ'D.)
	A905-00028-0000	CASH BOX ASSY. W/HANDLE
	A151-00029-0000	LOCK ASSY. - BACK DOOR
	0017-00009-0490	VENT SCREEN
	0017-00032-0083	ON/OFF SWITCH
	0567-00106-0100	SWITCH MTG. PLATE

NO. 902 & 908 - SPACE ZAP UPRIGHT & MINI - FRONT DOOR ASSY.

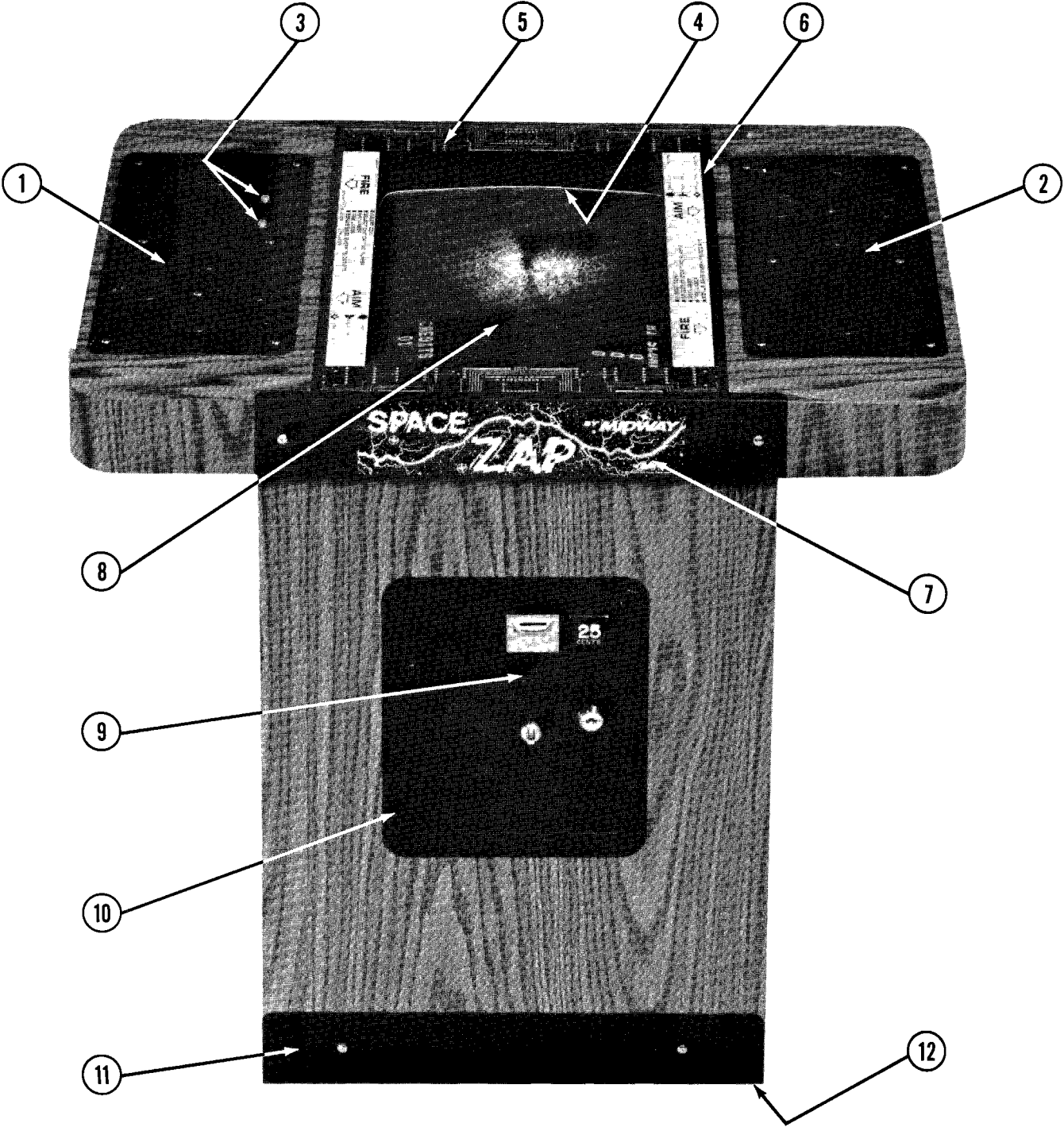


**NOTE:
MIDWAY'S BASIC COIN DOOR,
VARIATIONS ARE DEPENDANT ON
YOUR PARTICULAR GAME.**

ORDER BY PART NUMBER ONLY

ITEM	PART N ^o	DESCRIPTION
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	0090-00117-03XF	COIN ENTRY PLATE (25¢)
4	0090-000906-0000	PLASTIC START BUTTON
5	0010-00007-0000	COMPRESSION SPRING
6	A090-00020-2003	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	0090-00126-01XF	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 & BOTTOM COIN CHUTE W/BRKT. ASSY.
22	0017-00101-0598	#8-32 x 5/16 SCREW
23	0010-00181-0100	SPRING
24	0090-00129-00XF	PIVOT POST
25	0010-00134-0000	SPRING
26	0090-00008-0000	ACCEPTOR FRAME ASSY.
27	0093-00155-00XF	REJECTOR LEVER
28	0017-00100-0012	"E" RING
29	0090-00162-00XF	COIN SWITCH MTG. BRKT. - SMALL (AMERICAN)
29	0090-00163-00XF	COIN SWITCH MTG. BRKT. - LARGE
30	0017-00005-0203	COIN SWITCH CHUTE - SMALL (AMERICAN)
30	0017-00005-0204	COIN SWITCH CHUTE - LARGE
31	0017-00101-0555	#6-32 x 5/16 SCREW
32	0017-00005-0195	COIN SWITCH
33	0010-00599-0000	COIN SWITCH WIRE
34	0017-00007-0132	PUSH-ON RING (BLK.)
35	0017-00101-0698	#4-40 x 3/4 SCREW (2 REQ'D.)
36	0090-00128-00XF	SWITCH BRKT. - DOOR TILT
	A090-00061-0000	ANTI-SPRING DEVICE ASSY. (REPLACES ITEM 30)
	A090-00064-0000	ANTI-PENNY DEVICE ASSY.

NO.920 - SPACE ZAP COCKTAIL - PICTURE



NO. 920 - SPACE ZAP COCKTAIL - PICTURE
ORDER BY PART NUMBER ONLY

ITEM	PART NO	DESCRIPTION
1	0920-00101-00XF	CONTROL PLATE - PLAYER #1
2	0920-00101-01XF	CONTROL PLATE - PLAYER #2
3	0017-00032-0051	BUTTON SWITCH (2 REQ'D.)
4	0889-00902-0000	T.V. BEZEL
	0889-00903-0000	COLOR OVERLAY
5	0920-00900-00XF	DISPLAY GLASS
6	0537-00903-0047	GLASS CHANNEL 21-7/8 IN. (2 REQ'D.)
7	0920-00100-00XF	GLASS RETAINING BRKT. (2 REQ'D.)
8	0017-00003-0347	19" MONITOR W/CHASSIS
	0889-00107-00XF	MONITOR MTG. BRKT. (4 REQ'D.)
	0017-00101-0082	#10 x 3/4 UNSLOTTED HEX W/WASHER SCREW (8 REQ'D.)
9	A090-00058-0000	SINGLE ENTRY COIN DOOR W/COIN METER
10	0090-00002-01BK	COIN DOOR FRAME
	0017-00101-0121	#6-32 x 5/16 PHIL TRUSS HD. SCREW (3 REQ'D.) (MOUNTS COIN DOOR TO FRAME)
11	0889-00109-00XF	KICK PLATE (2 REQ'D.)
12	0017-00102-0048	LEG LEVELERS (4 REQ'D.)
	0017-00103-0026	LEG LEVELER NUTS (4 REQ'D.)

NOTES

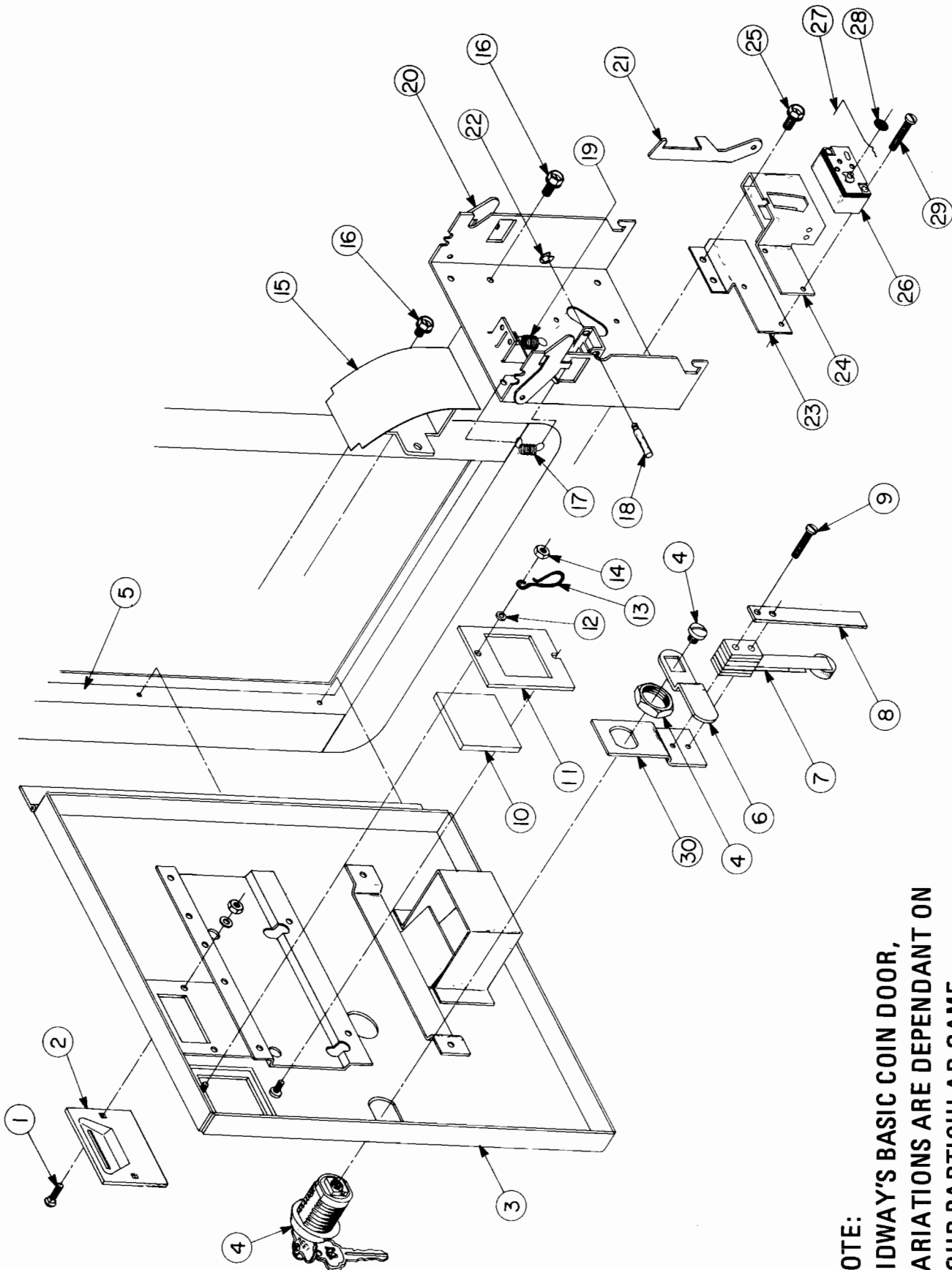
This space is provided for personal notes

NO. 920 - SPACE ZAP COCKTAIL - ADDITIONAL PARTS LIST

ORDER BY PART NUMBER ONLY

ITEM	PART NO	DESCRIPTION
	A082-90411-A000	POWER SUPPLY P.C.B. ASSY.
	0624-00902-0100	P.C. SUPPORT BRKT 12 IN. (2 REQ'D.)
	0624-00902-0400	P.C. SUPPORT BRKT. 4 IN.
	A151-00027-0000	INTERLOCK SWITCH & BRKT. ASSY.
	0017-00032-0083	ON/OFF SWITCH
	0567-00106-0100	SWITCH MTG. PLATE
	0017-00009-0033	BASSICK CLAMP
	0889-00110-0000	STRIKE
	A749-00003-0000	COIN BOX ASSY.
	A627-00056-0000	COIN BOX COVER ASSY.
	A625-00024-0000	COIN BOX GUIDE BRKT. ASSY.
	0625-00117-0000	COIN BOX GUIDE BRKT.
	0017-00101-0628	#8-32 x 3/4 CARRIAGE BOLTS (4 REQ'D.)
	0017-00103-0008	#8-32 HEX NUTS
	A902-00022-0000	SINGLE AUDIO AMP. BD. & BRKT. ASST.
	3000-17143-0300	GROUND STRAP
	A870-00009-0000	FAN & CABLE ASSY.
	0017-00003-0310	EXHAUST FAN 115V., 60HZ
	0017-00009-0485	FAN FINGER GUARD
	0869-00909-0000	FAN SHROUD (PLASTIC)
	0870-00700-00XF	FAN SPACER
	0017-00101-0583	#6-32 x 1-1/4 CARRIAGE BOLTS (4 REQ'D.)
	0017-00103-0052	#6-32 LOCK NUT (4 REQ'D.)
	0017-00104-0019	#6 FLAT WASHER (4 REQ'D.)
	0017-00009-0495	2 IN. HINGE - CABINET TOP (2 REQ'D.)
	A889-00017-0000	LATCH SLIDE ASSY.
	0889-00901-0000	COVER PLATE (UNDER TABLE TOP BELOW CONTROLS) (2 REQ'D.)
	0017-00003-0161	SPEAKERS - 4" SQ. (2 REQ'D.)
	0017-00009-0482	SPEAKER GRILL (2 REQ'D.)
	0017-00009-0393	VENTILATION GRILL (2 REQ'D.)
	0017-00101-0639	#8-32 x 1-1/4 CARRIAGE BOLTS (16 REQ'D.)
	0017-00103-0061	#8-32 HEX NUTS W/SEMS (16 REQ'D.)
	A920-00013-0000	HIGH VOLTAGE CABLE ASSY.
	A920-00014-0000	LOW VOLTAGE CABLE ASSY.
	A920-00017-0000	COIN DOOR CABLE ASSY.
	A920-00011-0000	PLAYER #1 CONTROL CABLE ASSY.
	A920-00012-0000	PLAYER #2 CONTROL CABLE ASSY.

NO. 920 - SPACE ZAP COCKTAIL - FRONT DOOR ASSY.



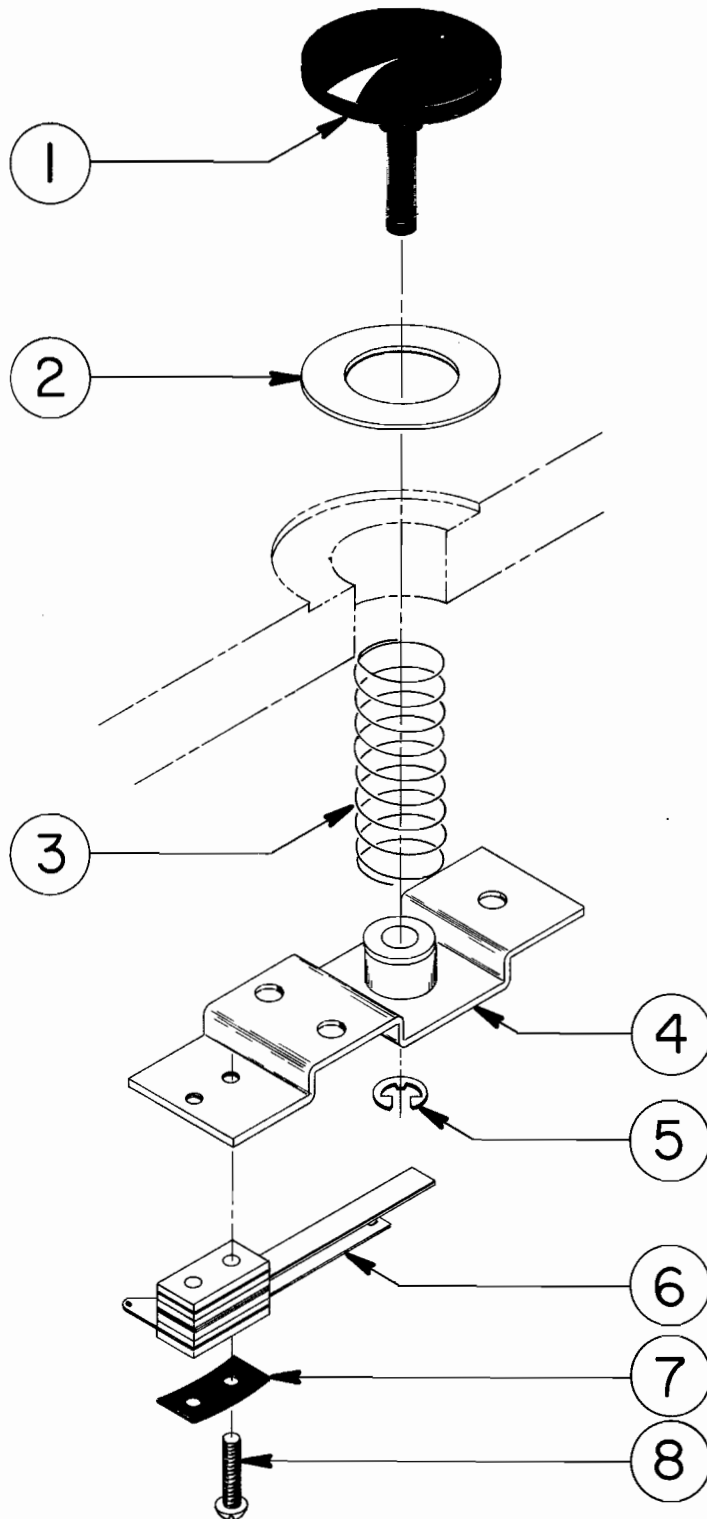
**NOTE:
MIDWAY'S BASIC COIN DOOR,
VARIATIONS ARE DEPENDANT ON
YOUR PARTICULAR GAME.**

NO. 920 - SPACE ZAP COCKTAIL - FRONT DOOR ASSY.

