



Parts and Operating Manual



Bally

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Telex No.: 72-1596

WARNING

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

WARNING: This equipment generates, uses, and can radiate radio frequency energy and if not used in accordance with the instructions manual, may cause interference to radio communications. It has been tested and found to comply with the limits for a CLASS A computing device pursuant to SUBPART J of PART 15 of FCC RULES, which are designed to provide reasonable protection against such interference when operated in a commercial environment. 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.

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 CHOCS 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.

***Bally*/MIDWAY**
T.M.

Invites You To Use

**OUR TOLL FREE NUMBERS FOR
SERVICE INFORMATION CONCERNING THIS GAME, OR ANY
OTHER BALLY/MIDWAY™ GAME YOU NOW HAVE ON LOCATION.**

**CALL US FOR PROMPT, COURTEOUS
ANSWERS TO YOUR PROBLEMS.**

**Continental U.S. 800-323-7182
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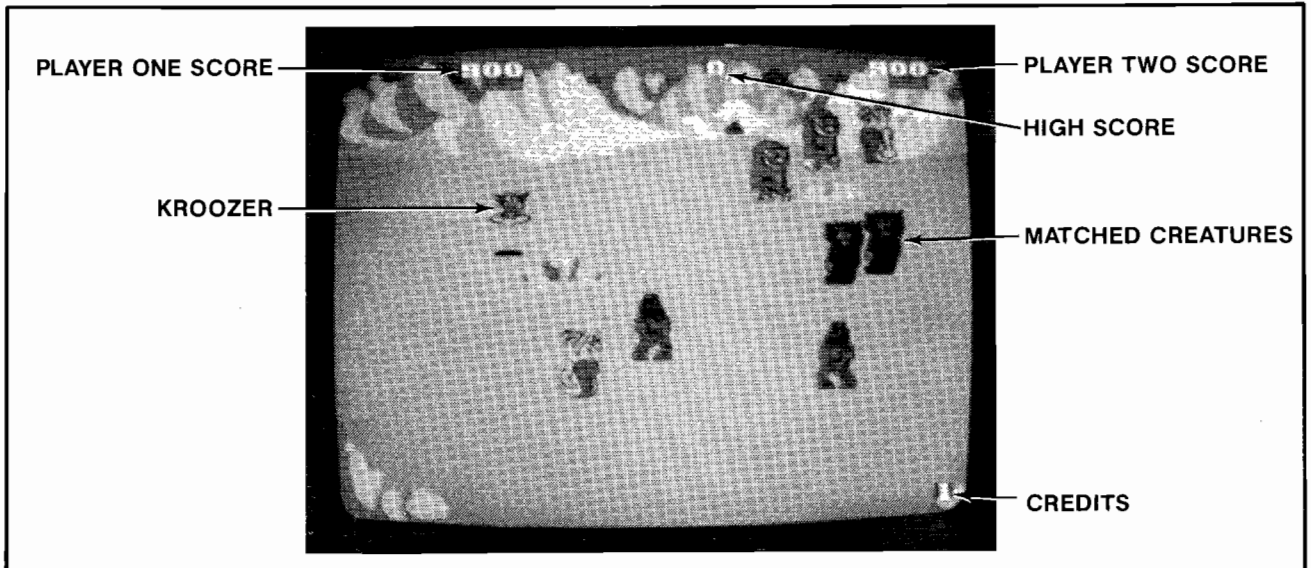
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Wacko

I. Game Operation



Identification of "On-Screen" Graphics During Play

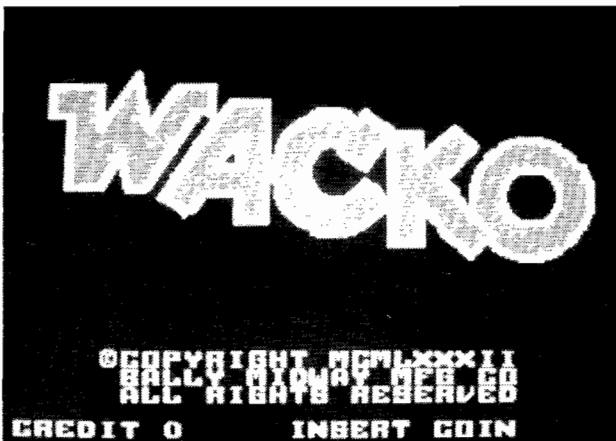
ATTRACT MODE

1. The Attract mode starts:

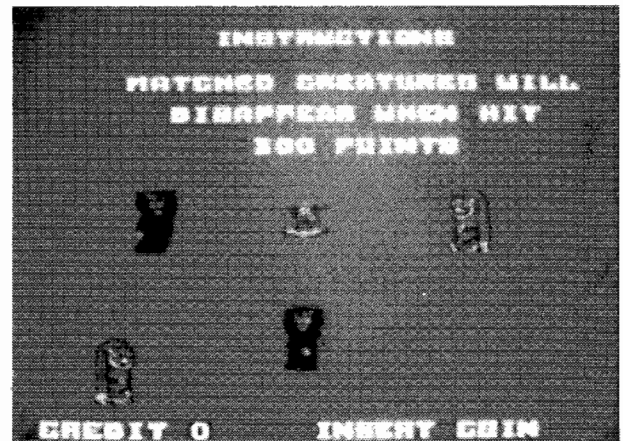
- Just after power has been turned on to the game. (Self-Test switch is in the "OFF" position.)
- After a Self-test has been completed and there are no more credits left in the game's memory.
- After a play has been finished, the score was not high enough to put the game into the High

Score/Initial mode, and there are no more credits left in the game's memory.

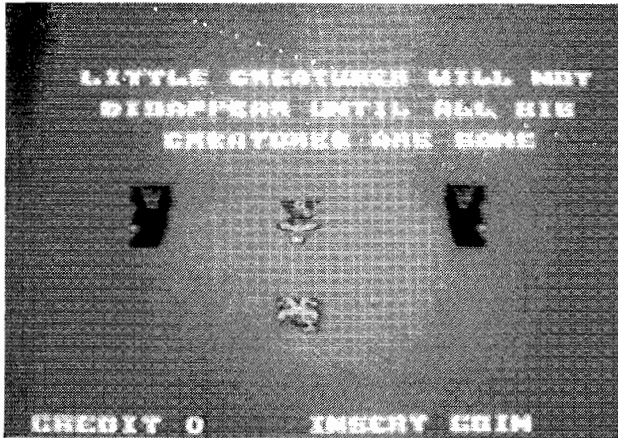
- After the High Score/Initial mode when there are no more credits left in its memory.
- In the Attract mode, the game will give the following displays **centered** on the monitor screen:



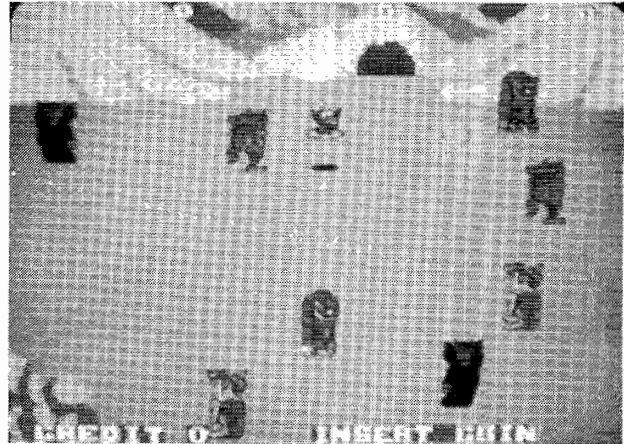
Attract Mode Display 1



Attract Mode Display 2



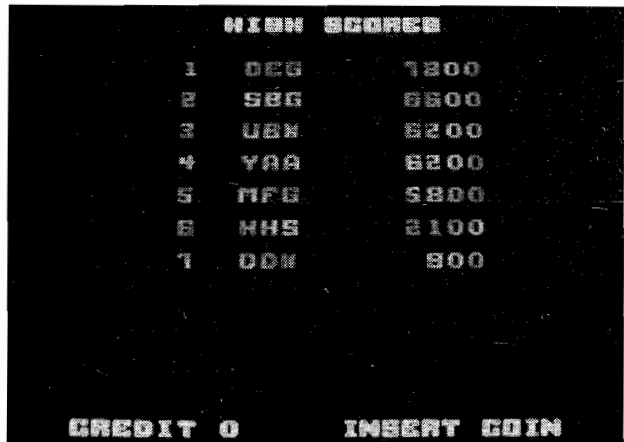
Attract Mode Display 3



Attract Mode Display 5



Attract Mode Display 4



Attract Mode Display 6

□ No matter where the game is in the Attract mode sequence, it will immediately go to the following display as soon as a game has been paid for. It will add the words "CREDIT ____" and

"PRESS 1 PLAYER BUTTON" or "PRESS 1 OR 2 PLAYER BUTTON" to the bottom of this display and all other displays in the Attract mode sequence. These words will remain at the bottom of these displays in the Attract mode sequence until the "1 PLAYER" or the "2 PLAYER" start button is pressed.