ORDER BY PART NUMBER ONLY

ITEM	PART N ^o	DESCRIPTION
1	0017-00101-0552	#6-32 x 1/4 CARRIAGE BOLT (2 REQ'D.)
2	0090-00117-03XF	COIN ENTRY PLATE (25¢)
3	A090-00058-0000	DOOR ASSY. SINGLE ENTRY
4	0017-00005-0050	DOOR LOCK & KEY WITH SCREW & NUT
5	0090-00002-01BK	SINGLE DOOR FRAME
6	0017-00005-0041	421 N.S. CAM
7	0090-00901-0000	DOOR SWITCH
8	0090-00126-01XF	SWITCH BACKUP PLATE
9	0017-00101-0528	#5-40 x 3/4 LONG M.S. (2 REQ'D.)
10	0090-00903-0040	25¢ WINDOW
11	0090-00143-0000	COIN PLEX RETAINER
12	0017-00104-0002	SPLIT LOCK WASHER (2 REQ'D.)
13	0017-00007-0019	KEY HOOK
14	0017-00103-0005	#6-32 HEX NUT (2 REQ'D.)
15	0090-00104-0000	TOP & BOTTOM COIN CHUTE W/BRKT. ASSY.
16	0017-00101-0598	#8-32 x 5/16 SCREW (4 REQ'D.)
17	0010-00181-0100	SPRING
18	0090-00129-00XF	PIVOT POST
19	0010-00134-0000	SPRING
20	0090-00008-0000	ACCEPTOR FRAME ASSY.
21	0093-00155-00XF	REJECTOR LEVER
22	0017-00100-0012	'E'-RING
23	0090-00162-00XF	COIN SWITCH MTG. BRKT. - SMALL (AMERICAN)
23	0090-00163-00XF	COIN SWITCH MTG. BRKT. - LARGE
24	0017-00005-0203	COIN SWITCH CHUTE - SMALL (AMERICAN)
24	0017-00005-0204	COIN SWITCH CHUTE - LARGE
25	0017-00101-0555	#6-32 x 5/16 SCREW (2 REQ'D.)
26	0017-00005-0195	COIN SWITCH
27	0010-00599-0000	COIN SWITCH WIRE
28	0017-00007-0132	PUSH-ON RING (BLK.)
29	0017-00101-0698	#4-40 x 3/4 SCREW (2 REQ'D.)
30	0090-00128-00XF	SWITCH BRKT. - DOOR TILT
	A090-00061-0000	ANTI-STRING DEVICE ASSY. — OPTIONAL (REPLACES ITEM 24)
	A090-00064-0000	ANTI-PENNY DEVICE ASSY.

NO. 902 - 908 - 920 - SPACE ZAP - PUSH BUTTON ASSY.

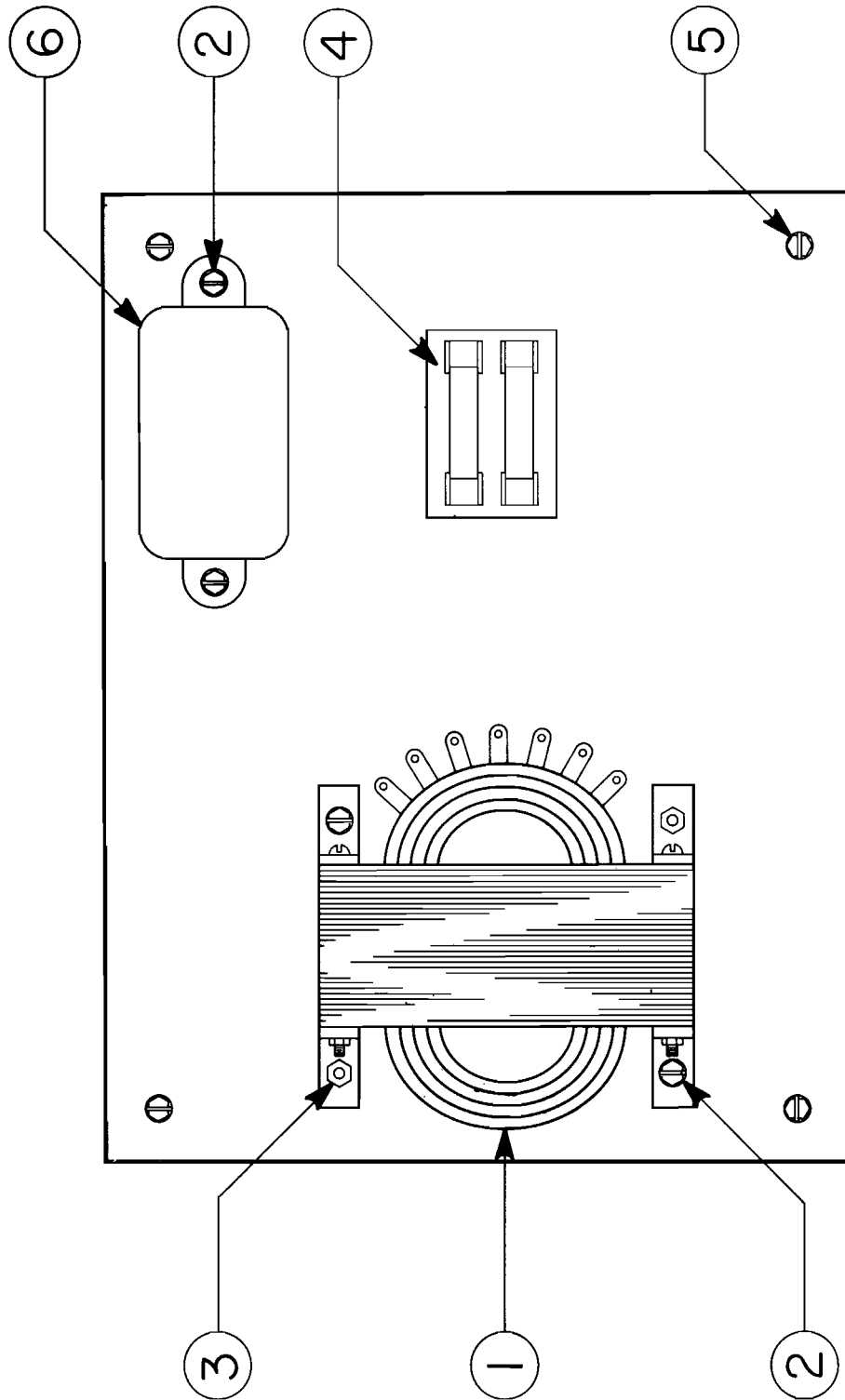


NO. 902 - 908 - 920 - SPACE ZAP - PUSH BUTTON ASSY.

ORDER BY PART NUMBER ONLY

ITEM	PART N ^o	DESCRIPTION
1	0902-00908-0000	PUSH BUTTON
2	0902-00910-0000	WASHER
3	0010-00263-0000	SPRING
4	A902-00014-0000	MTG. BRKT. ASSY.
5	0017-00100-0025	"E"-RING
6	A920-00016-0000	SWITCH ASSY.
7	0020-00202-0000	SWITCH PLATE
8	0017-00101-0527	#5-40 x 5/8 SLT. RND. HD. M.S. (2 REQ'D.)

NO. 902 - 908 - 920 - SPACE ZAP - TRANSFORMER BOARD ASSY.

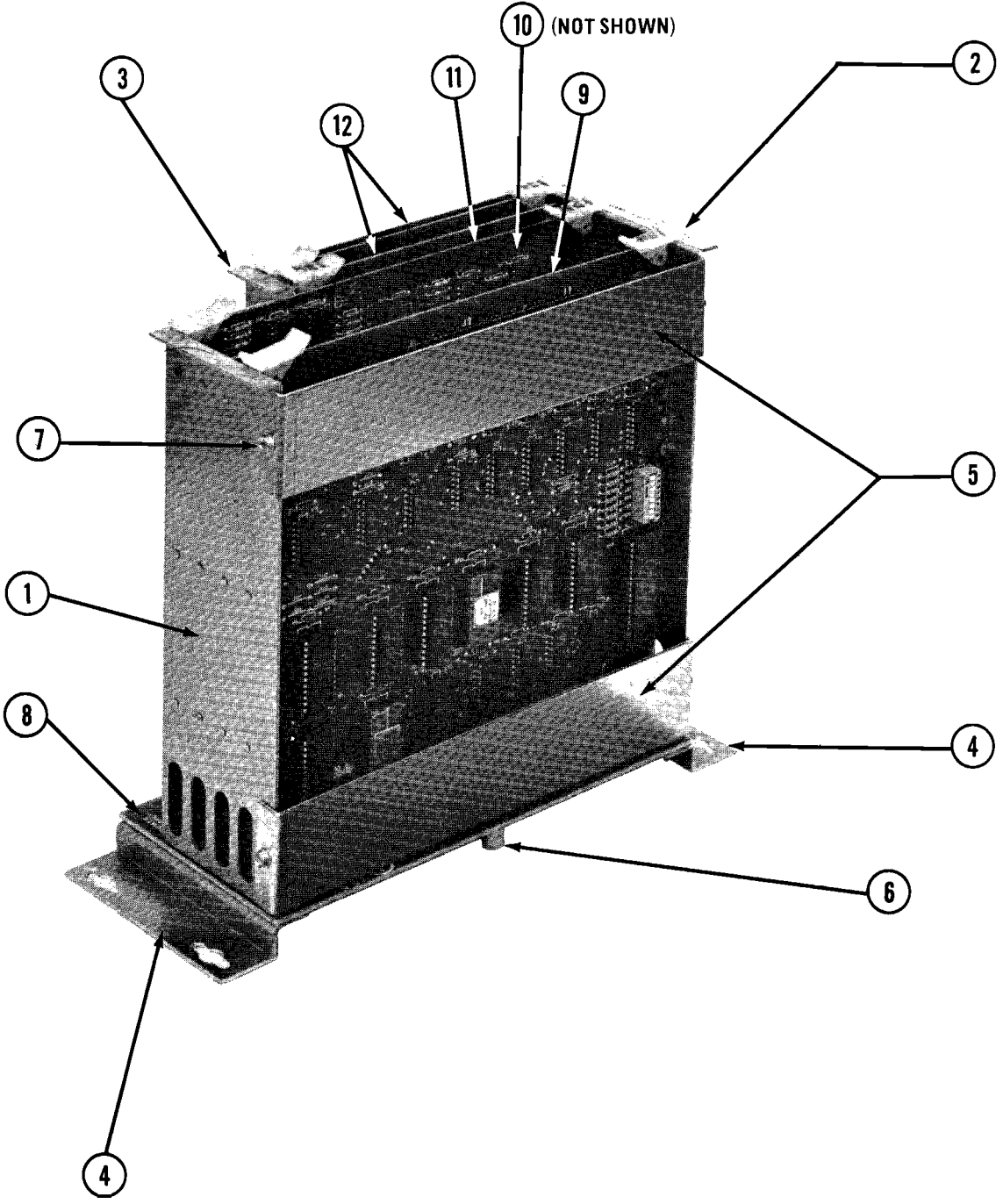


MIDWAY MFG. CO.
A BALLY CO.

ORDER BY PART NUMBER ONLY

ITEM	PART NO	DESCRIPTION
1	MT00-00065-A000	TRANSFORMER
2	0017-00101-0015	#6 x 1/2 SLT. HEX HD. M.S. (7 REQ'D.)
3	0017-00101-0628	#8-32 x 3/4 CARRAGE BOLT (2 REQ'D.)
	0017-00103-0008	#8-32 HEX NUT (2 REQ'D.)
4	0720-00001-0200	2 POSITION FUSE CLIP ASSY.
	0017-00003-0006	FUSE 3A, 250V. (2 REQ'D.)
5	0017-00101-0031	#8 x 1" SLT. HEX HD. M.S. (4 REQ'D.)
6	0017-00003-0114	NOISE FILTER
	0017-00003-0064	LINE CORD - 16 FEET (NOT SHOWN)

NO. 902 - 908 - 920 - SPACE ZAP - COMMERCIAL CARD RACK ASSY.

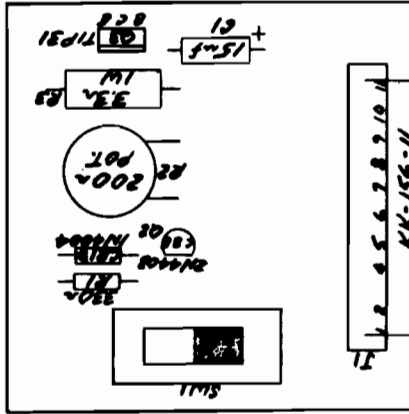


MIDWAY MFG. CO.
A BALLY COMPANY

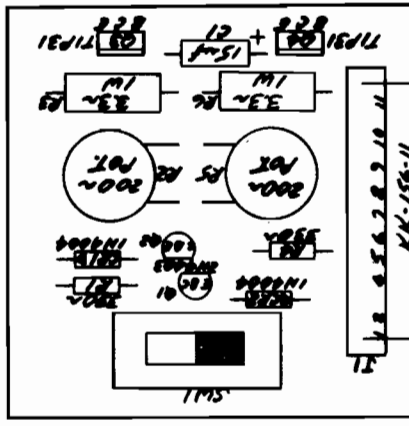
NO. 902 - 908 - 920 - SPACE ZAP - COMMERCIAL CARD RACK ASSY.

ORDER BY PART NUMBER ONLY

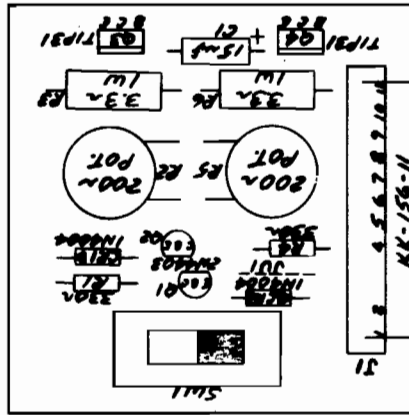
ITEM	PART N ^o	DESCRIPTION
1	A789-00003-0000	P.C. RACK ASSY. - RIGHT
2	A789-00004-0000	P.C. RACK ASSY. - LEFT
3	A789-00005-0000	P.C. RACK ASSY. - BASE
4	0789-00100-0000	MTG. BRKT. SUPPORT (2 REQ'D.)
5	0789-00106-0000	RACK STRAP (2 REQ'D.)
6	0017-00007-0153	P.C. BD. SUPPORT
	0017-00101-0096	#6 x 3/8 SLT. HEX HD. SCREW (5 REQ'D.)
7	0017-00101-0099	#6 x 1/4 SLT. HEX HD. SCREW (10 REQ'D.)
	0017-00104-0019	#6 FLAT WASHER (3 REQ'D.)
8	A082-90006-B000	BACK PANEL P.C. ASSY. (MOTHER BOARD)
9	A084-90708-A902	GAME LOGIC BOARD ASSY.
10	A082-91355-C000	PATTERN BOARD ASSY. (NOT SHOWN IN PICTURE)
11	A082-91354-E000	C.P.U. BOARD ASSY.
12	A082-91356-C000	RAM BOARD ASSY. (2 REQ'D.)



MONO
AUDIO AMP BOARD ASSEMBLY
A082-90704-A000



STEREO
AUDIO AMP BOARD ASSEMBLY
A082-90703-A000

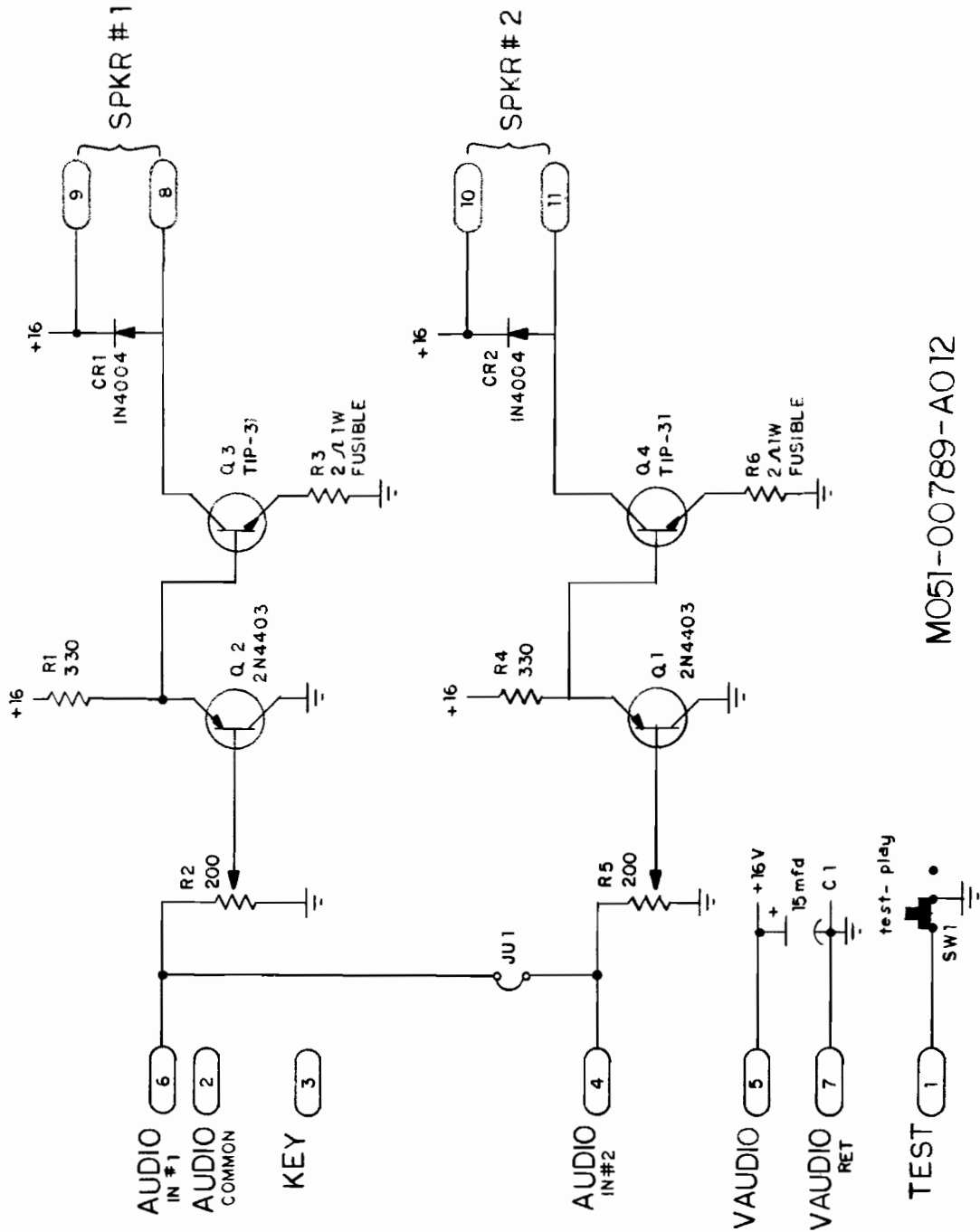


DUAL MONO
AUDIO AMP BOARD ASSEMBLY
A082-90705-A000

MO51-00789-A013

NOTE*

* FOR MONO 1/2 CIRCUIT SHOWN IS USED FOR DUEL MONO BOTH CIRCUITS ARE USED JUMPER JU1 IS USED FOR STEREO BOTH CIRCUITS ARE USED JUMPER JU1 IS NOT USED

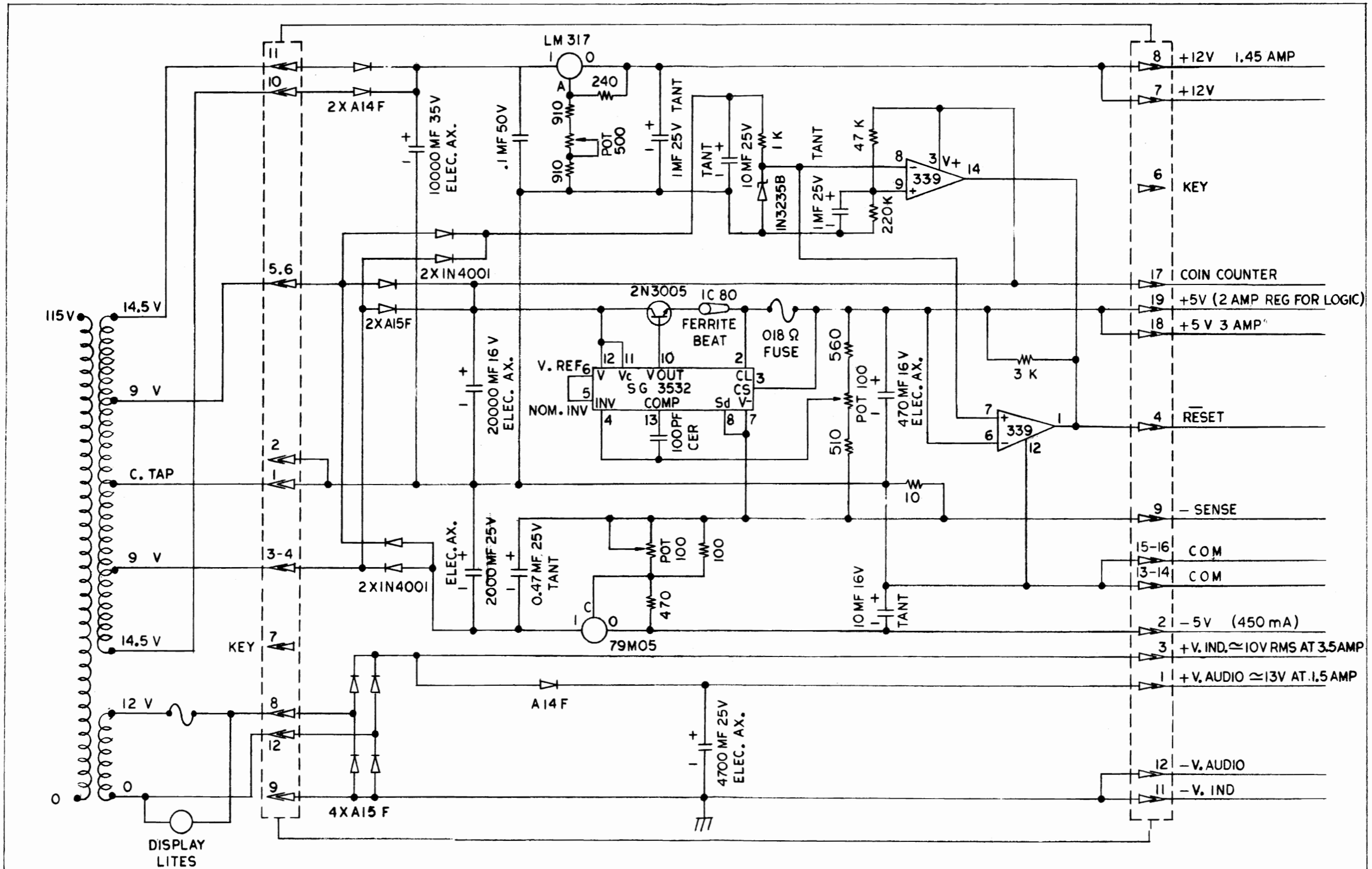


MO51-00789-A012

AUDIO AMP BOARD

PART NO.

A082-90903-A000

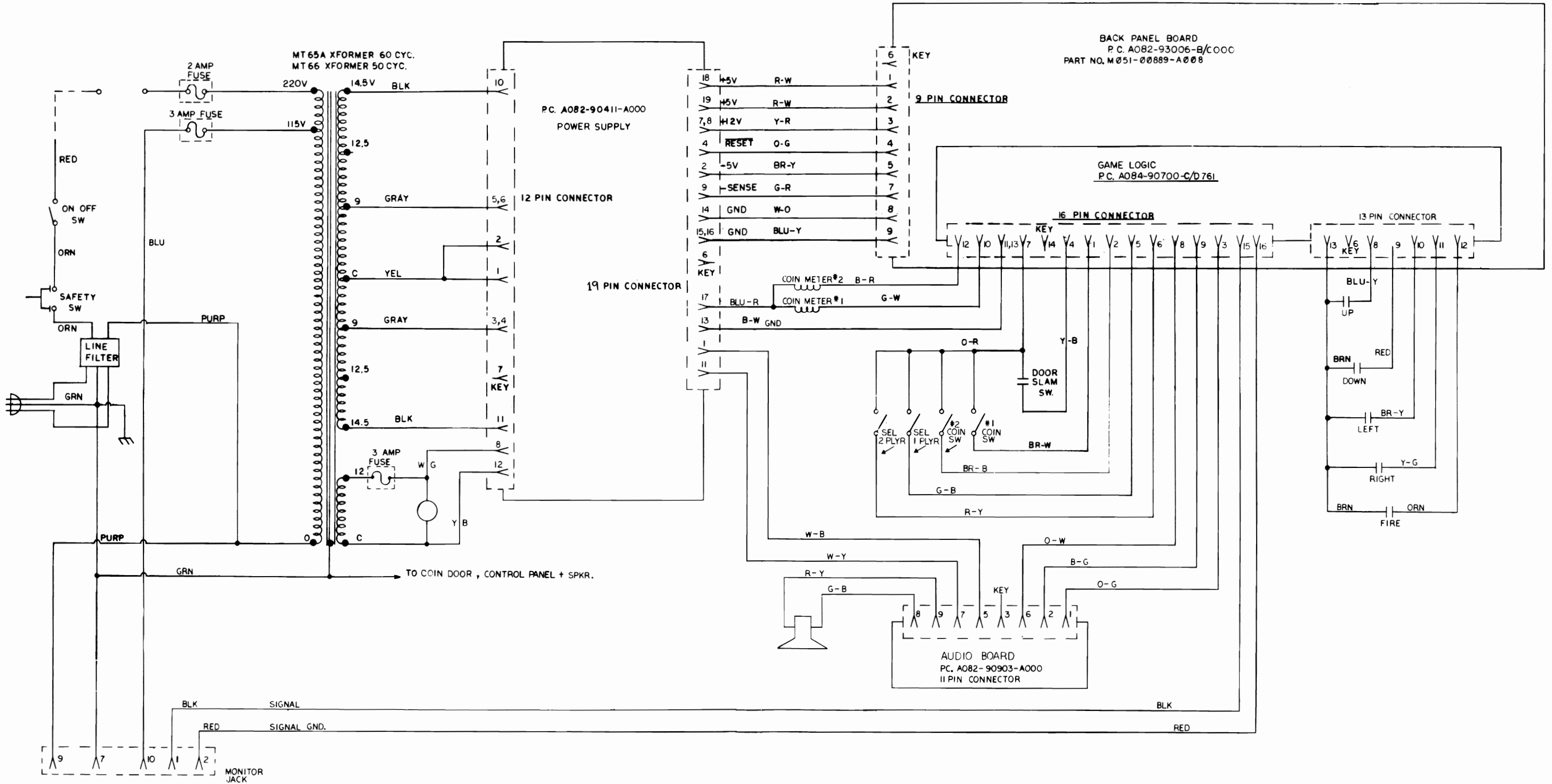


DRAWING NO. M051-00789-A011

COMMERCIAL CARD RACK	A082-90411-A000
PWR SPLY SCHEMATIC	

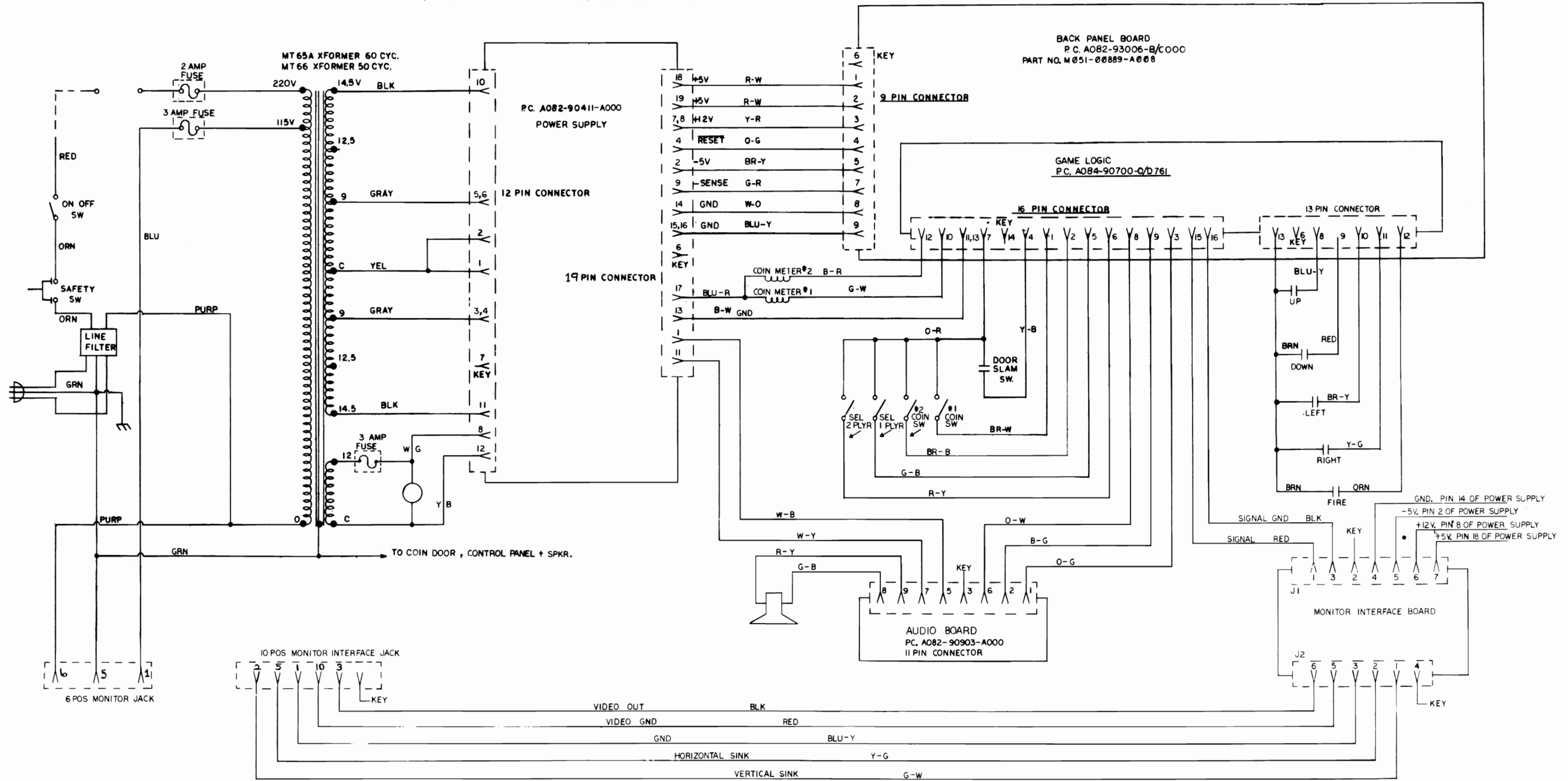
"SPACE ZAP"
 MIDWAY MFG. CO.
 10750 W. GRAND AVE.
 FRANKLIN PARK, IL. 60131

WIRING SCHEMATIC PART NO. M051-00902-A006



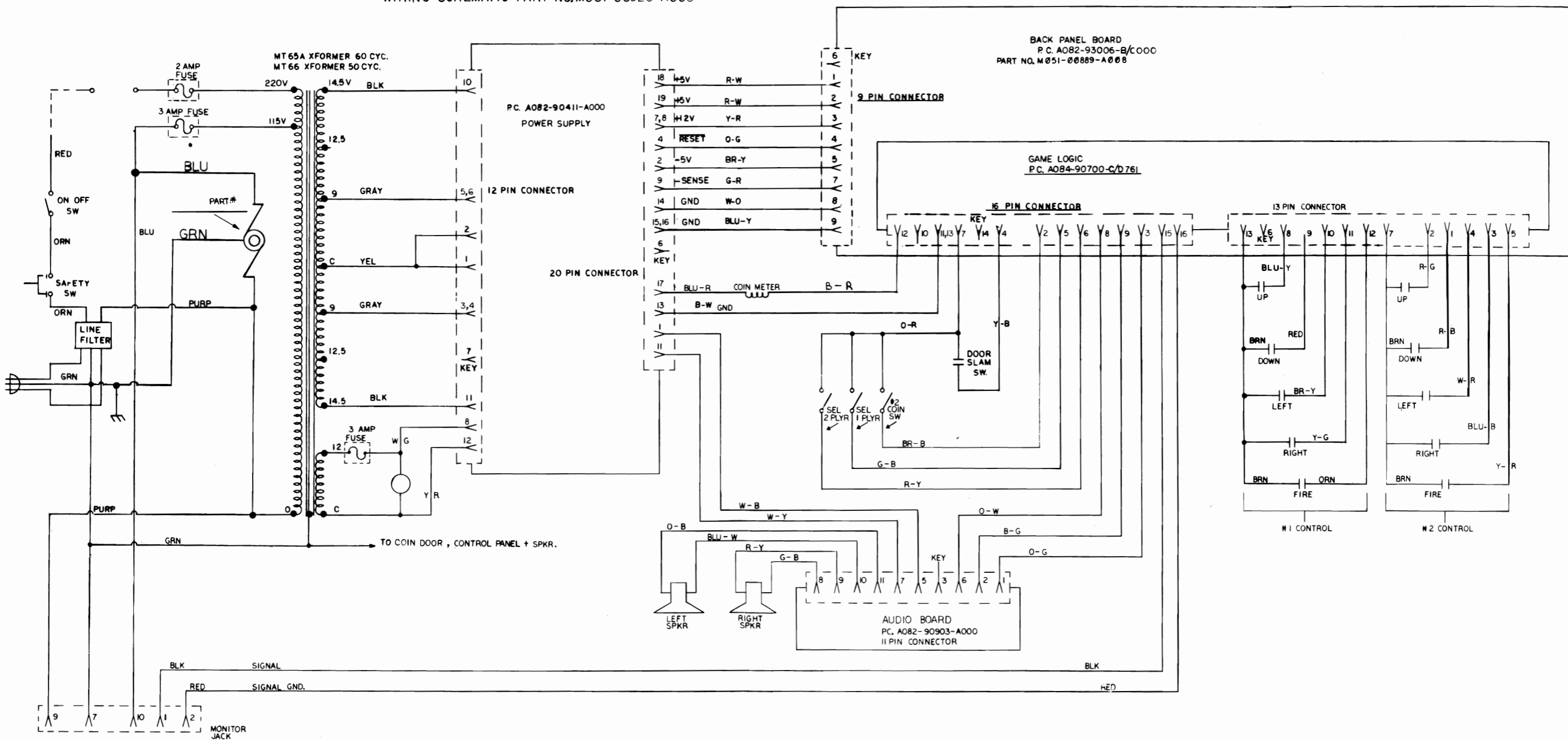
"SPACE ZAP"-MINI
MIDWAY MFG. CO.
10750 W. GRAND AVE.
FRANKLIN PARK, IL. 60131

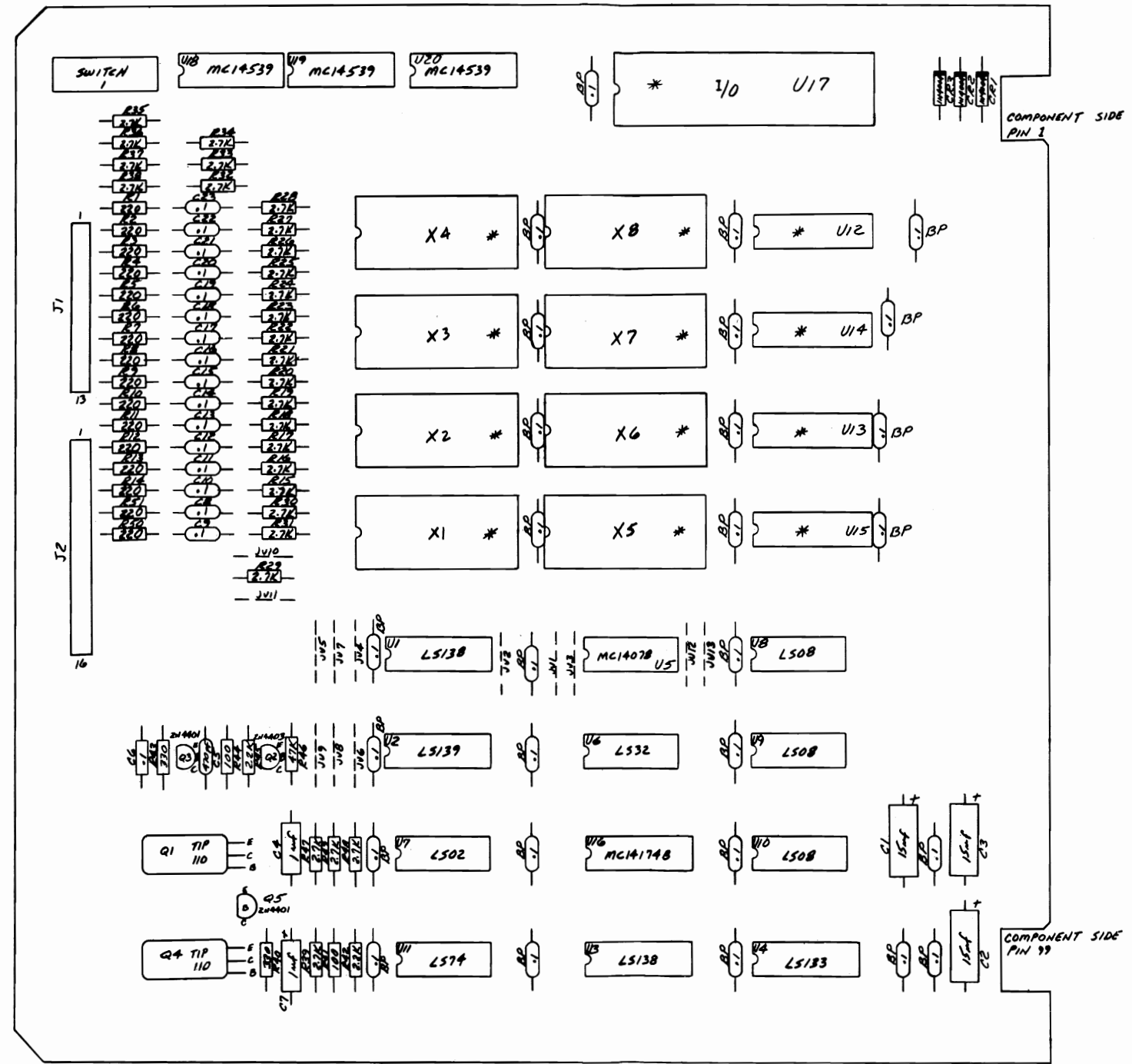
WIRING SCHEMATIC PART NO. M051-00908-A002