Ready To Play Mode Display

READY-TO-PLAY MODE

1. The Ready-To-Play mode starts when enough coins have been accepted for a 1 or 2 player game.
2. The Ready-To-Play mode ends when either the "1 PLAYER" or the "2 PLAYER" push button is pressed.
3. In the Ready-To-Play mode, the game will give the above modified displays **centered** on the monitor screen.
4. If no START button is pressed, the displays will remain modified indefinitely as shown above.

PLAY MODE

1. The Play mode begins when either the "1 PLAYER" or the "2 PLAYER" start button is pressed. (One Player game **ONLY**, game play begins **IMMEDIATELY!**)
2. The Play mode ends when all of your SHIPS have been eliminated. When this happens (One Player game **ONLY**), "GAME OVER" is written across the center of the monitor screen.



3. **ON THE SCREEN:** The game is made up of groups of 4 sequences for each rack. When play begins your SHIP is on a plain a good distance from the mouth of a cave. In the next sequence, you are a little closer to the mouth of the cave, and so on until in the 4th sequence you are all the way inside the cave. If you survive the cave, you advance to the next rack. In the first sequence of that rack, you are back out on the plain again, a good distance from the mouth of the cave. In the next sequence of this rack, you are a little closer to the mouth of the cave, and so on until in the 4th sequence of this rack you are all the way inside the cave again. This alternating sequence of events continues throughout the game.

At the beginning of each sequence, when a 2 PLAYER game has been selected, the game tells which player is up.

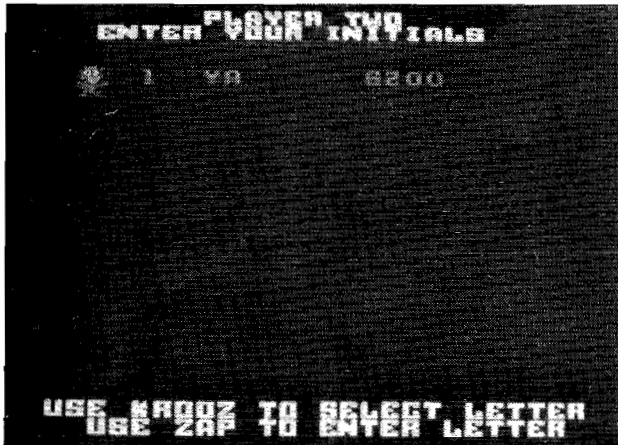
Also indicated in each sequence of each rack is the rack number you're playing, the number of players (1 or 2), a running total of the players' score(s), and the highest game score to date.

4. **PLAY BEGINS:** Your SHIP appears in the center the screen, creatures start appearing around it, and play begins after the last creature has appeared. Your SHIP cannot move until this last creature has appeared.
5. **CREATURES:** Each creature is a dual entity. To shoot only one creature of any given pair only stuns it for a short period of time. When stunned, it will not move about on the screen. Shooting the

remaining creature of any given pair while the first is stunned will cause both of these creatures to disappear.

6. **MUTANT CREATURES:** In later racks, mutant creatures can be formed by the player. All he has to do is shoot one creature of any given pair, and, while this creature is stunned, shoot another creature of a **DIFFERENT** given pair. The two shot creatures will exchange body parts to form a mutant. In order to eliminate these mutants, the remaining whole creature of each pair must be mutated as previously described. You now have two complete pairs of mutants which can now be eliminated in the usual manner.
7. **BABIES:** Again, as you move into the higher racks of the game, you will find that as like pairs of creatures/mutants are eliminated — they turn into babies. The babies can be stunned but not eliminated until the last of the creature/mutant pairs have been turned into babies. At this point, the babies can be eliminated. They **DO NOT** have to be shot in pairs. One hit eliminates one baby.
8. **EGGS:** As you move still farther into the more difficult racks, you will find that the babies, when shot, will turn into eggs. The eggs can be stunned but not eliminated until the last of the babies have been turned into eggs. At this point, the eggs can be eliminated. They **DO NOT** have to be shot in pairs. One hit eliminates one egg.
9. **INSIDE THE CAVE:** Game play is essentially the same inside the cave except things look more crowded. The other new thing that you will notice in the cave is that any egg that is shot will hatch and out will come either a bat or a demon. One rack will be bats, the next demons, the next bats, and so on. The bats/demons can be stunned but not eliminated until the last of the eggs has been turned into bats/demons. At this point, the bats/demons can be eliminated. They **DO NOT** have to be shot in pairs. One hit eliminates one bat/demon.
10. **SHIP:** Your SHIP can move in **ANY DIRECTION** on the screen. Its movements are controlled by the ball on the game's control panel.
11. **FIRE CONTROL STICKS:** These control the direction your SHIP will fire in; either left, right, up, or down. There are no in between angles of fire, just those stated above. There are two fire control sticks on the Upright models to allow both left and right handed persons to play the game easily.
12. **BALL CONTROLLER:** By using the ball controller you can position your SHIP at any location you desire on the screen.
13. **BONUS SHIPS:** These can be awarded to the player as he reaches or passes certain preselected point values. This feature is adjustable by the game's Owner/Operator.

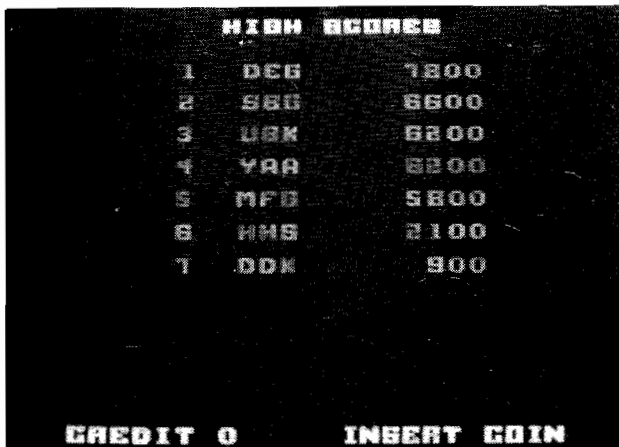
14. **PLAY ENDS:** When your last SHIP is eliminated (1 Player game ONLY), "GAME OVER" is written across the bottom center of the monitor screen.
15. **HIGH SCORE/INITIAL MODE:** If your score was high enough to become one of the ten best scores, the game will go into the High Score/Initial mode immediately after the above display. If your score is not high enough to cause the game to go into the High Score/Initial mode, it will either go to the Attract mode (if there are no more credits left in its memory) or into the Ready-To-Play mode (if there are still credits left in its memory). In the High Score/Initial mode the game gives a display which looks like that shown below.



High Score Initial Mode Display

Follow the ON-SCREEN instructions to enter your initials next to your score in the league of the best ten players to date.