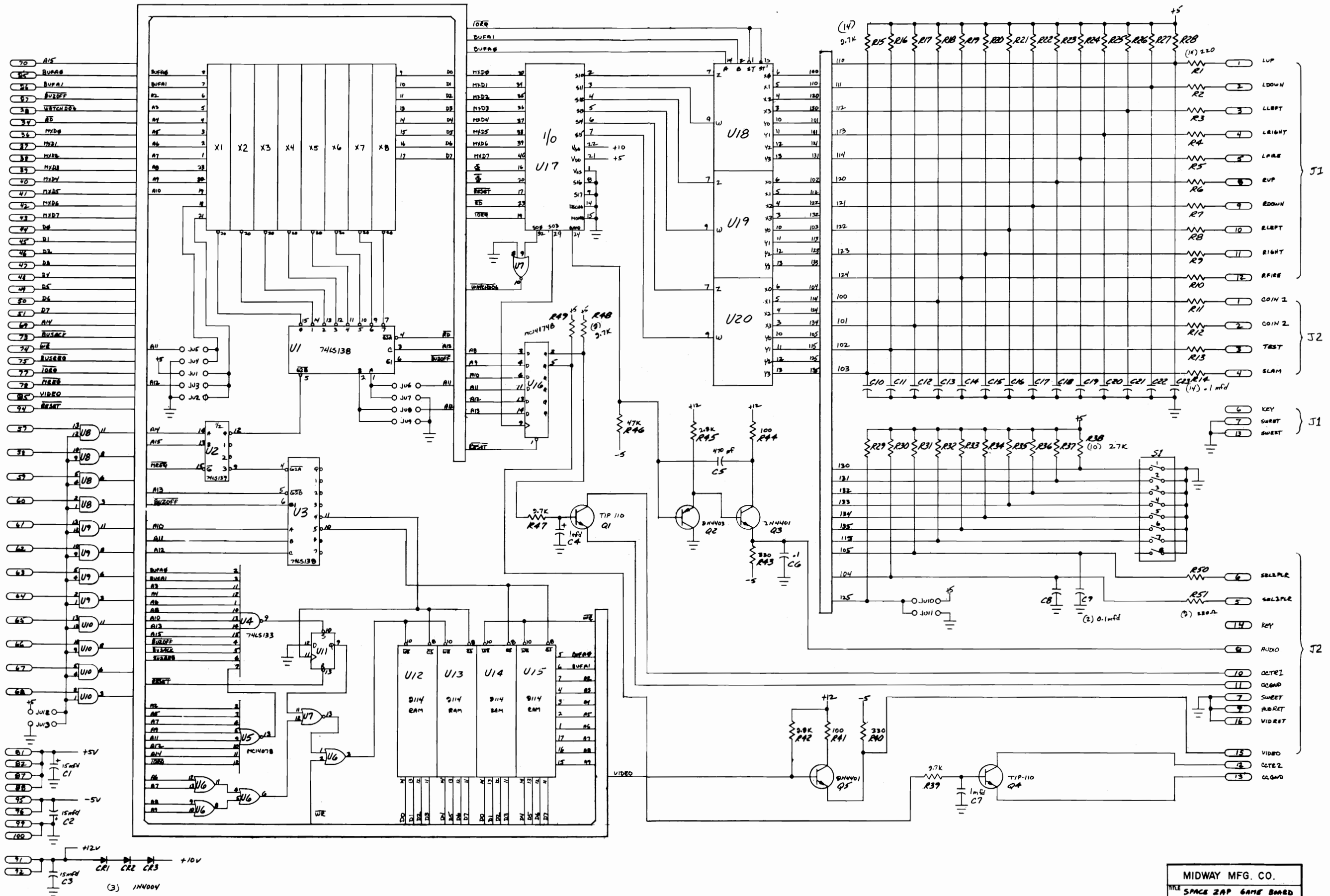
"SPACE ZAP"-COCKTAIL
 MIDWAY MFG. CO.
 10750 W. GRAND AVE.
 FRANKLIN PARK, IL. 60131