When you've printed out your last initial, move the cursor opposite the "END" word and activate the same control you did to enter your initials. This tells the game you are through printing out your initials. The game will then give the following RANKINGS display showing your score opposite your ranking and your initials.



Rankings Display

NOTE: If you don't tell the game you are through printing out your initials as instructed above, the game will automatically go into the RANKINGS display after a short wait.

After the High Score/Initial mode, the game will either go to the Attract mode (if there are no more credits left in its memory) or into the Ready-To-Play mode (if there are still credits left in its memory).

16. Most of the above holds true in the "2 PLAYER" mode also. But there are a few minor differences.

TWO PLAYER OPERATION

The Upright and Cocktail Table models all have two player operation.

In the two player mode, the rules of play are the same as in the single player mode. There are some additional rules, however.

1. In the Upright models, the players must take turns at the controls.
2. In the Cocktail Table model, each player has his own set of individual controls. The picture will flip to face you when it is your turn. (When it is not your turn, your set of controls will have **NO** effect on the game.)
3. Your turn lasts until your SHIP is eliminated. At this point, the game will do one of several things depending on whether or not the eliminated SHIP was your last or if you still have others remaining in reserve.

ELIMINATED SHIP — OTHERS REMAINING IN RESERVE

- The game stops and "PLAYER____" is displayed on the screen.
- Next, the other player's Ship and pattern appear on the monitor screen and game play begins for the other player.

ELIMINATED SHIP — NO OTHERS REMAINING IN RESERVE

- Game displays: "PLAYER____" "GAME OVER" on the monitor screen.
- Next, the remaining player's Ship and pattern appear on the monitor screen and game play begins for the other player.
- After the last player's last SHIP is eliminated, and if either or both scores were high enough, it goes to the "HIGH SCORE/INITIAL" mode.

If neither players' score was high enough to cause the game to go into the "HIGH SCORE/INITIAL" mode, the game will either go to the Attract mode (if there are no more credits left in its memory) or into the Ready-To-Play mode (if there are still credits left in its memory).

ASSIGNED POINT VALUES

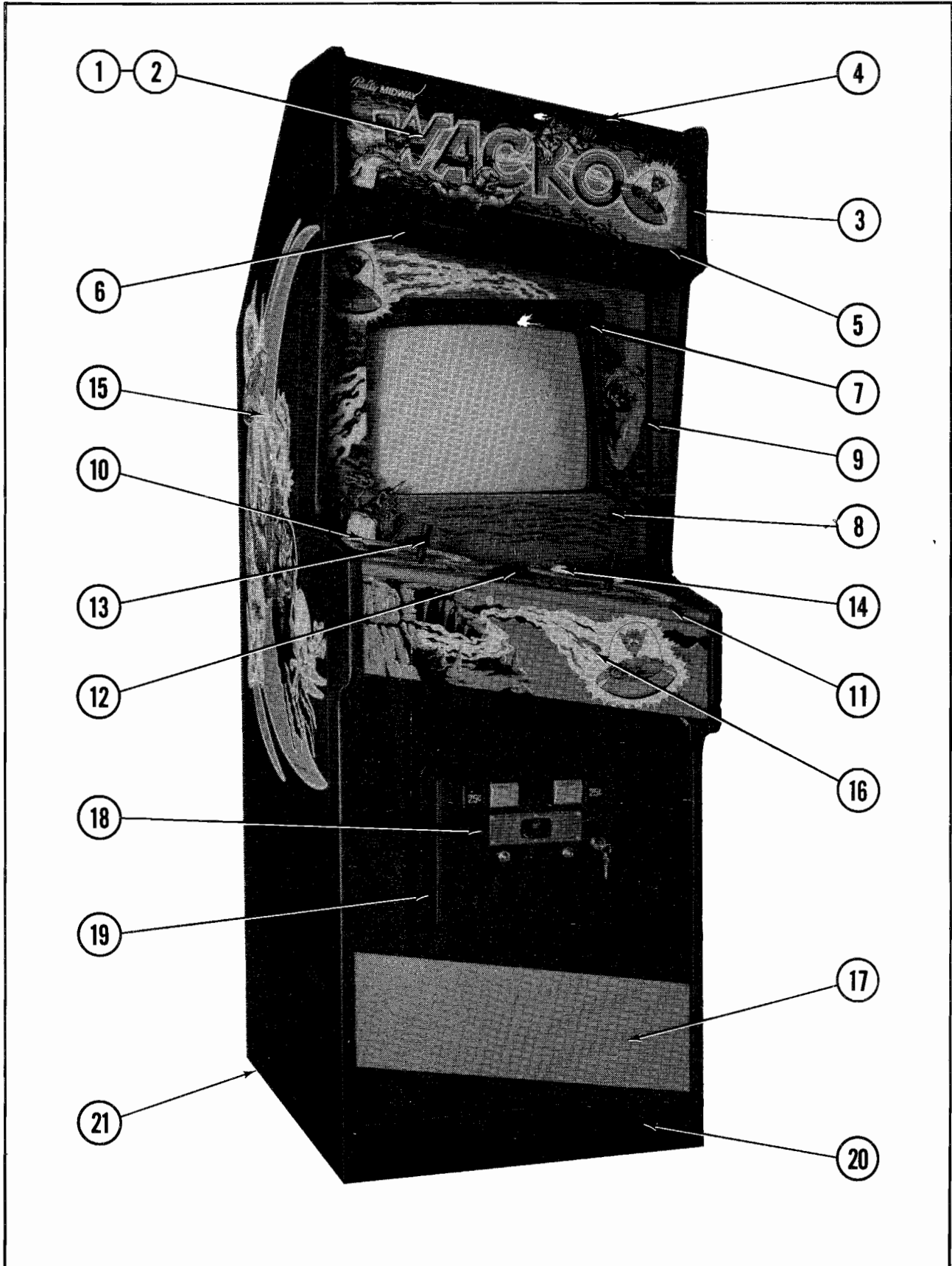
WACKO SCORING

DESCRIPTION	POINTS AWARDED	NOTES
MATCHED PAIRS	300 POINTS EACH PAIR	
MUTANT PAIRS	500 POINTS EACH PAIR	
BABIES	150 POINTS EACH	CANNOT BE DESTROYED UNTIL ALL MATCHED AND MUTANT PAIRS ARE DESTROYED.
EGGS	500 POINTS EACH	ABOVE NOTE APPLIES.
BAT/DEMONS	750 POINTS EACH	ABOVE NOTE APPLIES.

SEE INSIDE BACK COVER FOR OPTION SWITCH SETTINGS

II. Illustrated Parts Breakdown

NO. 337 — WACKO — UPRIGHT — FRONT

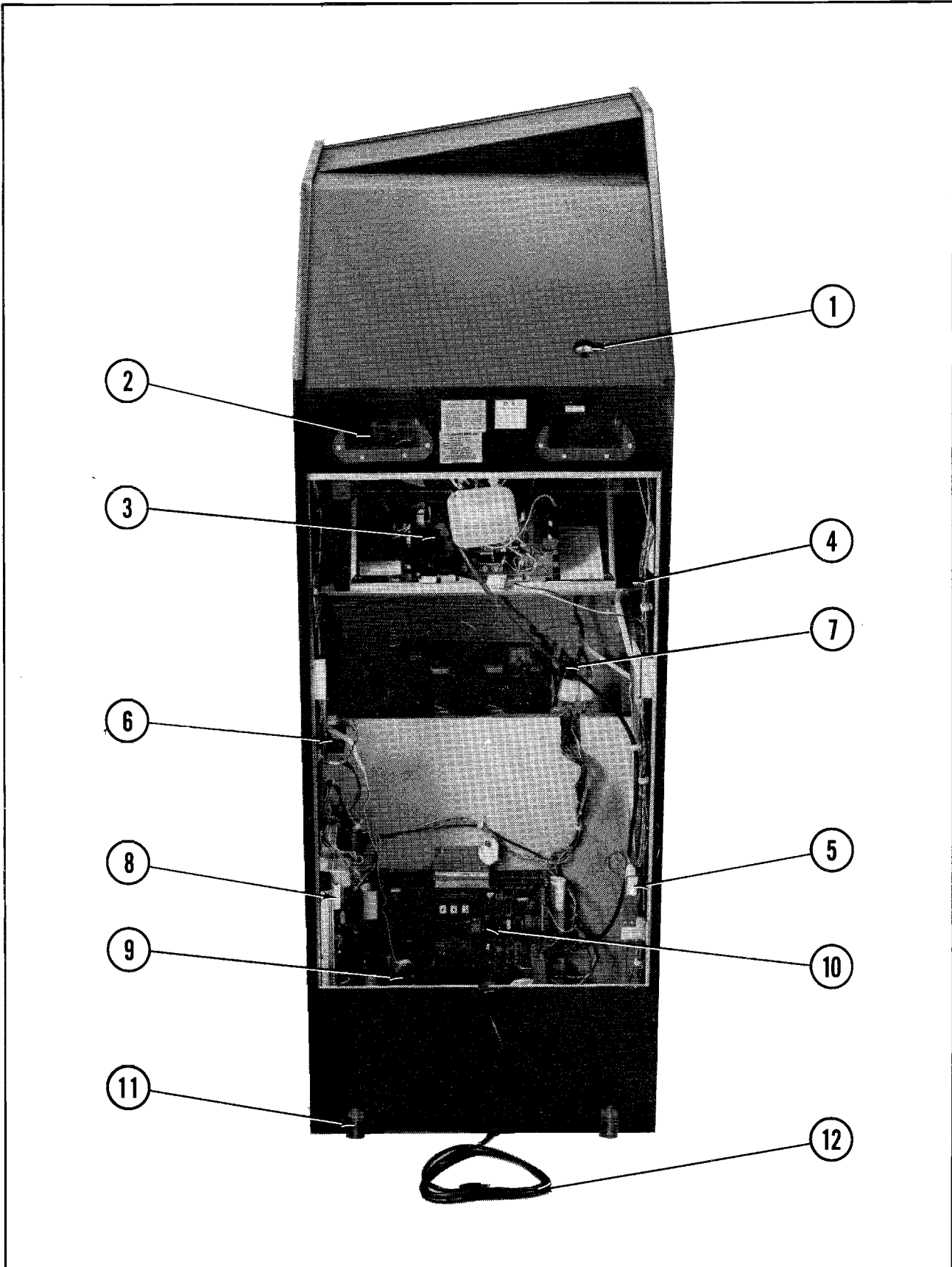


NO. 337 — WACK — UPRIGHT — FRONT PARTS LIST

ORDER BY PART NUMBER ONLY

ITEM	PART NO.	DESCRIPTION
1	0337-00900-00XF	HEADER DISPLAY PLEXI
2	A595-00011-0000	FLUORESCENT HEADER LIGHT ASSY.
3	0537-00903-0064	GLASS CHANNEL — 6-7/8" LG. (2 REQ'D.)
4	0337-00902-0000	HEADER RETAINING BRKT. (2 REQ'D.)
	0017-00101-0138	#8 x 5/8 TORX PAN HD. TAMPER RESISTANT SCREW (10 REQ'D.)
	0017-00009-0522	LONG ARM KEY T-20 (FOR ABOVE SCREW)
5	0017-00042-0323	COIN HOLDER
6	0017-00009-0393	BLACK SPEAKER GRILL W/SLOTS (2 REQ'D.)
	0017-00003-0430	6" x 9" SPEAKER — 4 OHM, 10W. (2 REQ'D.)
	0017-00101-0127	#8-32 x 1-1/2 CARRIAGE BOLT (8 REQ'D.)
	0017-00103-0061	#8-32 HEX NUT W/SEMS (8 REQ'D.)
7	0337-00904-0000	19" T.V. BEZEL
8	0337-00901-00XF	MAIN VIEWING GLASS
9	0537-00903-0002	GLASS CHANNEL — 22" LG.
	0537-00903-0065	GLASS CHANNEL — 25-7/8 LG. (OPPOSITE SIDE)
10	0629-00902-0900	GLASS LIFT CHANNEL — 22-1/4" LG.
11	A337-00014-0000	CONTROL PLATE & OVERLAY ASSY.
	A337-00013-0000	CONTROL SHELF PLATE WELDMENT W/STRIKES ASSY.
	0337-00903-0000	DECORATIVE OVERLAY
	0337-00103-0100	CONTROL SHELF MTG. BRKT. — RIGHT
	0337-00103-0200	CONTROL SHELF MTG. BRKT. — LEFT
	0555-00901-0000	PLASTIC LOCATING PIN (4 REQ'D.)
	0017-00009-0534	BASSICK CLAMP (2 REQ'D.)
	0017-00101-0141	#8 x 11/16 UNSLOT HEX HD. SCR. (8 REQ'D.)
	0316-00903-0000	CONTROL SHELF STRAP
12	A337-00015-0000	BALL CONTROL ASSY.
13	A337-00020-0000	4 POSITION CONTROL ASSY. (2 REQ'D.)
	A337-00006-0000	CONTROL SHELF CABLE ASSY.
14	0017-00042-0260	PUSH BUTTON ASSY. — WHITE (2 REQ'D.)
	0017-00032-0093	PUSH BUTTON SWITCH W/HOLDER (2 REQ'D.)
	0017-00103-0054	5/8-11 PAL NUT (2 REQ'D.)
15	0337-00909-0200	DECAL — LEFT SIDE
	0337-00909-0100	DECAL — RIGHT SIDE (NOT SEEN)
16	0337-00907-0000	DECAL — APRON CONTROL
17	0337-00908-0000	DECAL — FRONT
18	A090-00300-11BK	U.S.A. 25¢ DOUBLE COIN DOOR ASSY.
	A982-00015-0000	COIN DOOR CABLE ASSY.
19	0090-00002-04BK	LARGE BLACK COIN DOOR FRAME
	0017-00101-0121	#6-32 x 5/16 PHIL. TRS. HD. SCR. (3 REQ'D.)
20	0935-00906-0100	KICK PLATE — 23" LG.
21	0017-00102-0048	3/8-16 x 2" LEG LEVELERS (4 REQ'D.)
	0017-00103-0026	3/8-16 LEG LEVELER HEX NUTS (4 REQ'D.)