WIRING SCHEMATIC PART NO. M051-00920-A003

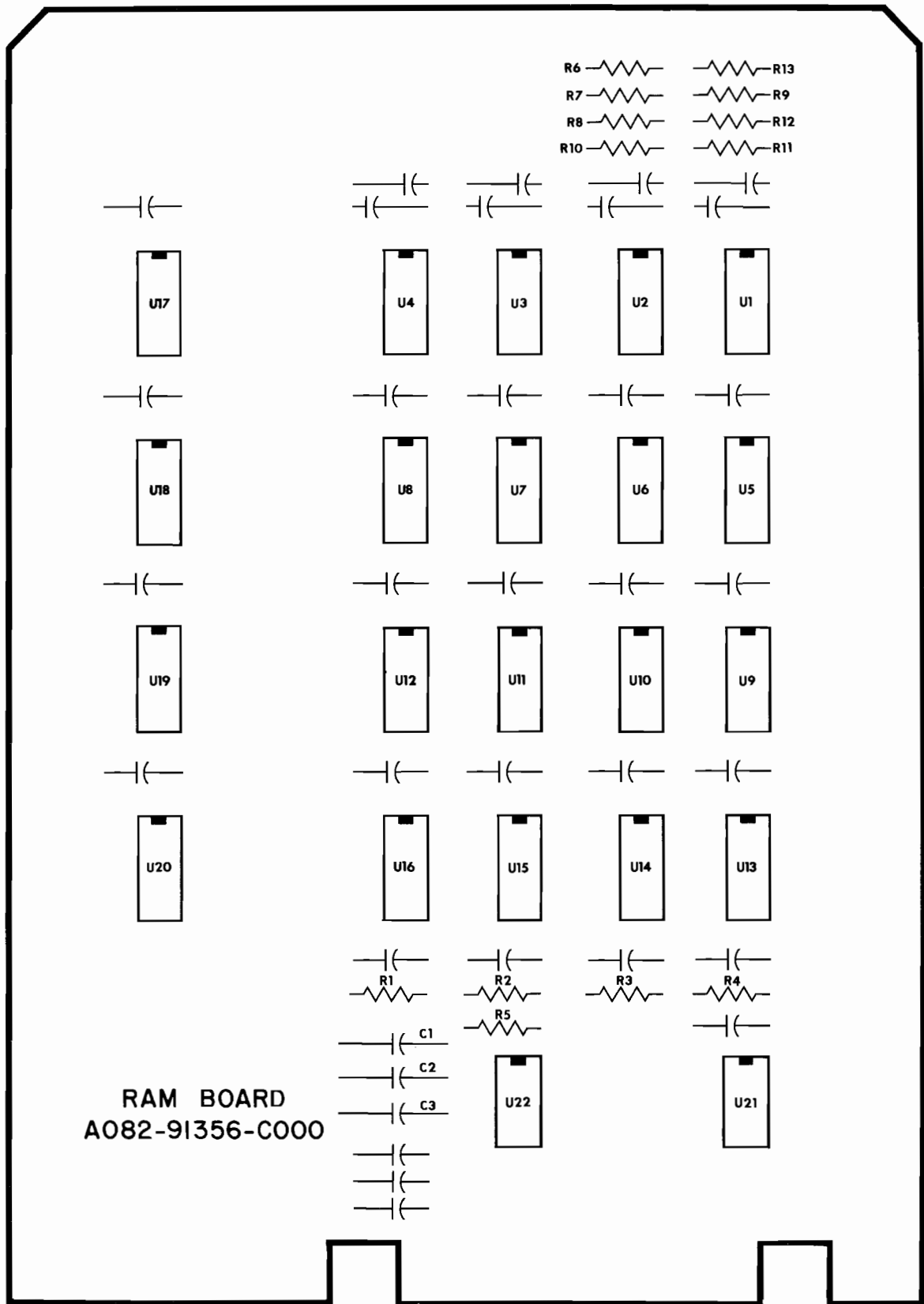




MIDWAY MFG. CO.
 SPACE ZAP GAME BB
 COMM CARD PACK
 A084-90708-1702

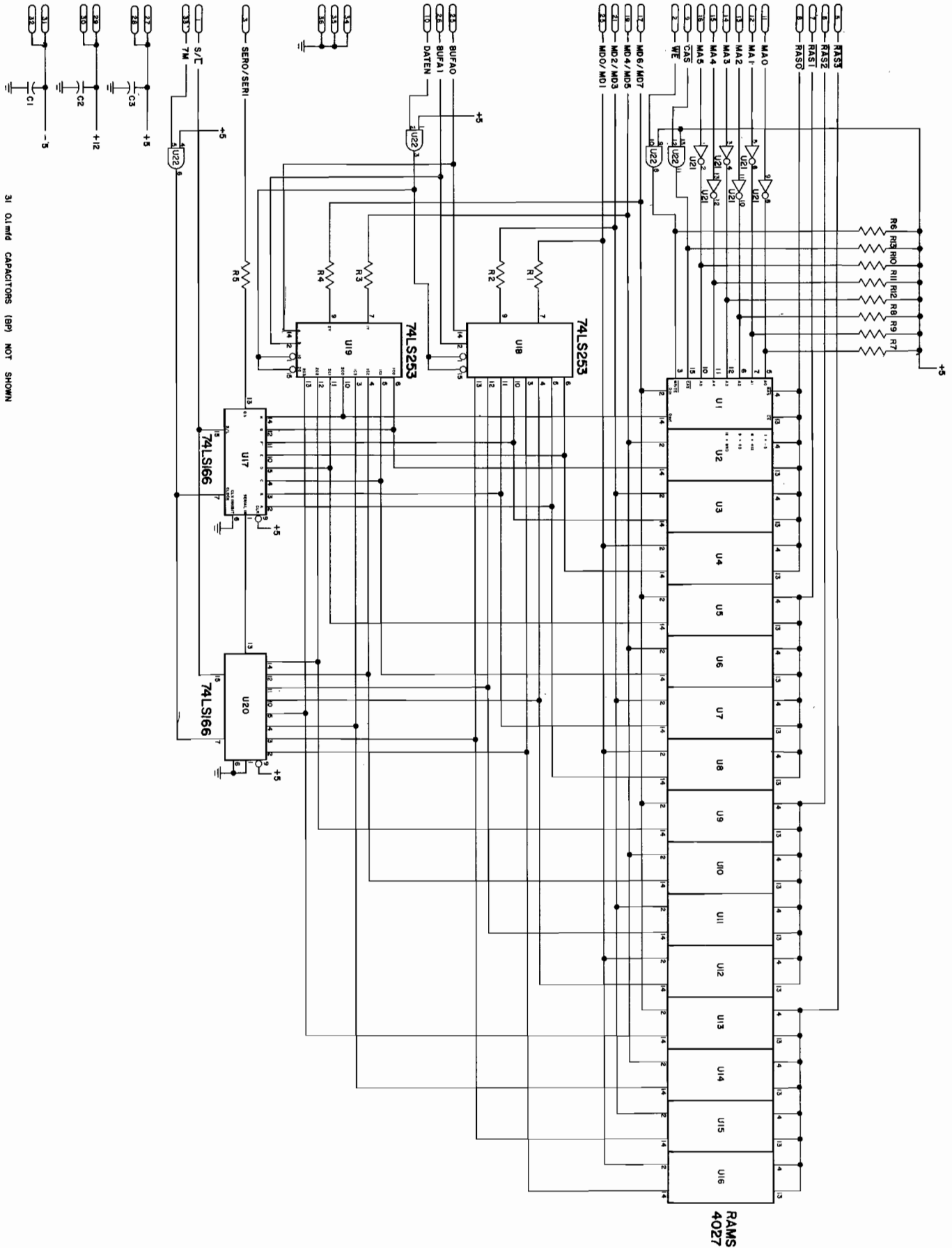


MIDWAY MFG. CO.
 TITLE SPACE ZAP GAME BOARD
 FOR CBS
 NO. A084-90708-A902

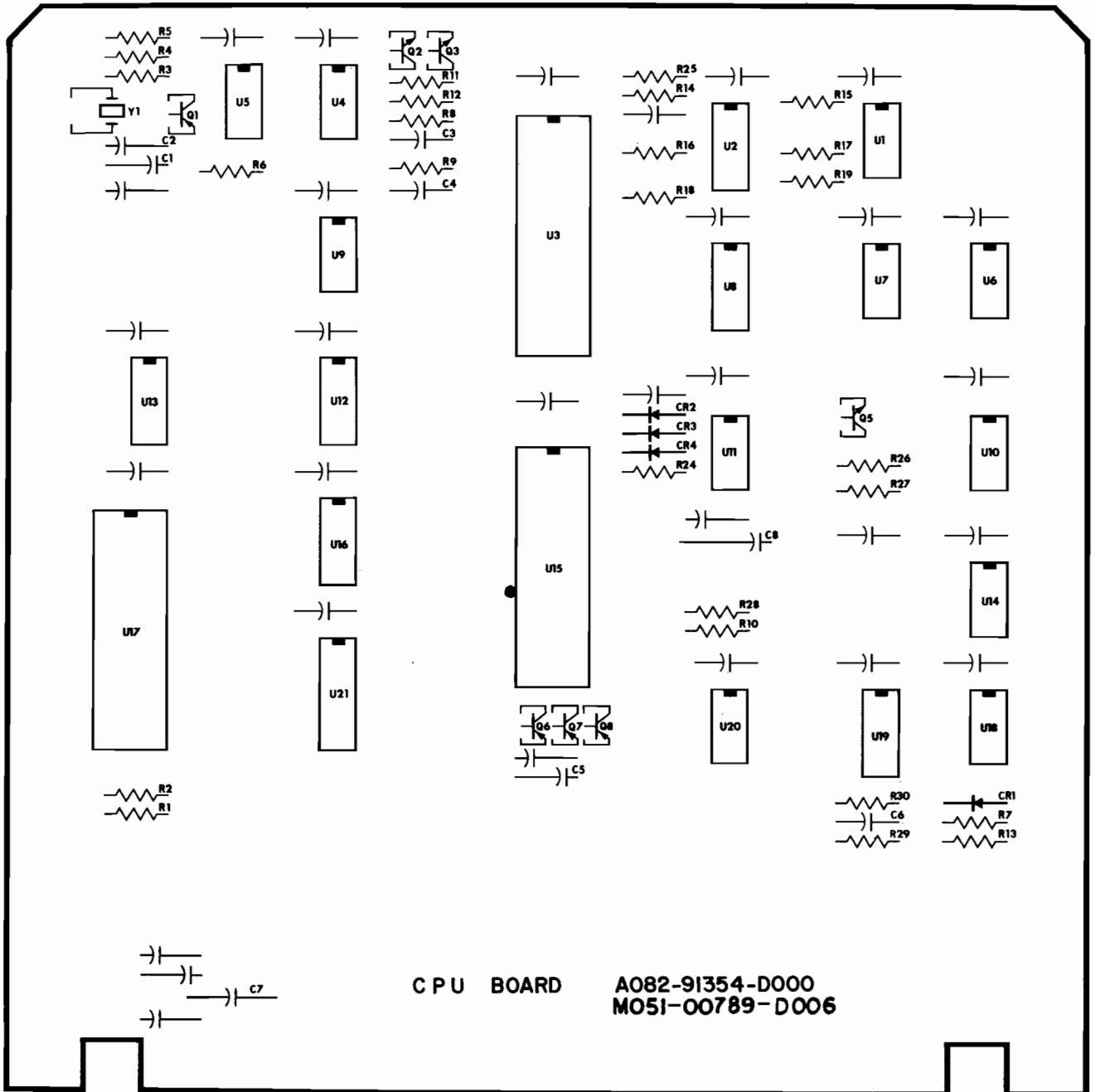


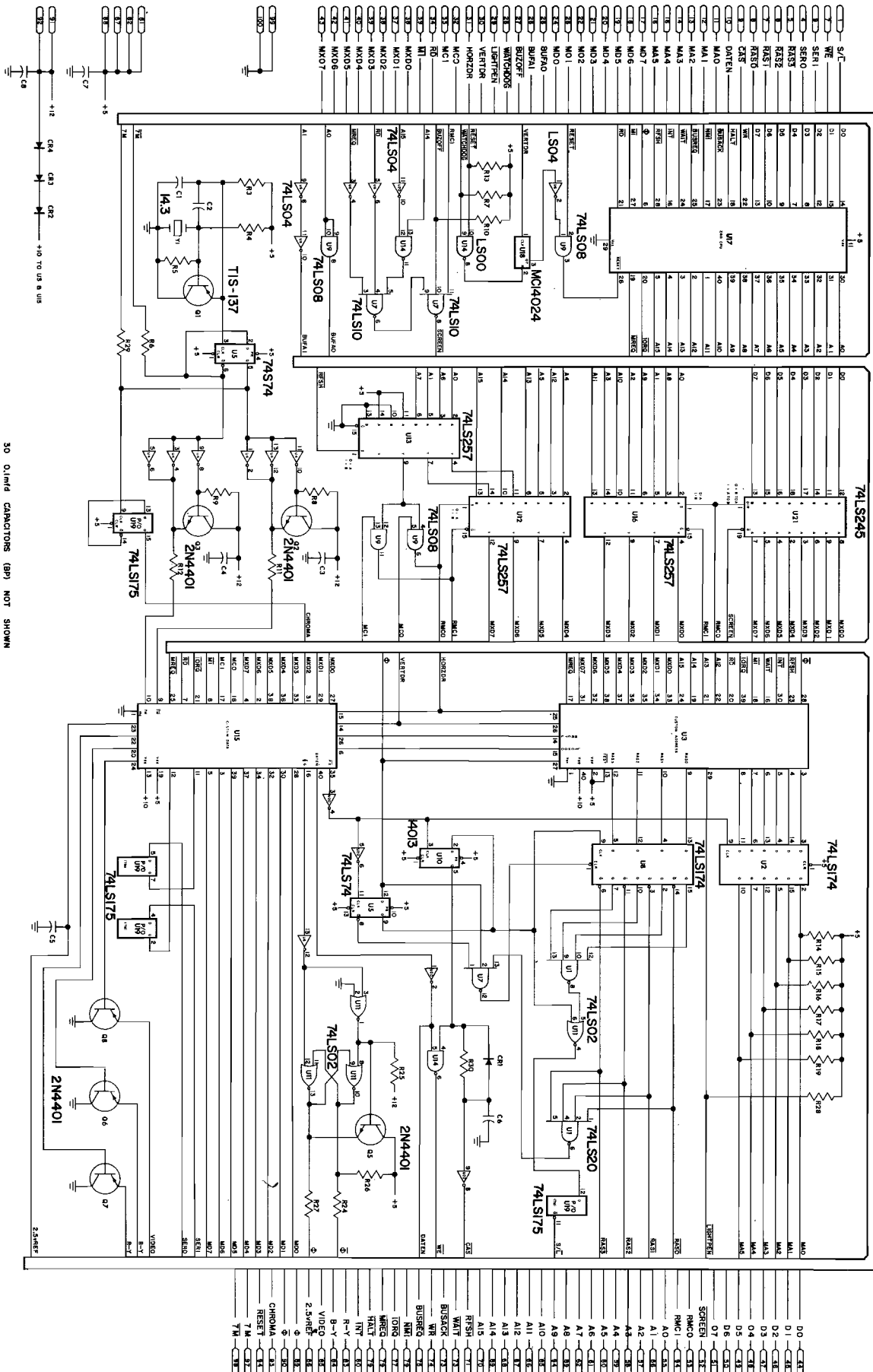
RAM BOARD
A082-91356-C000

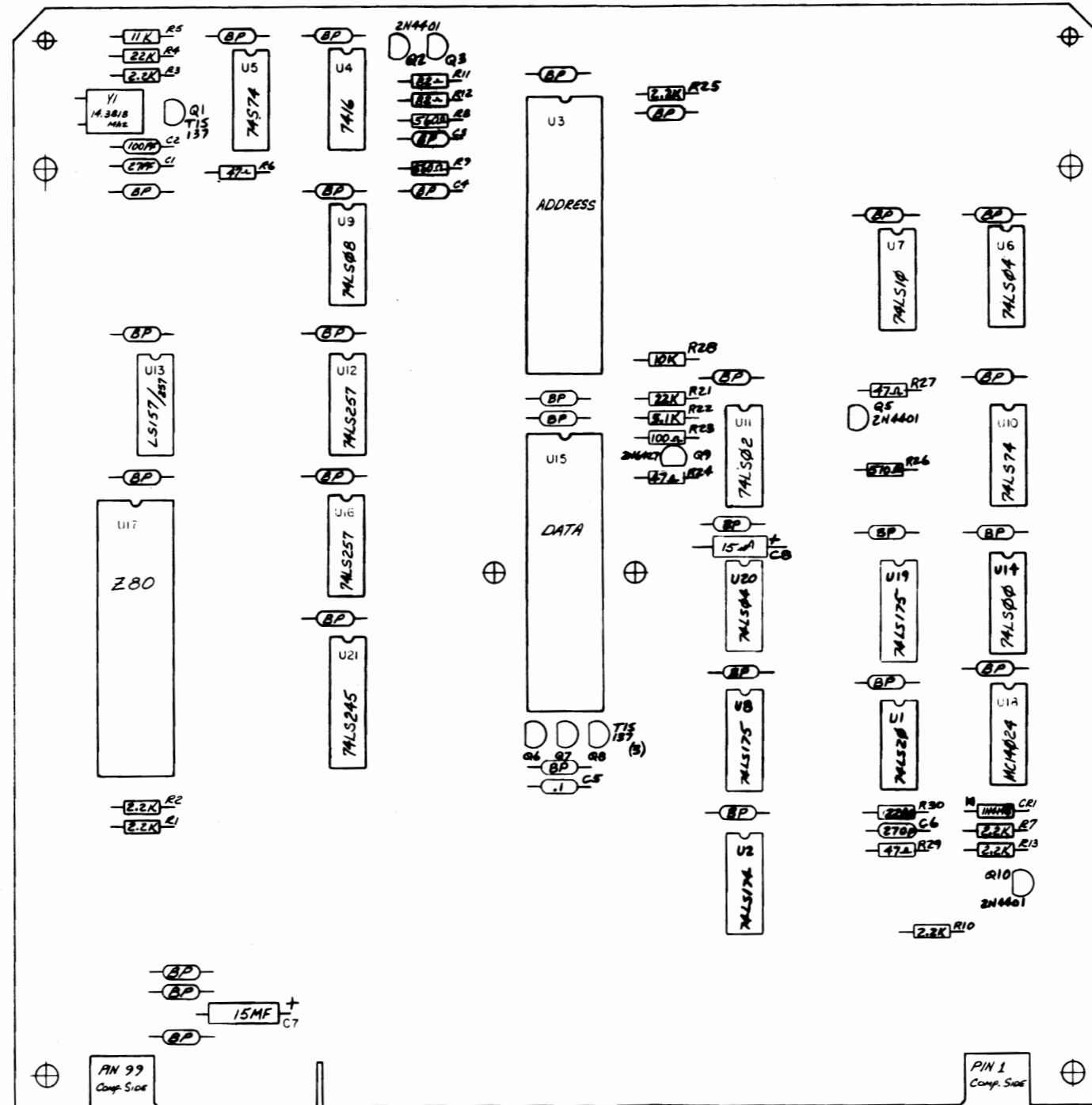
COMPONENT PART NO. M051-00789-A003



31 0.1mfd CAPACITORS (BP) NOT SHOWN



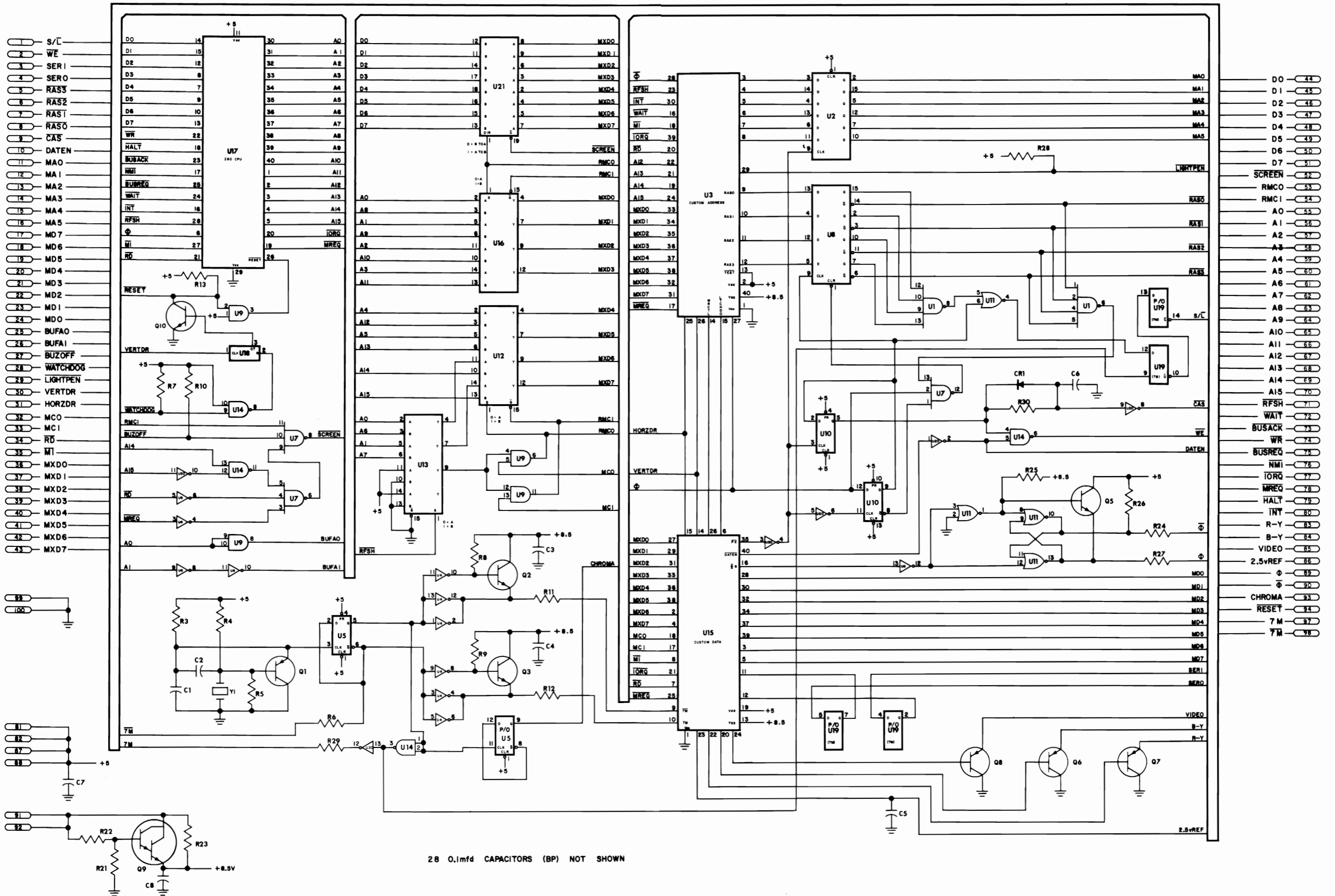




COMPONENT SIDE

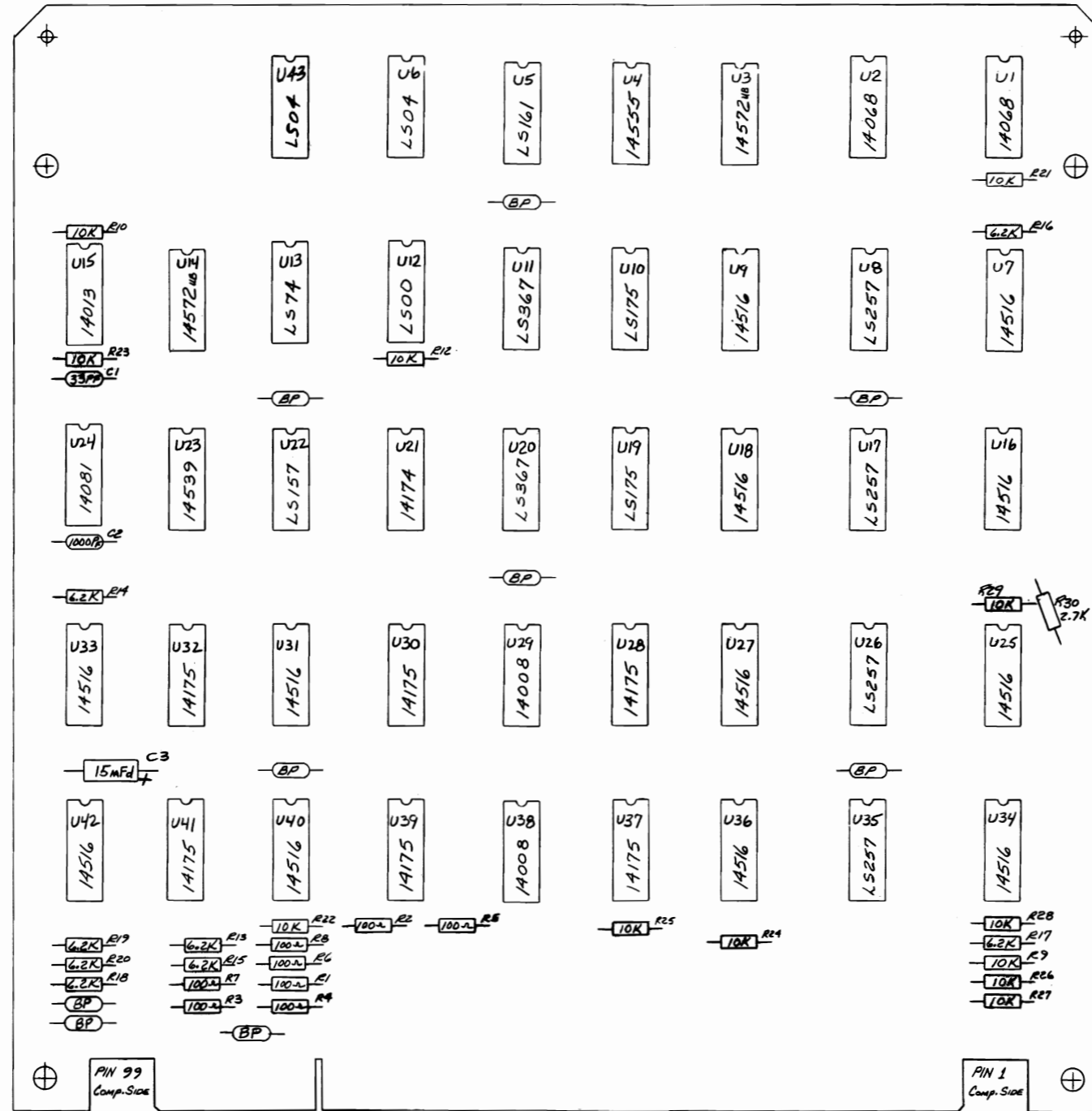
M051-00789-A006

TITLE	CPU BOARD
FOR	CARD RACK
NO.	A082-91354-E000



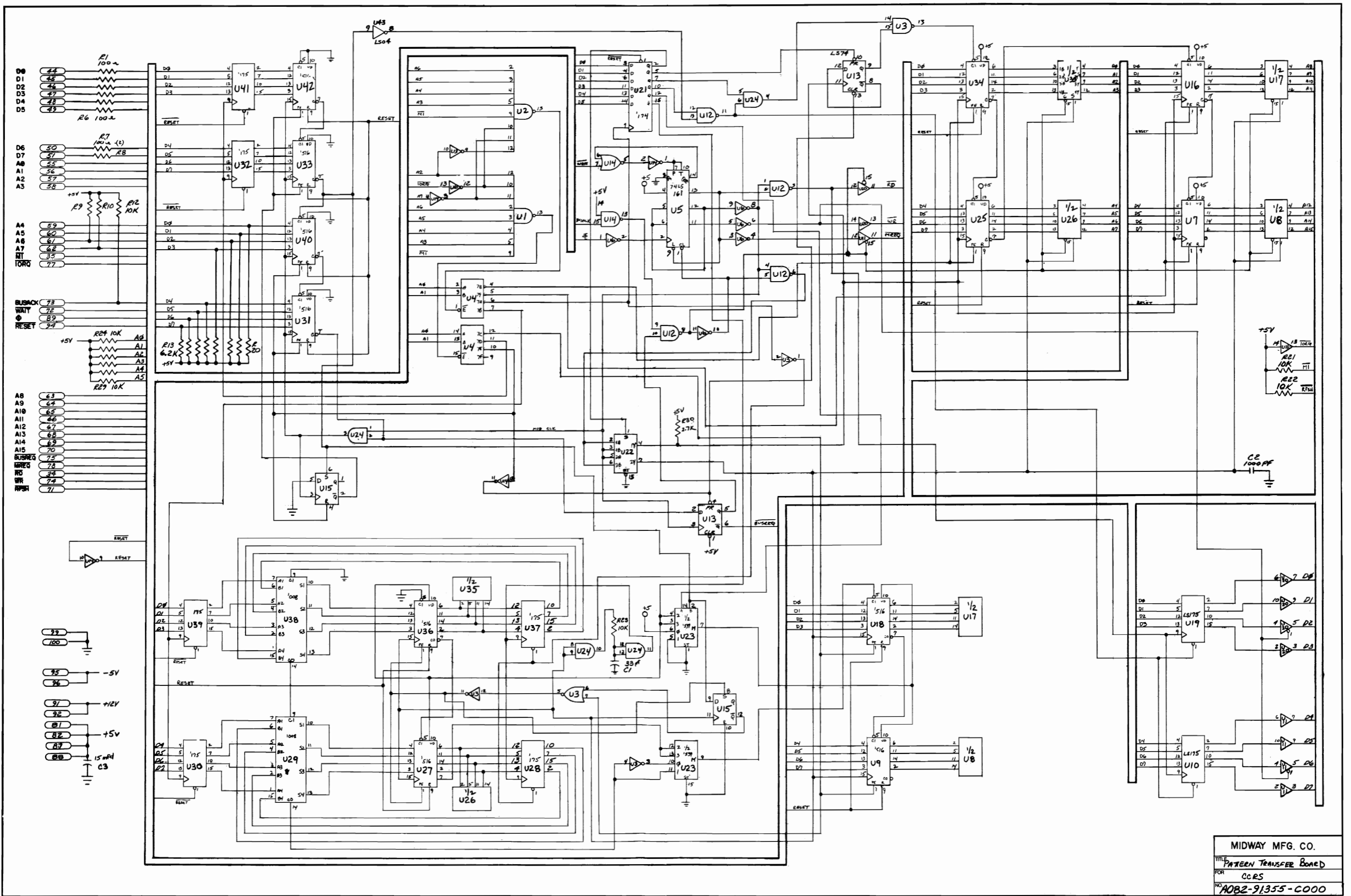
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M051-00789-E005

CPU BOARD

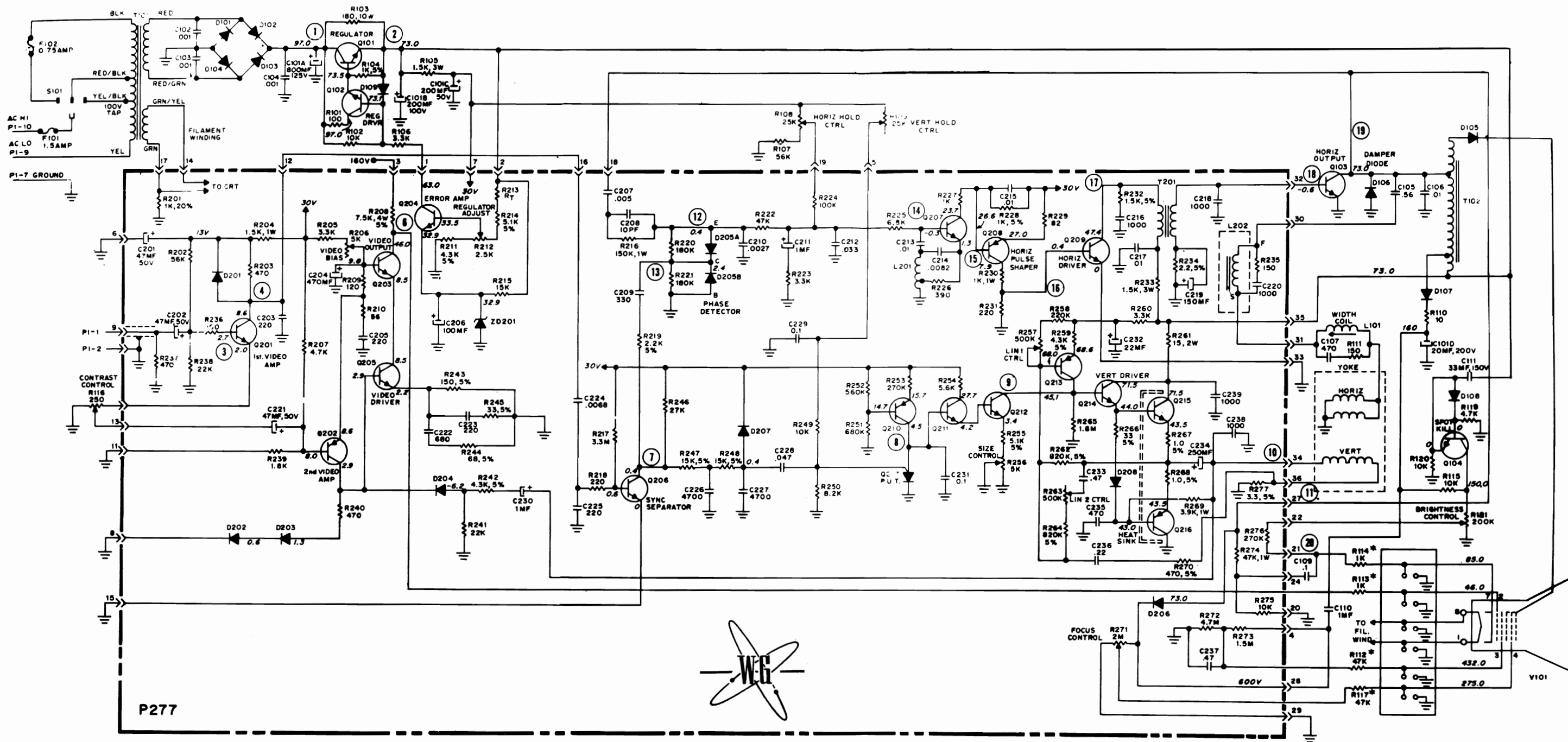


COMPONENT SIDE
 A082-91355-C000
 PATTERN BOARD
 COMM. CARD RACK

MIDWAY MFG. CO.	
TITLE	PATTERN BOARD
FOR	COMM. CARD RACK
NO.	A082-91355-C000



MIDWAY MFG. CO.
 16 BIT TRANSFER BOARD
 FOR
 CCRS
 NO. A082-91355-C000



- NOTES:
- VOLTAGE MAY VARY WITH CONTROL SETTING.
 - LINE VOLTAGE MAINTAINED AT 120VAC, 50/60HZ.
 - 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.
 - 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