NO. 337 — WACK — UPRIGHT — REAR ACCESS



NO. 337 — WACKO — UPRIGHT — REAR ACCESS — PARTS LIST

ORDER BY PART NUMBER ONLY

ITEM	PART NO.	DESCRIPTION
1	A945-00038-0000	ON-OFF SWITCH & PLATE ASSY.
2	0894-00916-0000	PLASTIC PULL & VENT (2 REQ'D.)
	0017-00101-0141	#8 x 11/16 UNSLOT HEX HD. M.S. (8 REQ'D.)
3	0017-00003-0339	ELECTROHOME — 19" COLOR DUAL SYNC. HORIZONTAL MTG. MONITOR (OR)
3	0017-00003-0439	WELLS-GARDNER — 19" COLOR DUAL SYNC. HORIZ. MTG. MONITOR (OR)
3	0017-00003-0454	ZENITH — 19" COLOR HORIZ. MTG. MONITOR
	0508-00106-0000	T.V. BEZEL MTG. BRKT.
4	0636-00101-0000	MONITOR RAIL (2 REQ'D.)
	0555-00901-0000	PLASTIC LOCATING PIN (4 REQ'D.)
	0017-00101-0141	#8 x 11/16 UNSLOT. HEX HD. M.S. (8 REQ'D.)
5	A088-00016-0000	INTERLOCK SWITCH & SPRING BRKT. ASSY.
6	A082-90910-E000	DUAL POWER AMP P.C. BOARD ASSY.
7	A333-00012-0000	CREDIT SWITCH & BRKT. ASSY.
8	A082-90412-D000	POWER SUPPLY P.C. BRD. ASSY.
	0624-00902-0100	P.C. SUPPORT BRKT. — 12" LG. (2 REQ'D.)
	0624-00902-0500	P.C. SUPPORT BRKT. — 6-1/2" LG. (2 REQ'D.)
	0017-00101-0141	#8 x 11/16 UNSLOT. HEX HD. M.S. (12 REQ'D.)
	0017-00104-0037	#8 FLAT WASHER (12 REQ'D.)
9	A945-00020-0000	POWER CHASSIS ASSY. — 125VA., 115V.
10	A337-00004-0000	CARD RACK W/BOARDS ASSY.
	A084-90010-A337	SUPER CPU P.C. BOARD ASSY.
	A084-90913-A337	SUPER SOUND I/O P.C. BOARD ASSY.
	A084-91399-A337	VIDEO/GENERATOR P.C. BOARD ASSY.
	0986-00701-00XF	TREADED SPACER (4 REQ'D.)
	0986-00702-00XF	SPACER (4 REQ'D.)
	0017-00101-0153	#6-32 x 1" PHIL. RND. HD. SCREW (4 REQ'D.)
	0017-00101-0339	#6-32 x 3/8 PHIL. RND. HD. SCREW (4 REQ'D.)
11	A961-00007-0000	CASTER ASSY. (2 REQ'D.)
	0961-00109-0000	WHEEL BRKT. (2 REQ'D.)
	0017-00042-0255	PLASTIC WHEEL (2 REQ'D.)
	0894-00702-00XF	SHAFT (2 REQ'D.)
	0017-00100-0037	3/8" E-RING (2 REQ'D.)
12	A945-00019-0000	LINE CORD ASSY.

NO. 337 — WACKO — UPRIGHT — REAR ACCESS — PARTS LIST (Continued)

ORDER BY PART NUMBER ONLY

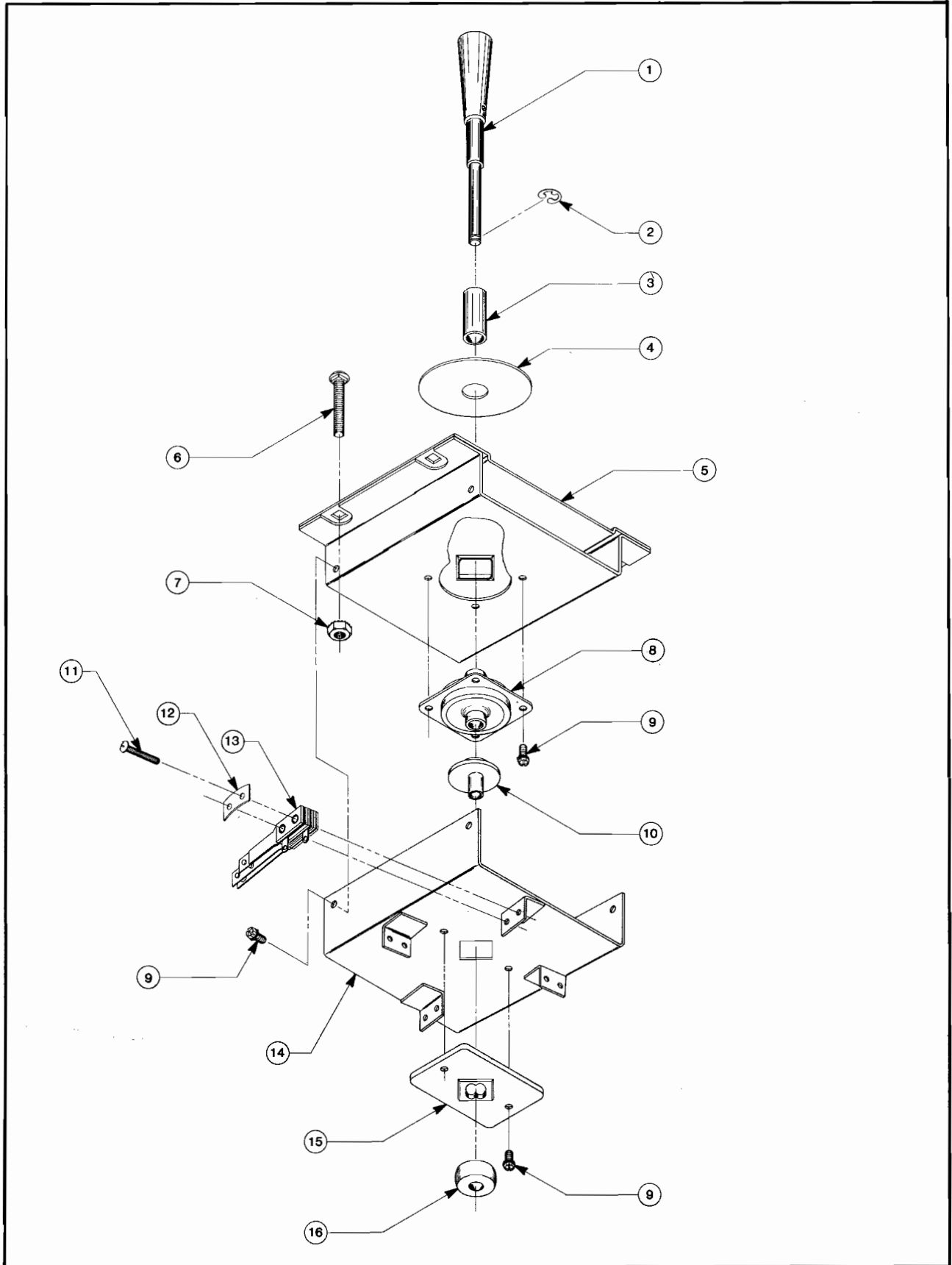
ITEM	PART NO.	DESCRIPTION
		ADDITIONAL PARTS LIST
	A097-00009-0000	BACK DOOR LOCK ASSY.
	0017-00009-0490	5-5/8" SQR. VENT GRILL — BACK DOOR (4 REQ'D.)
	A950-00004-0000	COIN BOX ASSY.
	A950-00006-0000	COIN BOX CRADLE ASSY.
	0950-00105-0000	COIN BOX COVER
	0950-00104-0000	COIN BOX HANDLE
	0950-00101-0000	COIN DEFLECTOR (2 REQ'D.)
	0950-00900-0000	LARGE PLASTIC COIN BOX
	0950-00103-0000	COIN BOX DIVIDER — OPTIONAL
	0017-00101-0142	1/4-20 x 1-3/8 BLACK RND. HD. BOLT (4 REQ'D.)
	0017-00104-0014	7/8" DISH WASHER (4 REQ'D.)
	0017-00103-0018	1/4-20 HEX NUT (4 REQ'D.)
	A337-00008-0000	MASTER CABLE W/BRKT. ASSY.
	A337-00010-0000	HIGH VOLTAGE CABLE ASSY.
	A316-00010-0000	LOW VOLTAGE CABLE ASSY.
	A337-00018-0000	VIDEO CABLE ASSY.
	A337-00019-0000	AUDIO CABLE ASSY.