REPLACEMENT PARTS LIST

CHASSIS PARTS

CAPACITORS

C101A, B, C, D	45X0558-001	800 µF/125V, 200 µF/100V 200 µF/50V, 20 µF/200V Electrolytic
C102, 103 104	80X0001-000	.001 µF, GMV Z5U Cer. Disc.
★C105	342X5642-049	.56 µF, 400V, 10% Polypropylene
★C106	46X0536-001	.01 µF, 1200V, 5% Polypropylene
C107	80X0099-006	470 pF, Z5F, 10%
C109	342X1044-040	0.1 µF, 400V, 20% Mylar
★C110	46X0540-002	1.0 µF, 630V, 10% Polyester Film
C111	45X0515-032	33 µF, 150V, Electrolytic

CONTROLS

R108, 109	40X0585-091	25k Ohm, Horiz. & Vert. Hold
R116	40X0585-090	250 Ohm, Contrast
R121	40X0585-092	200k Ohm, Brightness

COILS & TRANSFORMERS

★L101	9A2787-001	Coil, Width
★T101	53X0475-001	Transformer, Power
★T102	53X0474-001	Transformer, Flyback

RESISTORS

R101	340X3101-941	100 Ohm, 10%, 1/2W
R102, 115, 120	340X3103-941	10k Ohm, 10%, 1/2W
★R103	340X0181-341	180 Ohm, 10%, 10W, WW
R104	340X3102-931	1k Ohm, 5%, 1/2W
★R105	340X6152-341	1.5k Ohm, 10%, 3W, WW
R106	340X3332-941	3.3k Ohm, 10%, 1/2W
R107	340X3563-941	56k Ohm, 10%, 1/2W
R110	340X3100-941	10 Ohm, 10%, 1/2W
R111	340X3151-941	150 Ohm, 10%, 1/2W
R119	340X3472-941	4.7k Ohm, 10%, 1/2W

SEMICONDUCTORS

D101, 102 103, 104	66X0023-009	Rectifier, Silicon 500V 1N444B
★D105	66X0067-001	Rectifier Varo H1802
★D106	66X0068-001	Diode, Damper MR1-1600
D107	66X0053-001	Diode, 350V Ampere BA148
D108, 109	66X0046-001	Diode, Silicon FDH444
★Q101	86X0117-001	Transistor (NPN) 2N5632 Regulator
Q102	86X0071-001	Transistor (NPN) Reg. Driver MPSA06
★Q103	86X0118-001	Transistor (NPN) BU207 Hor. Output
Q104	86X0065-001	Transistor (NPN) D40N5 Spot Kill

MISCELLANEOUS

★F101	16X0171-001	Fuse Holder
★F102	16X0176-001	Fuse, 1.5 Amp. Slo-Blo 3AG
★	16X0175-001	Fuse, 0.75 Amp. Slo-Blo 3AG
★	13X1201-001	HV Lead & Recept. Assy.
★	28X0789-001	Spring, Dag, Grounding
★	9A2786-001	Deflection Yoke & Clamp
★V101 or ★V101	19VARP4 or 22VATP4	CRT (19V1001) CRT (22V1001)
★	38A5473-000 38A5474-000	2 PDT Small Relay (W/Wires) 6 PDT Large Relay (W/Wires)

★ Product Safety Device

REPLACEMENT PARTS LIST P277 CIRCUIT BOARD ASSY.

CAPACITORS

C202, 221	45X0524-027	47 µF, 50V, Electrolytic
C203, 205, 223, 225	80X0099-057	220 pF, 10%, Z5F, Cer. Disc.
C204	45X0524-053	470 µF, 16V, Electrolytic
C206	45X0524-051	100 µF, 50V, Electrolytic
C207	80X0099-192	.005 µF, 20%, 1KV, Cer. Disc.
C208	80X0099-036	10 pF, 10%, 500V, Cer. Disc.
C209	80X0099-013	330 pF, 10%, 500V, Cer. Disc.
C210	349X4722-109	.0027 µF, 10%, Mylar
C211	45X0524-023	1.0 µF, 15V, Electrolytic
C212	349X3332-109	.033 µF, Mylar
C213	46X0537-002	.01 µF, Poly
C214	46X0537-003	.0082 µF, Poly
C215	349X1032-109	.01 µF, 10%, 100V Mylar
C216, 218, 220, 238, 239	80X0099-076	1000 pF, 10%, 500V, Cer. Disc.
C217	349X1032-209	.01 µF, 10%, 200V, Mylar
C219	45X0524-052	150 µF, 10V, Electrolytic
C222	80X0099-137	680 pF, 10%, 500V, Cer. Disc.
C224	349X6822-109	.0068 µF, 10%, 100V, Mylar
C226, 227	80X0099-056	4700 µF, 10%, 500V, Cer. Disc.
C228	349X4732-109	.047 µF, 10%, 100V, Mylar
C229	349X1044-109	0.1 µF, 20%, 100V, Mylar
C230	45X0515-014	1.0 µF, 50V, Electrolytic
C231	349X1042-109	0.1 µF, 10%, 100V, Mylar
C232	45X0524-026	22 µF, 100V, Electrolytic
C233	349X4742-109	.47 µF, 10%, 100V, Mylar
C234	45X0524-025	250 µF, 100V, Electrolytic
C235	80X0099-006	470 pF, 10%, Z5F, Cer. Disc.
C236	349X2242-109	.22 µF, 10%, 100V, Mylar
C237	46X0540-001	.47 µF, 10%, 630V, Polyester Film

CONTROLS

R206, 256	40X0592-008	5k Ohm, Video Output, Size
R212	40X0585-093	2.5k Ohm, Reg. Adj.
R257, 263	40X0592-004	500k Ohm, Lin 1 & 2
R271	40X0585-094	2M Ohm, Focus

COILS & TRANSFORMERS

★L201	9A2788-001	Horiz. Osc.
★L202	9A2789-001	Horiz. Lin.
★T201	52X0126-001	Horiz. Driver

RESISTORS

R201	340X3102-954	1k Ohm, 20%, 1/2W
R203, 237, 240	340X3563-944	56k Ohm, 10%, 1/2W
★R204	340X3471-944	470 Ohm, 10%, 1/2W
R205, 223, 260	340X4152-843	1.5k Ohm, 10%, 1.0W
R207	340X3332-944	3.3k Ohm, 10%, 1/2W
★R208	340X3472-944	4.7k Ohm, 10%, 1/2W
R209	340X7752-733	7.5k Ohm, 5%, 4.0W
R210	340X3121-944	120 Ohm, 10%, 1/2W
R211, 242, 259	340X3560-944	56 Ohm, 10%, 1/2W
R213	340X3432-934	4300 Ohm, 5%, 1/2W
R214, 255	43X0467-001	Thermistor
R215	340X3512-934	5.1k Ohm, 5%, 1/2W
★R216	340X3153-944	15k Ohm, 10%, 1/2W
R217	340X4154-843	150k Ohm, 10%, 1.0W
R218, 231	340X3335-944	3.3M Ohm, 10%, 1/2W
R219	340X3221-944	220 Ohm, 10%, 1/2W
	340X3222-934	2.2k Ohm, 5%, 1/2W

★ Product Safety Device

RESISTORS (Cont'd.)

R220, 221	340X3184-944	180k Ohm, 10%, 1/2W
R222	340X3473-944	47k Ohm, 10%, 1/2W
R224	340X3104-944	100k Ohm, 10%, 1/2W
R225	340X3682-944	6.8k Ohm, 10%, 1/2W
R226	340X3391-944	390 Ohm, 10%, 1/2W
R227	340X3102-944	1k Ohm, 10%, 1/2W
R228	340X3102-934	1k Ohm, 5%, 1/2W
R229	340X3820-944	82 Ohm, 10%, 1/2W
★R230	340X4102-843	1k Ohm, 10%, 1.0W
R232	340X3152-934	1.5k Ohm, 5%, 1/2W
★R233	340X6152-743	1.5k Ohm, 10%, 3.0W
R234	340X5022-333	2.2 Ohm, 5%, 2.0W
R235	340X3151-944	150 Ohm, 10%, 1/2W
R236	340X3101-944	100 Ohm, 10%, 1/2W
R238, 241	340X3223-944	22k Ohm, 10%, 1/2W
R239	340X3182-944	1.8k Ohm, 10%, 1/2W
R243	340X3151-934	150 Ohm, 5%, 1/2W
R244	340X3680-934	68 Ohm, 5%, 1/2W
R245, 266	340X3330-934	33 Ohm, 5%, 1/2W
R246	340X3273-944	27k Ohm, 10%, 1/2W
R247, 248	340X3153-934	15k Ohm, 5%, 1/2W
R249, 275	340X3103-944	10k Ohm, 10%, 1/2W
R250	340X3822-944	8.2k Ohm, 10%, 1/2W
R251	340X3684-944	680k Ohm, 10%, 1/2W
R252	340X3564-944	560k Ohm, 10%, 1/2W
R253, 276	340X3274-944	270k Ohm, 10%, 1/2W
R254	340X3562-944	5.6k Ohm, 10%, 1/2W
R258	340X3224-944	220k Ohm, 10%, 1/2W
★R261	340X5150-843	15 Ohm, 10%, 2.0W
R262, 264	340X3824-934	820k Ohm, 5%, 1/2W
R265	340X3185-944	1.8M Ohm, 10%, 1/2W
R267, 268	340X3010-934	1 Ohm, 5%, 1/2W
R269	340X4392-843	3.9k Ohm, 10%, 1/2W
R270	340X3471-934	470 Ohm, 5%, 1/2W
R272	340X3475-944	4.7M Ohm, 10%, 1/2W
R273	340X3155-944	1.5M Ohm, 10%, 1/2W
★R274	340X4473-843	47k Ohm, 10%, 1.0W
R277	340X3033-934	3.3 Ohm, 5%, 1/2W

SEMICONDUCTORS

D201, 202, 203, 204, 207, 208	66X0046-001	Diode, Silicon FDH444
D205A, 205B	66X0066-001	Diode, Dual, MSD6102
D206	66X0054-002	Diode, RCA D2102SF
Q201, 205, 206	86X0113-001	Transistor (NPN) 2N3904
Q202, 208	86X0114-001	Transistor (PNP) 2N3906
Q203	86X0071-001	Transistor (NPN)
Q204, 212	86X0071-001	Transistor (NPN) MPSA06
Q207, 211	86X0058-002	Transistor (NPN) MPSA20
Q209	86X0116-001	Transistor Horiz, Driver (NPN) 2N6557
Q210	86X0066-001	Transistor (PNP) MPSA70
Q213	86X0072-001	Transistor (PNP) MPSA56
Q214	86X0073-001	Transistor (NPN) MPSU07
Q215	86X0074-001	Transistor (NPN) 2N5192
Q216	86X0075-001	Transistor (PNP) 2N5195
Q217	86X0070-001	Transistor (P.U.T.) MPU131
ZD201	66X0040-004	Diode, Zener 31V

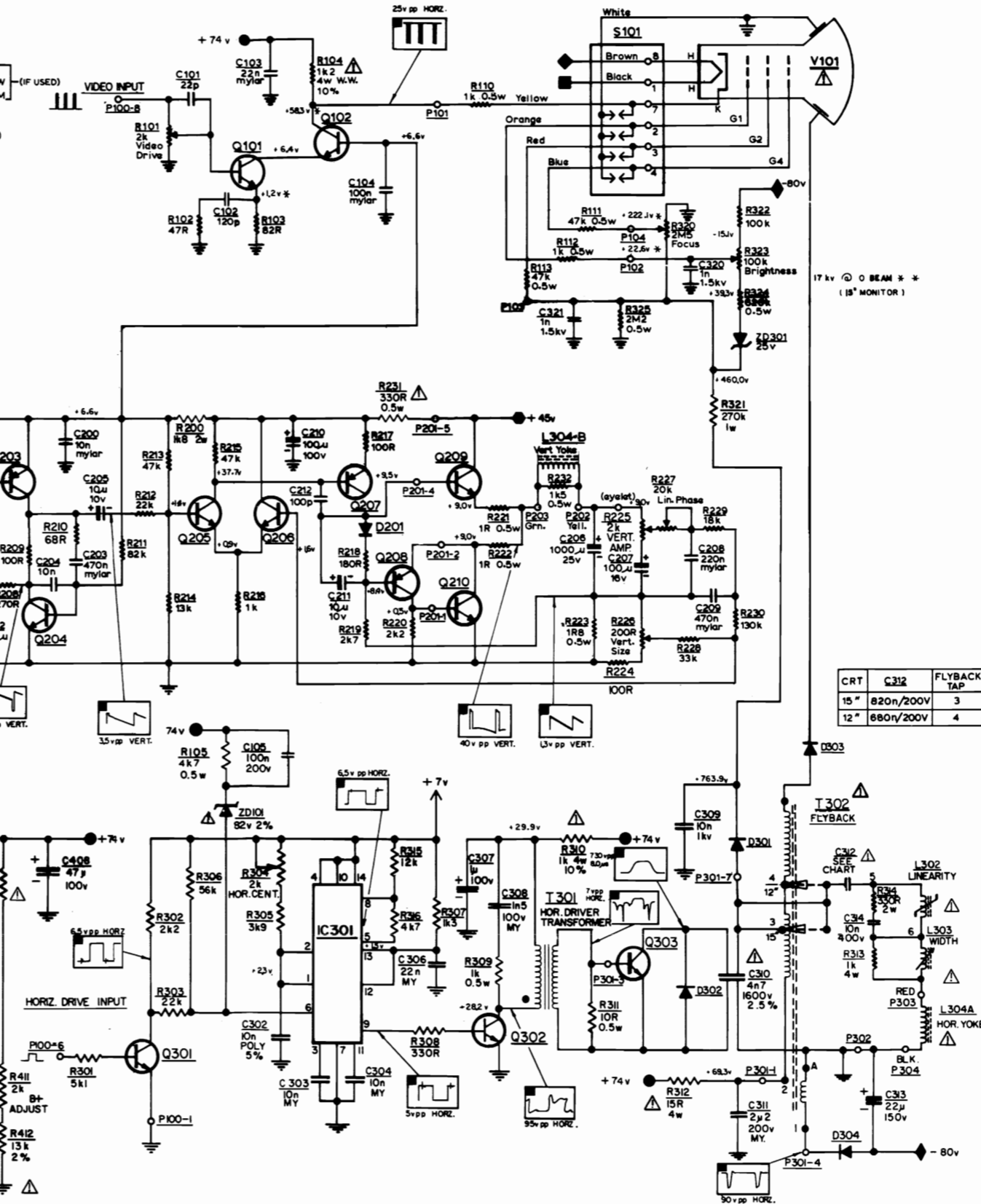
MISCELLANEOUS

38A5395-000	Pix Socket & Connector Assy.
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TRANSISTOR BASES - BOTTOM VIEW											
		A		B		C		D		E	
		E C		E B C		E C B		AN CATH. CATH.		E B C	
SYM	FUNCTION	ELEC. PART No.	JEDEC HOUSE No.	type	SYM	FUNCTION	ELEC. PART No.	JEDEC HOUSE No.	type		
Q101	VIDEO PREAMP	14-802-12	TIS 98	A	IC301	HORIZ DELAY	14-2029-01	MC 3456			
Q102	VIDEO OUTPUT	14-904-12	MPS U10	F	D201	VERT BIAS	14-514-14	IN 914			
Q201	VERTICAL PREAMP	14-802-12	TIS 98	A	D301	FOCUS RECTIFIER	14-514-23	BY184			
Q202	VERT & TRIGGER	14-802-12	TIS 98	A	D302	FLYBACK DAMPER	28-22-25	DG 1			
Q203	MILLER INTEGRATOR	14-808-12	TIS 101	A	D303	EHT RECTIFIER	28-42-01	H1802			
Q204	MILLER INTEGRATOR	14-822-12	TIS 97	A	D304	B- FOCUS SUPPLY	28-22-27	IN 5081			
Q205	DIFFERENTIAL AMP	14-811-32	SPS 5449	B	D401	B+ POWER SUPPLY	28-22-27	IN 5081			
Q206	DIFFERENTIAL AMP	14-802-12	TIS 98	A	D402	B+ POWER SUPPLY	28-22-27	IN 5081			
Q207	VERT DRIVER	14-861-12	S 24615	A	D403	B+ POWER SUPPLY	28-22-27	IN 5081			
Q208	VERT DRIVER	14-861-12	S 24615	A	D404	B+ POWER SUPPLY	28-22-27	IN 5081			
Q209	VERT OUTPUT	14-601-23	SJ 5461	E							
Q210	VERT OUTPUT	14-601-23	SJ 5461	E	ZD101	82V HOLD DOWN ZEN.	14-515-64	DSMB252			
Q301	TRIGGER AMP	14-802-12	TIS 98	A	ZD201	6.2V ZENER B+	14-515-66	IN5234B			
Q302	HORIZ DRIVER	14-904-12	MPSU10	F	ZD301	25V SPOT KILL. ZEN.	14-515-36	IN5669B	D		
Q303	HORIZ OUTPUT	14-601-36	2SC1413	E							
Q401	REGULATOR	14-601-26	2N5240	E	ZD402	5.1V REF. ZENER	14-515-44	IN 751A			
Q402	PRE-REGULATOR	14-823-32	2N5400	B	ZD403	10V REF. ZENER	14-515-45	IN 4740A			
Q403	REG. DRIVER	14-904-12	MPSU10	F							
Q404	ERROR AMP	14-904-12	MPSU10	F							
Q405	CURRENT LIMITER	14-802-12	TIS 98	A							

00-19007-01 Issue 2

V17 SCHEMATIC

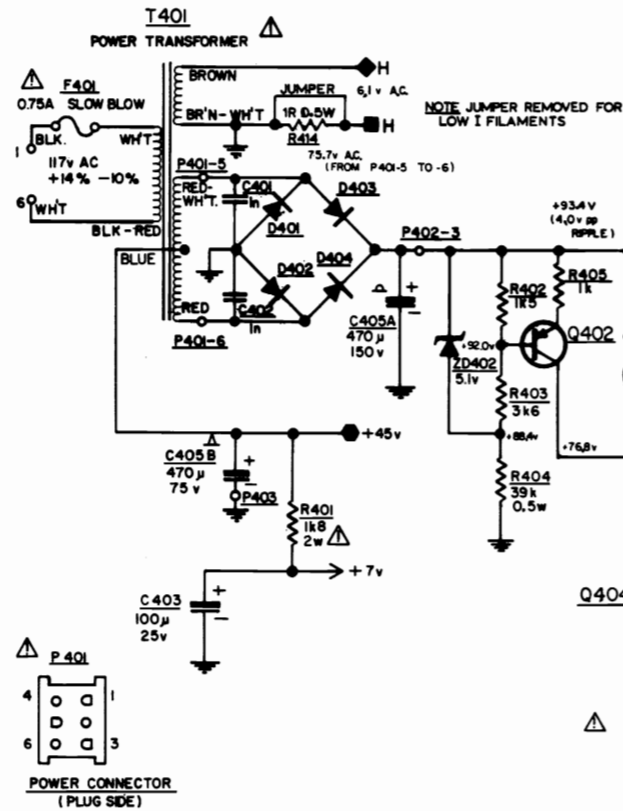


CRT	C312	FLYBACK TAP
15"	820n/200V	3
12"	680n/200V	4

RESISTORS - RESISTANCE IN OHMS, K (KILOHMS), OR M (MEG OHMS)
1/4 WATT, 5% TOLERANCE UNLESS OTHERWISE NOTED.
CAPACITORS - CAPACITY IN P (PICO FARADS), N (NANO FARADS), OR
μ (MICRO FARADS) D.C.W.V. AND TOLERANCE NOTED WHERE CRITICAL.

CAUTION FOR CONTINUED SAFETY REPLACE COMPONENTS INDICATED BY WITH EXACT REPLACEMENT PARTS ONLY. CONSULT SERVICE MANUAL PARTS LIST SECTION "SAFETY COMPONENTS"

* DEPENDS ON CONTROL SETTINGS AND/OR SIGNAL CONDITION.



ELECTROHOME REPLACEMENT PARTS LIST

CHASSIS ASSEMBLY (02-210233-03)*

SYMBOL	DESCRIPTION	PART NO.
Q 209	Vertical Output Transistor, SJ5461	14-601-23
Q 210	Vertical Output Transistor, SJ5461	14-601-23
Q 303	Horizontal Output Transistor, 2SC1413	14-601-36
Q 401	Regulator Power Transistor 2N5840 select.	14-601-26
D 302	Damper Diode, DG1	28-22-25
D 303	HV Rectifier 30KV, H1802	28-42-01
F 401	.75A 125V Fuse	27-5-28
L 101	10MH Coil	21-1400-06
L 302	Linearity Coil	21-1428-01
L 303	Width Coil	21-1427-01
L 304	Deflection Yoke	21-244-01
T 302	Flyback Transformer	21-243-01
T 401	Power Transformer	24-10197-03
SW 401	Line Switch	26-230-01
	Heat-shrinkable Sleeving, .187 ID	20-300013-04
	Heat-shrinkable Sleeving, .750 ID	20-300013-08
	Cable Tie	33-523-01
	Clip - PCB Support	33-629-01
	Fuse Holder	34-198-01
	CRT Socket	34-213-11
TS1, 2	Terminal Strip, Fire Retardant	34-491-03
	Transistor Socket	34-515-03
P 201	Connector Housing	34-549-05
P 402	Connector Housing	34-549-06
P 301	Connector Housing	34-549-07
	Crimp Terminal	34-550-01
	Anode connector with spring	34-678-01
P 401	Power connector housing	34-677-06
	Pin Terminal	34-676-21
	Transistor Cover	39-1151-01
C 405	Electrolytic 470, 470 uF/150, 75v	44-202-37
C 314	10 NF 400v capacitor	48-121034-01
C 312	820 NF 200v capacitor	49-19-26

MONITOR PCB ASSEMBLY

SYMBOL	DESCRIPTION	PART NO.
D 201	Signal Diode, 1N914	14-514-14
D 301	Signal Diode, 1800 Piv, BY 184	14-514-23
D 304, 401, 402, 403, 404	Rectifier 1A 600v, 1N5061	28-22-27
ZD 101	82v 2% Zener Diode, 0.5M82ZS2	14-515-64
ZD 201	6.2v Zener Diode, 1N5234B	14-515-66
ZD 301	25v 5% Zener Diode, 1N5869B	14-515-36
ZD 402	5.1v 5% Zener Diode, 1N751A	14-515-44
ZD 403	10v 5% Zener Diode, 1N4740A	14-515-45
Q 101	Small Signal Transistor, MPS 6514	14-800-32
Q 201, 202, 206, 301 405	Small Signal Transistor, T1S98	14-802-12
Q 203	Small Signal Transistor, T1S101	14-808-12
Q 205	Small Signal Transistor, SPS5449	14-811-32
Q 204	Small Signal Transistor, T1S97	14-822-12
Q 402	Small Signal Transistor, 2N5400	14-823-32
Q 207, 208	Small Signal Transistor, S24615	14-861-12
Q 102, 302, 403, 404	Plastic Power Transistor, MPSU10	14-904-12
IC 301	Double one-shot IC, MC3456	14-2029-01
T 301	Horizontal Buffer Transformer	24-170001-04
R 304	Cermet Trim Pot 2K	41-328-01
R 226	Carbon Trim Pot 200R	41-299-16
R 205, 225, 411	Carbon Trim Pot 2K	41-299-12
R 227	Carbon Trim Pot 20K	41-299-01
R 320, 323	Carbon Trim Pot 2M5	41-299-07
R 408	Critical Safety Resistor, 3R3 5% 2W	42-63-54
R 312	15R 4W 10% Resistor	42-111501-03
R 310	1K 4W 10% Resistor	42-111021-03
R 104	1K2 4W 10% Resistor	42-111221-03
C 307	1uF 100v Electrolytic	44-310508-01
C 205, 211	10 uF 10v Electrolytic	44-310002-01
C 313	22 uF 150v Electrolytic	44-322009-05

SYMBOL	DESCRIPTION	PART NO.
C 408	47 uF 100v Electrolytic	44-347008-08
C 403	100 uF 25v Electrolytic	44-310104-04
C 207	100 uF 16v Electrolytic	44-310103-12
C 210	100 uF 100v Electrolytic	44-310108-06
C 202	470 uF 10V Electrolytic	44-347102-04
C 206	1000 uF 25v Electrolytic	44-310204-10
C 212	100 pF 25p 10% 50v Capacitor	46-310113-51
C 102	120pF 5% Mica Capacitor	47-41215-05
C 204	10NF 10% Polypropelene Capacitor	48-131031-11
C 406	68pF 10% 500v Capacitor	46-368013-02
C 401, 402	1NF 10% 25P 500v Capacitor	46-310213-06
C 320, 321	1NF 20% 25V 1500v Capacitor	46-510228-74
C 309	10NF 1Kv Capacitor	46-510311-37
C 308	1.5NF 100v Mylar Capacitor	48-171521-22
C 200, 303, 304, 201	10NF 10% 200v Mylar Capacitor	48-171032-22
C 103, 306	22NF 10% 200v Mylar Capacitor	48-172232-22
C 104, 105	100NF 10% 200v Mylar Capacitor	48-171042-22
C 208	220NF 10% 200v Mylar Capacitor	48-172242-22
C 203, 209	470NF 10% 200v Mylar Capacitor	48-174742-22
C 311	2.2 uF 20% 200v Mylar Capacitor	48-172252-51
C 302	10NF 5% Polypropelene Capacitor	48-181032-04
	Monitor P.C.B. (less components)	50-1568-01

SAFETY COMPONENTS

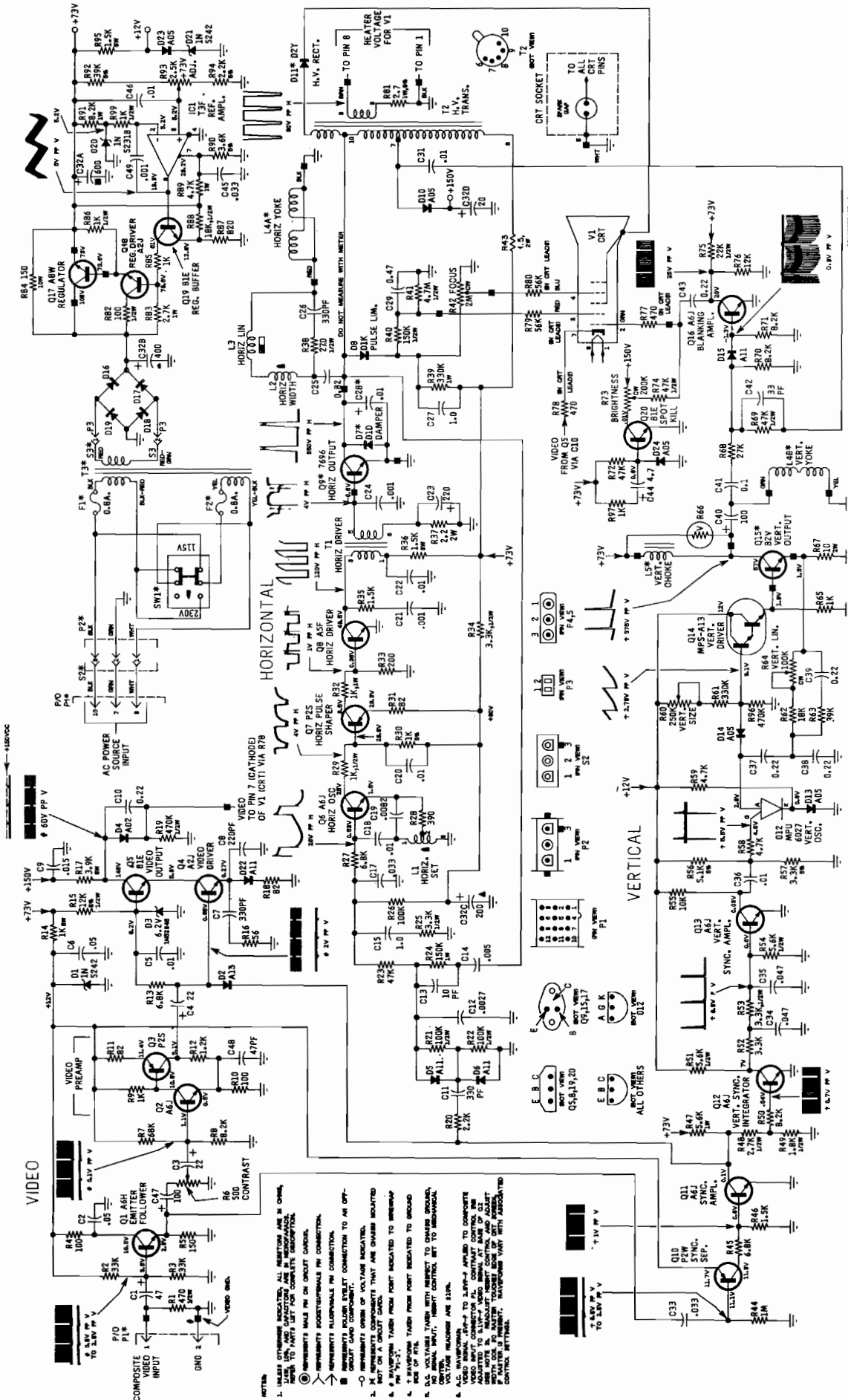
For continued reliability and safety, the following components should be replaced with Electrohome parts:

V 101	Picture tube, 15"	17-6152-03 or-04
R 104	1K2 4W Wirewound Resistor	42-111221-03
ZD 101	82v 2% Zener Diode	14-515-64
R 231	330R .5W 5% Carbon Comp. Res.	40-223315-13
R 310	1K 4W Wirewound Resistor	42-111021-03
R 312	15R 4W Wirewound Resistor	42-111501-03
C 310	4N7 1600v Critical Safety Cap.	49-24-06
T 302	Flyback Transformer	21-243-01
L 304	Deflection Yoke	21-244-01
F 401	.75A 125v slow-blow Fuse	27-5-28
T 401	Power Transformer	24-10197-03
SW 401	Line Switch	26-230-01
R 401	1K8 2W 5% Resistor	40-621825-01
R 408	3R3 2W 5% Resistor	42-63-54

All safety components are marked with  on the schematic.

* Not a replacement or stock item

POWER SUPPLY



- NOTES:**
1. USE THE FOLLOWING INDICATORS: ALL RESISTORS ARE IN OHMS, UNLESS OTHERWISE SPECIFIED. ALL CAPACITORS ARE IN MICROFARADS, UNLESS OTHERWISE SPECIFIED.
 2. RESISTORS WITH A LETTER AND A NUMBER ARE TO BE USED IN THE FOLLOWING MANNER: LETTER FOR COMPLETE DESCRIPTION, NUMBER FOR PARTS LIST FOR COMPLETE DESCRIPTION.
 3. RESISTORS WITH A LETTER AND A NUMBER ARE TO BE USED IN THE FOLLOWING MANNER: LETTER FOR COMPLETE DESCRIPTION, NUMBER FOR PARTS LIST FOR COMPLETE DESCRIPTION.
 4. RESISTORS WITH A LETTER AND A NUMBER ARE TO BE USED IN THE FOLLOWING MANNER: LETTER FOR COMPLETE DESCRIPTION, NUMBER FOR PARTS LIST FOR COMPLETE DESCRIPTION.
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 6. RESISTORS WITH A LETTER AND A NUMBER ARE TO BE USED IN THE FOLLOWING MANNER: LETTER FOR COMPLETE DESCRIPTION, NUMBER FOR PARTS LIST FOR COMPLETE DESCRIPTION.
 7. RESISTORS WITH A LETTER AND A NUMBER ARE TO BE USED IN THE FOLLOWING MANNER: LETTER FOR COMPLETE DESCRIPTION, NUMBER FOR PARTS LIST FOR COMPLETE DESCRIPTION.
 8. RESISTORS WITH A LETTER AND A NUMBER ARE TO BE USED IN THE FOLLOWING MANNER: LETTER FOR COMPLETE DESCRIPTION, NUMBER FOR PARTS LIST FOR COMPLETE DESCRIPTION.
 9. RESISTORS WITH A LETTER AND A NUMBER ARE TO BE USED IN THE FOLLOWING MANNER: LETTER FOR COMPLETE DESCRIPTION, NUMBER FOR PARTS LIST FOR COMPLETE DESCRIPTION.
 10. RESISTORS WITH A LETTER AND A NUMBER ARE TO BE USED IN THE FOLLOWING MANNER: LETTER FOR COMPLETE DESCRIPTION, NUMBER FOR PARTS LIST FOR COMPLETE DESCRIPTION.