NO. 337 — 4 POSITION CONTROL ASSY. — PARTS LIST

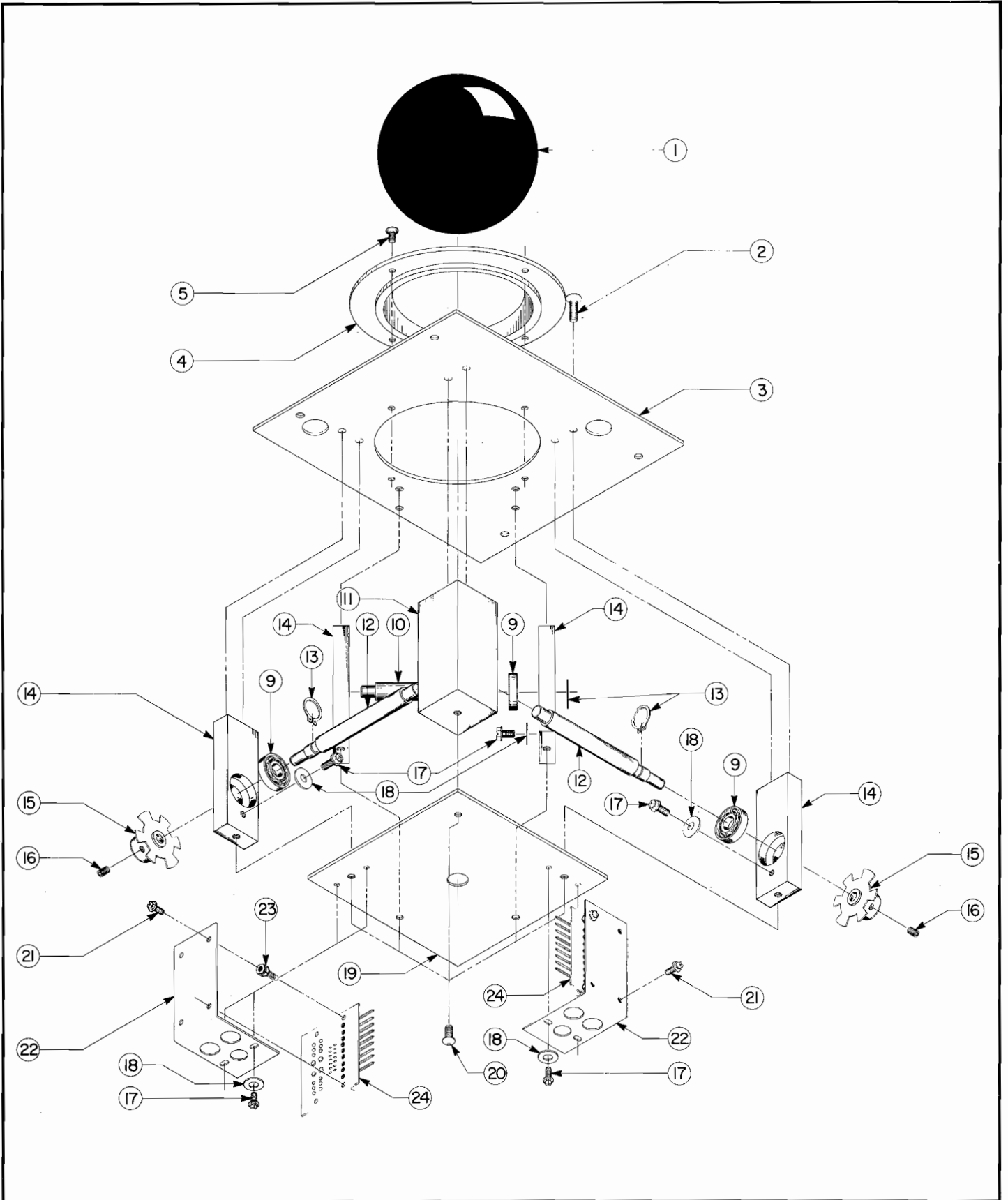
ORDER BY PART NUMBER ONLY

ITEM	PART NO.	DESCRIPTION
1	A337-00021-0000	HANDLE ASSY.
2	0017-00100-0025	1/4" E-RING
3	0337-00708-0000	STOP SPACER
4	0530-00907-0000	SLIDE PLATE
5	A982-00019-0000	PIVOT PLATE WELD ASSY.
6	0017-00101-0637	#8-32 x 1" CARRIAGE BOLT (4 REQ'D.)
7	0017-00103-0061	#8-32 HEX NUT W/SEMS (4 REQ'D.)
8	0337-00911-0000	GROMMET
9	0017-00101-0598	#8-32 x 5/16 SLT. HEX HD. M.S. (10 REQ'D.)
10	0337-00906-0000	SLEEVE
11	0017-00101-0528	#5-40 x 3/4 PHIL. RND. HD. SCR. (8 REQ'D.)
12	0020-00202-0000	SWITCH PLATE (4 REQ'D.)
13	A337-00017-0000	SWITCH ASSEMBLY (4 REQ'D.)
14	A932-00012-0000	STOP PLATE & SWITCH BRKT. ASSY.
15	0337-00905-0000	WEAR PLATE
16	0921-00700-0000	ACTUATOR

NO. 337 — 4 POSITION CONTROL ASSY.