M5000-155, M7000-155 -- Diagram Schematic

REPLACEMENT PARTS LIST

VP12

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
ELECTRICAL PARTS			COILS & CHOKES		
	1Y25017A01	MONITOR PANEL: complete; KT364LM	L-1	24D68822A08	HORIZ SET
	1Y25017A02	POWER, Audio Panel: complete; KT365LM	L-2	24D68801A67	COMPENSATING: 2000 uh
CAPACITORS			L-3	24D69163A18	HORIZ LINEARITY
C-1	23C65282A41	50 mf 50V Lytic	L-4	24V25000A74	HORIZ WIDTH: incl's C42 & R68
C-2	23C65282A41	50 mf 50V Lytic	L-5	24D68523A15	DEFLECTION YOKE
C-3	21S180D10	220 pf 20% 100V X5F (Use 21R132503)	TRANSISTORS		
C-4	23C65282A41	50 mf 50V Lytic	Q-1	48S137171	1st VIDEO: A6H
C-5	21S180B98	180 pf 10% 500V X5F	Q-2	48S137127	2nd VIDEO: P2S
C-6	23S10255A78	470 mf 16V Lytic	Q-3	48S134919	VIDEO OUTPUT: A1M
C-7	21S180C01	680 pf 10% 500V X5F	Q-4	48S137317	VIDEO DRIVER: A8H
C-8	21S180B85	560 pf 10% 500V X5F	Q-5	48S137115	SYNC SEPERATOR: A5U
C-10	8S10191B67	.22 mf 10% 250V Polyester	Q-6	48S137172	HORIZ OSCILLATOR: A6J
C-11	8S10191A54	.0068 mf 10% 160V Polyester	Q-7	48S137127	HORIZ PULSE SHAPER: P2S
C-12	21S180D10	220 pf 20% 100V X5F (Use 21R132503)	Q-8	48S137093	HORIZ DRIVER: A5F
C-13	21S131625	330 pf 10% X5F	Q-9	48S137203	HORIZ OUTPUT: A6Z
C-15	21S180C41	.0027 mf 10% 500V Z5F (Use 21K121699)	Q-10	48S137173	VERT OSCILLATOR (1): P2W
C-16	23S10229A07	1.0 mf +40-20% 15V Lytic (Use 23C43280A17)	Q-11	48S137171	VERT OSCILLATOR (2): A6H
C-17	8S10191B90	.033 mf 10% 160V Polyester	Q-12	48S137115	VERT DRIVER: A5U
C-18	8S10299A73	.01 mf 10% 100V Poly carb	Q-13	48S134900	VERT OUTPUT: A1C
C-19	8S10299A74	.0082 mf 10% 160V Poly carb	Q-14	48S134952	REGULATOR DRIVER: A2J
C-20	8S10191B98	.01 mf 10% 250V Polyester	Q-15	48S137315	REFERENCE AMP: A8G
C-21	21S180B51	.001 mf 10% 500V X5F	Q-16	48S137368	REGULATOR: A8W
C-22	8S10191B98	.01 mf 10% 160V Polyester	Q-17	48S137172	AUDIO DRIVER: A6J
C-23	21S180C02	10 pf 10% N150	Q-18	48S137168	AUDIO OUTPUT: P2V
C-24	23D65282A40	150 mf 10V Lytic	Q-19	48S137169	5V REGULATOR, Driver: A6G
C-25	21S180B51	.001 mf 10% 500V X5F	Q-20	48S137344	5V REGULATOR: A8U
C-26	8S10212B53	.47 mf 10% 630V Mtiz Poly	Q-21	48S137476	SPOT KILLER: B1E
C-27	8S10212A11	1.0 mf 10% 630V Mtiz Poly	CONTROLS		
C-28	8S10571A06	.01 mf 5% 1200V Poly Prop Foil	R-5	18D68222A34	CONTRAST: 250 Ohm
C-29	8S10571A23	.56 mf 10% 250V Mtiz Prop Foil	R-10	18D66401A44	VIDEO BIAS: 4K
C-30	8S10191A32	.047 mf 10% 250V Polyester	R-17	18D67858A12	FOCUS: 2 meg
C-31	21S180B87	220 pf 10% 500V X5F	R-21	18D68222A35	BRIGHTNESS: 200K
C-32	21S180D34	.005 mf 20% 1KV Z5F (Use 21S180D31)	R-34	18D68222A37	HORIZ HOLD: 25K
C-33	8S10212A69	.47 mf 10% 100V Mtiz Poly	R-59	18D66401A44	VERT LINEARITY: 4K
C-34	8S10191A32	.047 10% 250V Polyester	R-65	17D65820A38	VERT SIZE: 15 Ohm
C-35	8S10191B98	.01 mf 10% 250V Polyester	R-74	17D65820A37	REGULATOR ADJUST: 2K
C-36	23S10255A69	4.7 mf 100V Lytic	R-82	18D68222A36	VERT HOLD: 3K
C-37	8S10212A20	2.2 mf 10% 100V Mtiz Poly	R-85	18D68222A34	VOLUME: 250 Ohm
C-38	8S10212A20	2.2 mf 10% 100V Mtiz Poly	RESISTORS		
C-39	8S10191B67	.22 mf 10% 250V Polyester	R-1	6S127633	470 10% 1/2W
C-40	8S10212A10	1.0 mf 10% 100V Mtiz Poly (Use 8S10191A46)	R-2	6S125568	22K 10% 1/2W
C-41	8S10064A06	.01 mf 10% 600V Mylar	R-3	6S127541	56K 10% 1/2W
C-42	21S180A71	470 pf 10% 500V X5F	R-4	6S127633	470 10% 1/2W
C-43	23C65807A47	400 mf/125V; 600 mf/50V; 20 mf/200V Lytic	R-6	6S128955	1500 10% 1W
C-44	21S180E60	.01 mf +80-20% 50V Z5V	R-7	6S121847	4700 10% 1/2W
C-47	23C65807A52	5000 mf 20V Lytic	R-8	6S122445	1800 10% 1/2W
C-49	23S10255A31	470 mf 40V Lytic	R-9	6S119926	2700 10% 1/2W
C-50	23D65282A41	50 mf 50V Lytic	R-11	6S128226	120 10% 1/2W
C-51	23S10255B43	40 mf 100V Lytic	R-12	6S127633	470 10% 1/2W
DIODES & RECTIFIERS			R-13	17S10731A02	7500 5% 5W WW
D-1	48S134921	DIODE, Silicon: D1D; Damper	R-14	6S124797	150 10% 1/2W
D-2	48S134978	DIODE, Silicon: D1K; Pulse Limiter	R-15	6S127516	82 10% 1/2W
D-3	48D67120A11	DIODE, Low Power	R-18	-----	Part of CRT socket assembly
D-4	48S137114	RECTIFIER, H. V.: Silicon: D2Y	R-19	-----	Part of CRT socket assembly
D-5	48S191A05	RECTIFIER, Silicon: 91A05 (Use 48S191A07)	R-20	-----	Part of CRT socket assembly
D-6	48S137469	DIODE, Silicon: zener; D7G	R-22	6S129296	270K 10% 1/2W
D-7	48S134917	DIODE, Dual: D1C; Detector	R-23	6S10053C67	27K 5% 1/2W
D-8	48S67120A11	DIODE, Low Power	R-24	6S127538	3.3 meg 10% 1/2W
D-9	48S191A10	RECTIFIER, Silicon: 91A10	R-25	6S121300	27K 10% 1/2W
D-10	48S191A10	RECTIFIER, Silicon: 91A10	R-26	6S127541	56K 10% 1/2W
D-11	48S101A10	RECTIFIER, Silicon: 91A10	R-27	6S129875	2200 10% 1/2W
D-12	48S191A10	RECTIFIER, Silicon: 91A10	R-28	6S125531	180K 10% 1/2W
D-13	48D67120A11	DIODE, Low Power	R-29	6S125531	180K 10% 1/2W
D-14	48S191A05	RECTIFIER, Silicon: 91A05 (Use 48S191A07)	R-30	6S125892	47K 10% 1/2W
D-15	48S191A05	RECTIFIER, Silicon: 91A05 (Use 48S191A07)	R-31	6S125534	100K 10% 1/2W
D-16	48S191A05	RECTIFIER, Silicon: 91A05 (Use 48S191A07)	R-32	6S124506	3300 10% 1/2W
D-17	48S191A05	RECTIFIER, Silicon: 91A05 (Use 48S191A07)	R-33	6S10053C53	6800 5% 1/2W
D-18	48S191A05	RECTIFIER, Silicon: 91A05 (Use 48S191A07)	R-35	6S127541	56K 10% 1/2W
D-19	48D67120A11	DIODE, Low Power	R-36	6S125545	390 10% 1/2W
D-20	48S10641D43	DIODE, Silicon: D4.3	R-37	6S121301	1000 10% 1/2W
D-21	48D67120A11	DIODE, Low Power	R-38	6S10053C33	1000 5% 1/2W
D-22	48S191A05	RECTIFIER, Silicon: 91A05 (Use 48S191A07)	R-39	6S127516	82 10% 1/2W
D-23	48S191A05	RECTIFIER Silicon: 91A05 (Use 48S191A07)	R-40	6S127547	1000 10% 1W
FUSES			R-41	6S127099	220 10% 1/2W
F-1	65S139424	FUSE: 1A-250V	R-42	6S127513	1500 10% 1/2W
F-2	65S139424	FUSE: 1A-250V	R-43	17S10130B07	1500 10% 3W fxd mtl film
INTEGRATED CIRCUITS			R-44	17S744356	2.2 10% 2W WW
IC-1	51S10732A01	INTEGRATED CIRCUIT: T3F	R-45	6S120141	150K 10% 1W
			R-46	6S127634	33K 10% 1W
			R-47	6S128229	680K 10% 1/2W
			R-48	6S10053D21	4.7 meg 10% 1/2W
			R-49	6S124797	150 10% 1/2W
			R-50	6S10053C45	3300 5% 1/2W
			R-52	6S124506	3300 10% 1/2W
			R-53	6S129874	68 10% 1/2W
			R-54	6S131972	39 10% 1/2W
			R-55	6S10053C65	22K 5% 1/2W
			R-56	6S125535	39K 10% 1/2W
			R-57	6S124506	3300 10% 1/2W
			R-58	6S129793	82K 5% 1/2W
			R-60	6S129875	2200 10% 1/2W
			R-61	6S10053F29	820 10% 1W
			R-62	6S127515	3900 10% 1/2W

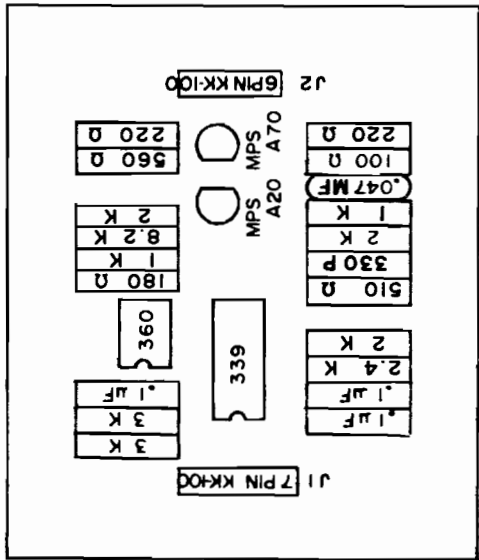
REPLACEMENT PARTS LIST

REF. NO.	PART NUMBER	DESCRIPTION	REF. NO.	PART NUMBER	DESCRIPTION
R-63	6S121301	1000 10% 1/2W			
R-64	17S10130C91	10 10% 1/2W (special)	E-1	50V25008A22 65S139451	SPEAKER: 4" PM; incl: D22 LAMP: No. 1436
R-66	6S129064	4700 10% 1W			
R-67	6S122848	18K 10% 1/2W			
R-68	6S124797	150 10% 1/2W			
R-69	17S647132	1200 10% 5W WW (Use 17S136197)			
R-71	6S119926	2700 10% 1/2W			
R-72	6S124551	15K 10% 1/2W		9D66133A28	CAP, SS Rect (HV Transformer -- PRI/SEC lead)
R-73	6S129875	2200 10% 1/2W		42B25158A01 31D70080B04	CLAMP, Metal : Defl Yoke Mtg CONNECTOR, PC panel: 9 contact; on chassis
R-75	6S121301	1000 10% 1/2W			
R-76	6S124506	3300 10% 1/2W	S-2	*15S10390A06	CONNECTOR, PC panel: 12 contact; less key and contacts (power-audio panel)
R-77	6S129221	100 10% 1/2W	P-1	*15S10183A69	CONNECTOR, Plug: 12 contact; less contacts (power)
R-78	6S127005	5600 10% 1/2W			
R-79	17S135589	150 10% 10W WW			
R-81	6C66263A08	VARISTOR (Use 6S66263A16)			
R-86	6S127099	220 10% 1/2W			
R-88	6S121301	1000 10% 1/2W			
R-89	---	Part of CRT Socket		*39S10184A63	CONTACT, Plug: for power connector 15S10183A69
R-90	6S131412	56 10% 1/2W		39S10184A22 15S10630A01	CONTACT: for S2 connector COVER, nylon: slide switch; SW1
R-91	6S10053C39	1800 5% 1/2W		*7S10609A03	GROMMET, Plastic: PC panel mtg
R-92	6S10053C57	10K 5% 1/2W		26C66745A05	HEAT SINK: Q3
R-95	6S125568	22K 10% 1/2W		*26C25198A01	HEAT SINK: Q20
R-96	6S125568	22K 10% 1/2W		9C66238A02 14A562353	HOLDER, Fuse: F1 & F2 INSULATOR, Mica: Transistor socket; Q9, Q13, Q16 & Q20 (Use 14A543B10)
R-97	6S121847	4700 10% 1/2W		28S10733A01 2S7051	KEY, Plug: for S2 connector NUT, hex: 3/8-32; control mtg
R-98	6S127099	220 10% 1/2W		5S10281A03 47C66082A03 3S136050	RIVET, drive pin: nylon; HV transf mtg ROD, Adjustment: width coil; L4 SCREW, tpg: 6-20 x 1/2 clu pan hd; Q9, Q13, Q16 & Q20
R-99	6S128226	120 10% 1/2W		9S10143A41 9D67555V27 *9D25201A01	SOCKET, lamp: E1 SOCKET, CRT: incl: leads & resistors SOCKET, HV Rectifier (4): complete; incl: 2nd anode lead & cup
				9C63825A01 9C63825A02 41D65987A01 66P65173A47	SOCKET, transistor: Q9, Q13, Q16 SOCKET, transistor: Q20 SPRING, special: CRT aquadag grnd TOOL, contact removal (S2 connector)
SWITCHES					
SW-1	40S10624A01	SWITCH, Slide: DPDT (115V--230V)			
TRANSFORMERS					
T-1	25D67440A03	HORIZ DRIVER			
T-2	24D69791A21	H. V. TRANSFORMER: complete			
T-3	25D65840A22	VERT OUTPUT (Use 25D65840B23)			
T-4	*25D68164A31	POWER			
MISCELLANEOUS ELECTRICAL PARTS					
V-1	20WP4 23JEP4	CRT (XM501-10 19VP111) CRT (XM701-10 23VP111)			

MECHANICAL PARTS

* DENOTES NEW ITEM APPEARING ON ANY LIST FOR FIRST TIME.

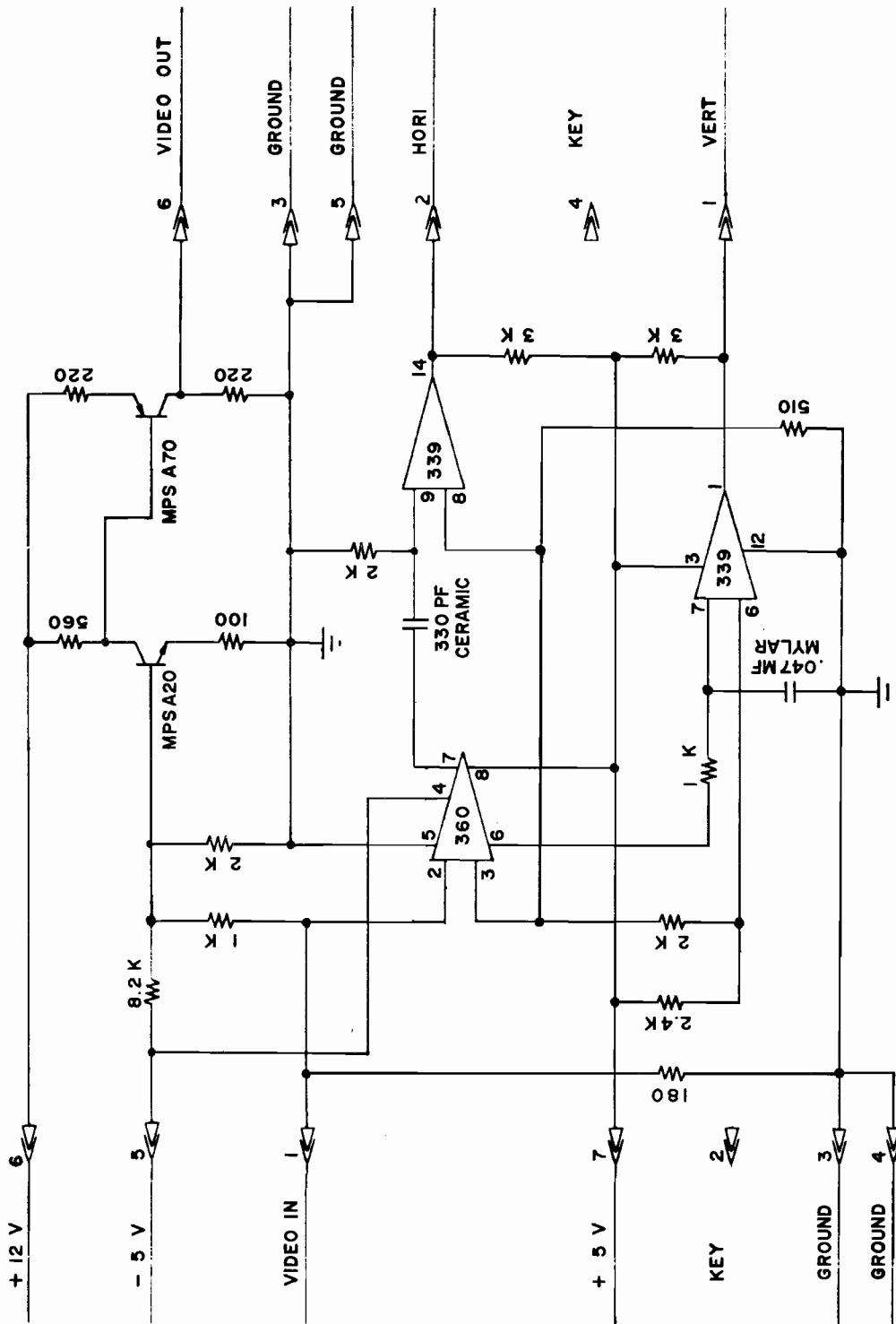
MOTOROLA PARTS DEPT.
MOTOROLA INC.
1155 HARVESTER RD.
WEST CHICAGO, IL 60185
PHONE (312) 231-4400



DRAWING NO. M05I-00087-B007

COMPONENT DRAWING
CCR INT 15" ELECTRO MNTR

A082-9 | 373-B000



MO51-00087-A008

NOTE: RESISTOR UNIT OHM

SCHEMATIC DIAGRAM
CCR INT 15" ELECTRO MNTR

A082-91373-B000

SPACE ZAP LOGIC BOARDS

GAME BOARD PC A084-90708-A902

CHIP NUMBER	FUNCTION
74LS02	Quad 2 input Nor
74LS08	Quad 2 input And
74LS32	Quad 2 input Or
74LS74	Dual "D" Flip-Flop
74LS133	13 input Nand
74LS138	3 to 8 line decoder
74LS139	Dual 2 to 4 line decoder
MC14078	8 input Nor
MC14174	Hex "D" Flip-Flop
2114	RAM
2716-8516	PROM 16K
9316	ROM 16K
2720-(0066-117)	I & O custom chip

Additional Devices:

TIP110	NPN transistor
2N4401	NPN transistor
2N4403	PNP transistor
IN4004	Diode

CPU BOARD (PC A082-91354-D000)

CHIP NUMBER	FUNCTION
74LS00	Quad 2 input Nand
74LS02	Quad 2 input Nor
74LS04	Hex inverter
74LS08	Quad 2 input And
74LS10	Triple 3 input Nand
74LS20	Dual 4 input Nand
74LS74	Dual "D" Flip-Flop
74LS157	Quad 2 input multiplexer
74LS174	Hex "D" Flip-Flop
74LS175	Quad "D" Flip-Flop
Z80	CPU
2719-(0066-115)	Address custom chip
2721-(0066-116)	Data custom chip
74LS245	Octal bus transceiver
74LS257	Quad 2 input multiplexer
74S74	Dual "D" Flip-Flop
7416	Hex buffer
MC14024	7 stage ripple counter

Additional Devices:

2N4401	NPN transistor
T1S-137	PNP transistor
IN4004	Diode
IN4148	Diode
14.31818	Crystal
47 Ω	Resistor
82 Ω	Resistor
220 Ω	Resistor
510 Ω	Resistor
680 Ω	Resistor
1K Ω	Resistor

CHIP NUMBER	FUNCTION
2.2K Ω	Resistor
10K Ω	Resistor
11K Ω	Resistor
22K Ω	Resistor
27 pfd	Capacitor
100 pfd	Capacitor
270 pfd	Capacitor
0.1 μ fd	Capacitor
15 μ fd	Capacitor
220-AG39D	IC Socket
240-AG39D	IC Socket
THM-6032B	Thermalloy Heatsink

PATTERN BOARD (PC A082-91355-C000)

CHIP NUMBER	FUNCTION
74LS00	Quad 2 input Nand
74LS04	Hex inverter
74LS74	Dual "D" Flip-Flop
74LS157	Quad 2 input multiplexer
74LS161	4 bit binary counter
74LS175	Quad "D" Flip-Flop
74LS257	Quad 2 input multiplexer
74LS367	Hex bus driver
CD4555	Dual binary 1 or 4 decoder
MC14008	4 bit full adder
MC14013	Dual "D" Flip-Flop
MC14068	8 input Nand
MC14174	Hex "D" Flip-Flop
MC14175	Quad "D" Flip-Flop
MC14516	Binary up/down counter
MC14539	Dual 4 input multiplexer
MC14572	Multiple gate package

RAM BOARD (PC A082-91356-C000)

CHIP NUMBER	FUNCTION
74LS08	Quad input And
74LS14	Hex schmitt trigger
74LS166	Parallel to serial shift register
74LS253	Dual 4 input multiplexer
MK4027 (MK4015)	RAM

Additional Devices:

110 Ω	Resistor
220 Ω	Resistor
1K Ω	Resistor
0.1 μ fd	Capacitor
15 μ fd	Capacitor

**AUDIO AMPLIFIER BOARD
(PC A082-90903-A000)**

CHIP NUMBER	FUNCTION
2N4403	PNP transistor
TIP 31	NPN transistor
IN4004	Diode

POWER SUPPLY (PC A082-90411-A000)

CHIP NUMBER	FUNCTION
LM317	Voltage regulator
LM339	Quad voltage comparator
SG3532	General purpose regulator

Additional Devices:

79M05	Negative five voltage regulator
IN3235	Zener diode
2N3055	NPN transistor

**MONITOR INTERFACE BOARD
(PC A082-91373-B000)**

CHIP NUMBER	FUNCTION
LM339	Quad voltage comparator
LM360	Differential comparator

Additional Devices:

MPS AZ0	Transistor
MPS A70	Transistor

NOTE: When an IC is a LS, it should be replaced by a LS device (low schottky).

STRAPPING CHART

	JU1	JU2	JU3	JU4	JU5	JU6	JU7	JU8	JU9
Single + 5 Volt 2716 EPROM	X			X		X		X	
2316E ROM		X		X		X		X	
2332 ROM		X			X		X	X	
2364 ROM			X		X		X		X

	JU10	JU11
UPRIGHT CABINET	X	
COCKTAIL		X

	JU12	JU13
U8, U9, U10 are 74LS08	X	
U8, U9, U10 are 74LS32		X

NOTES

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