NO. 337 — WACKO — BALL CONTROL ASSEMBLY

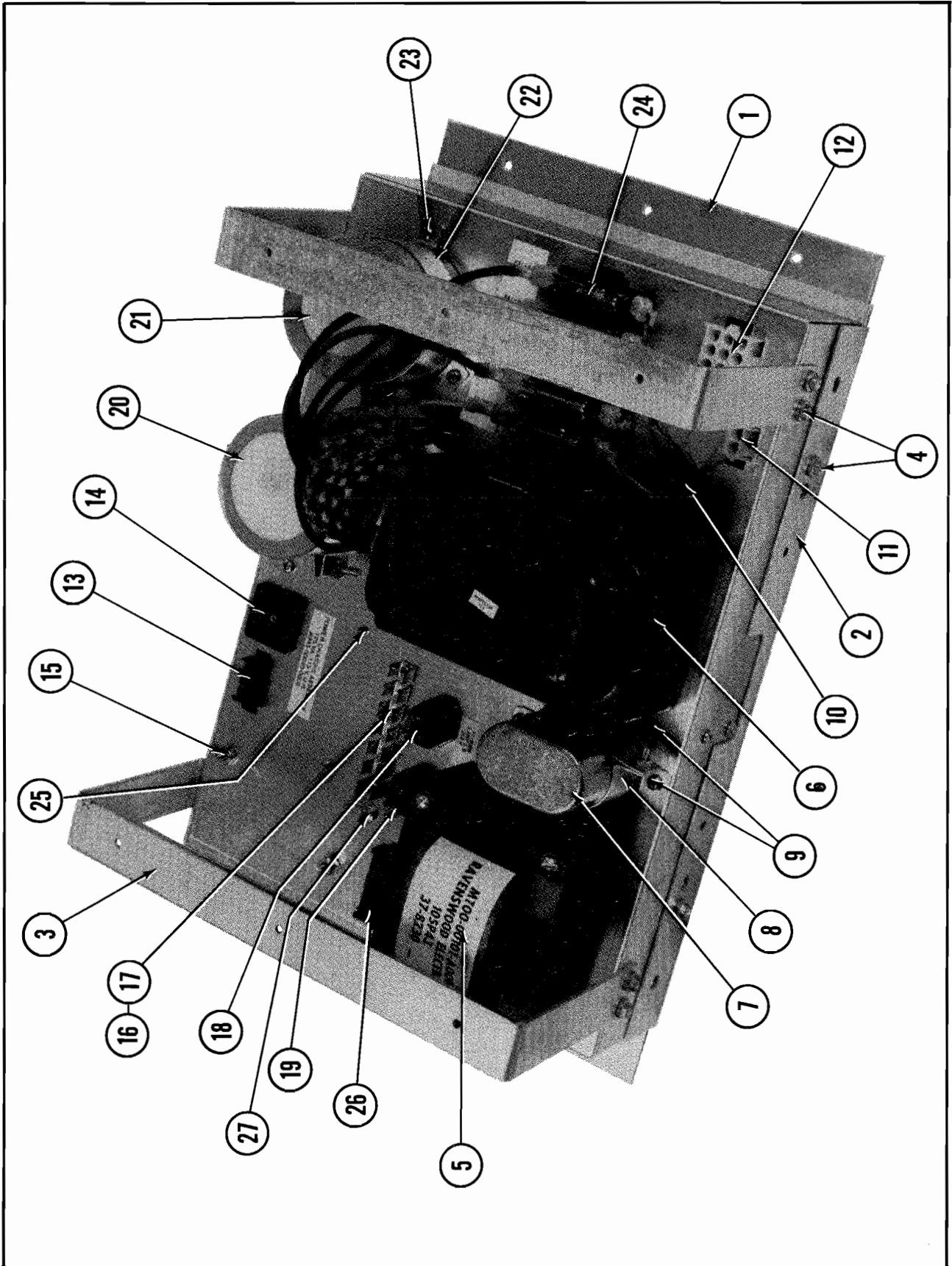


NO. 337 — WACKO — BALL CONTROL ASSEMBLY — PARTS LIST

ORDER BY PART NUMBER ONLY

ITEM	PART NO.	DESCRIPTION
1	0017-00041-0625	3" DIA. BLACK RUBBER BALL
2	0017-00101-0120	#10-24 x 1/2 HEX FLAT HD. M.S. (10 REQ'D.)
3	0337-00101-0000	BALL CONTROL MTG. PLATE
4	0337-00910-0000	BALL RING
5	0017-00101-0550	#6-32 x 1/4 PHIL. FLAT HD. M.S. (4 REQ'D.)
9	0017-00006-0085	ROLLER BEARING (6 REQ'D.)
10	0337-00705-00XF	IDLER SHAFT
11	0337-00702-0000	MAIN POST
12	0337-00704-00XF	SHAFT (2 REQ'D.)
13	0017-00100-0114	RETAINING RING (3 REQ'D.)
14	0337-00703-0000	END POST (4 REQ'D.)
15	A643-00010-0000	BUSHING & DISC ASSY. (2 REQ'D.)
16	0017-00101-0302	#6-32 x 3/16 HEX HD. SOCKET SET SCR. (4 REQ'D.)
17	0017-00101-0599	#8-32 x 3/8 SLT. HEX S.M.S. (7 REQ'D.)
18	0017-00104-0026	#8 FLAT WASHER (7 REQ'D.)
19	0337-00104-0000	BALL CONTROL PLATE — BOTTOM
20	0017-00101-0119	#10-24 x 1/2 HEX BUT HD. M.S. (5 REQ'D.)
21	0017-00101-0099	#6 x 1/4 SLT. HEX HD. M.S. (8 REQ'D.)
22	0889-00103-00XF	SENSOR P.C. MTG. BRKT. (2 REQ'D.)
23	0017-00042-0285	1/4" P.C.B. SPACER (8 REQ'D.)
24	A084-91429-C000	X-Y BALL SENSOR P.C. BRD. ASSY. (2 REQ'D.)

WACKO — POWER CHASSIS ASSY. — 125VA., 115V.

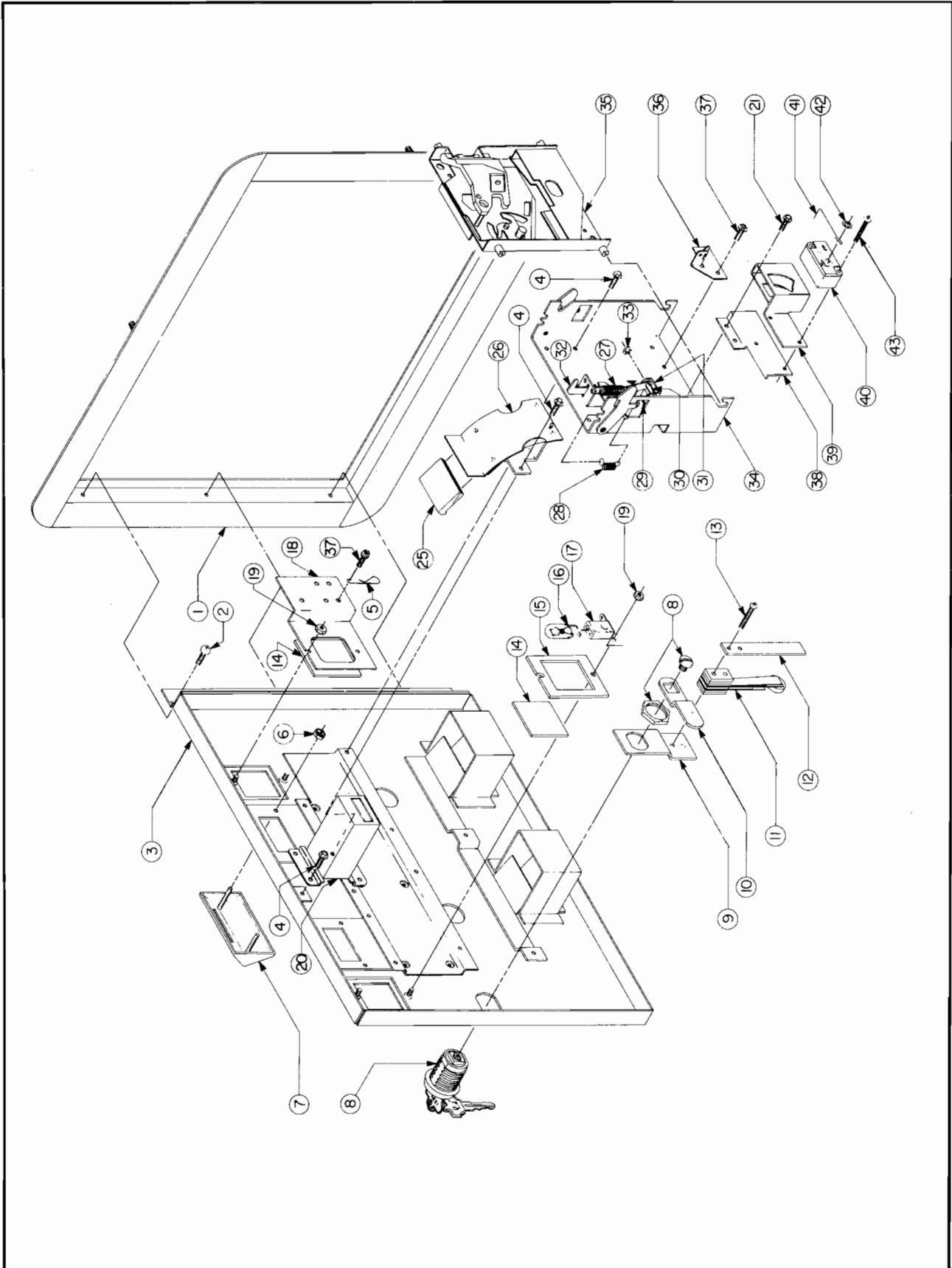


WACKO — POWER CHASSIS ASSY. — 125VA., 115V. — PARTS LIST

ORDER BY PART NUMBER ONLY

ITEM	PART NO.	DESCRIPTION
1	0945-00104-00XF	CHASSIS
2	A945-00029-0100	MTG. PLATE & BARRIER ASSY.
3	0945-00107-01XF	STRAP (2 REQ'D.)
4	0017-00101-0123	#8 x 1/4 UNSLOT. HEX HD. SCR. (12 REQ'D.)
5	MT00-00101-A000	ISOLATION TRANSFORMER W/O SHIELD ASSY. — 115V., 50/60 HZ.
	0017-00103-0061	#8-32 HEX NUT W/SEMS (4 REQ'D.)
6	MT00-00099-A000	POWER TRANSFORMER ASSY. — 115V., 60 HZ.
	0017-00103-0084	#6-32 HEX NUT W/SEMS (4 REQ'D.)
7	0175-181T4-GXJK	CAPACITOR — 3.5 M.F., 440V.
8	0017-00009-0535	CLAMP
	0017-00101-0565	#6-32 x 7/16 SLT. PAN HD. SCR.
	0017-00103-0084	#6-32 HEX NUT W/SEMS
9	0017-00101-0067	#6 x 3/8 PHIL. PAN HD. SCR. (11 REQ'D.)
	0945-00103-00XF	PARTITION — LOCATED UNDER CHASSIS (NOT SEEN)
10	0945-00902-0000	SNAP BUSHING (3 REQ'D.)
11	0017-00021-0297	2 POSITION CONNECTOR
12	A945-00030-0100	CONNECTOR & CABLE ASSY. #1
13	A945-00030-0200	CONNECTOR & CABLE ASSY. #2
14	A945-00021-0000	CONVENIENCE OUTLET ASSY.
15	0017-00101-0573	#6-32 x 1/2 PHIL. RND. HD. SCR. (2 REQ'D.)
	0017-00103-0084	#6-32 HEX NUT W/SEMS (2 REQ'D.)
	A945-00025-0000	FILTER ASSEMBLY — 125V. — UNDER CHASSIS (NOT SEEN)
16	0017-00021-0510	TERMINAL STRIP
17	0017-00101-0140	#4-40 x 5/16 PHIL. PAN HD. SCR. (2 REQ'D.)
18	0017-00003-0263	SLO-BLO FUSE — 4A., 250V.
19	0017-00003-0005	FUSE — 2A., 250V.
	0017-00003-0444	QUICK CONN. FUSEHOLDER (2 REQ'D.) — FOR ABOVE FUSES
20	0945-00816-1902	CAPACITOR — 100,000 M.F.
21	0945-00816-1901	CAPACITOR — 55,000 M.F.
	0017-00104-0107	#10 FLAT WASHER (4 REQ'D.)
	0017-00103-0081	#10-32 HEX NUT W/SEMS (4 REQ'D.)
22	0017-00009-0422	CLAMP (2 REQ'D.)
	0017-00101-0758	#8-32 x 3/4 PHIL. RND. HD. SCREW (2 REQ'D.)
	0017-00103-0061	#8-32 HEX NUT W/SEMS (2 REQ'D.)
23	0017-00101-0067	#6 x 3/8 PHIL. PAN HD. SCR. (6 REQ'D.)
24	0945-00904-0000	5 POSITION FUSE HOLDER
	0017-00003-0263	SLO-BLO FUSE — 4A., 250V.
	0017-00003-0217	SLO-BLO FUSE — 2.5A., 250V. (2 REQ'D.)
	0017-00003-0007	SLO-BLO FUSE — 3A., 250V. (2 REQ'D.)
	0945-00903-0000	FUSE HOLDER BARRIER
	A945-00022-0000	HEATSINK & DIODE ASSY.
	0017-00101-0067	#6 x 3/8 PHIL. PAN HD. SCR. (2 REQ'D.)
25	0017-00101-0780	#6 x 1/2 PHIL. PAN HD. SCREW (2 REQ'D.)
	0017-00021-0629	5 POSITION TERMINAL STRIP — (UNDER CHASSIS)
	A945-00019-0000	LINE CORD ASSY. — 115V. (NOT SHOWN)
26	A945-00030-0500	CONNECTOR & CABLE ASSY.
27	0017-00101-0660	#10-32 x 3/4 PAN HD. SCREW
	0017-00104-0107	#10 FLAT WASHER
	0017-00103-0081	#10-32 HEX NUT W/SEMS

FRONT DOOR ASSEMBLY — U.S.A. 25¢

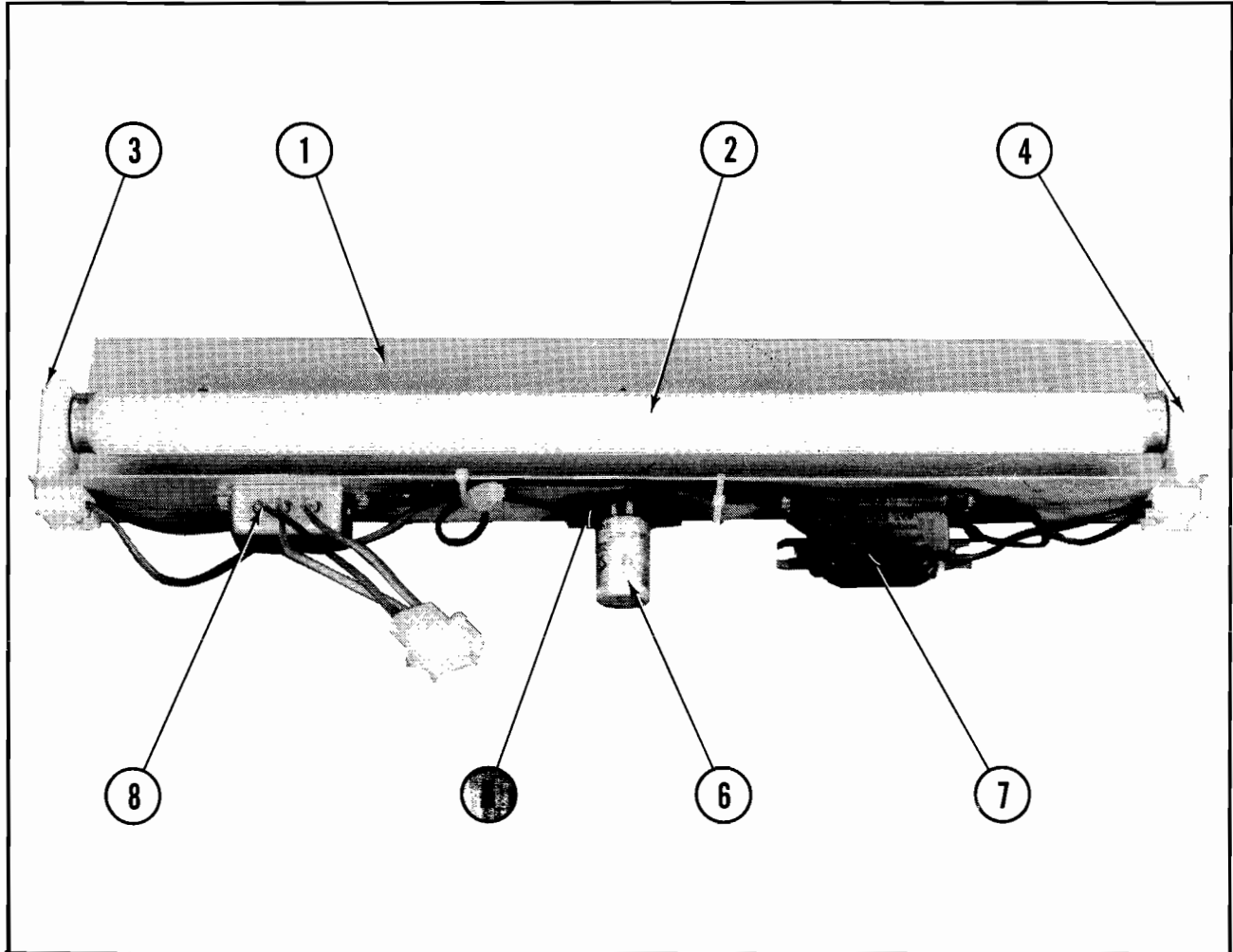


FRONT DOOR ASSEMBLY — U.S.A. 25¢ — PARTS LIST

ORDER BY PART NUMBER ONLY

ITEM	PART NO.	DESCRIPTION
1	0090-00002-04BK	DOUBLE ENTRY COIN DOOR FRAME
2	0017-00101-0121	#6-32 x 5/16 PHIL. TRS. HD. SCR. (3 REQ'D.)
3	A090-00073-02BK	DOUBLE ENTRY COIN DOOR W/DRESS PLATE
4	0017-00101-0123	#8 x 1/4 UNSLOT. HEX HD. SCREW (12 REQ'D.)
5	0017-00007-0019	KEY HOOK
6	0017-00103-0059	PUSH NUT (4 REQ'D.)
7	0090-00912-0000	COIN ENTRY PLATE — 25¢ (2 REQ'D.)
8	A097-00005-0000	DOOR LOCK & KEY W/SCREW & NUT (OR)
8	A097-00006-0000	DOOR LOCK & KEY W/SCREW & NUT
9	0090-00128-00XF	DOOR TILT SWITCH BRKT.
10	0017-00005-0041	DOOR CAM
11	A090-00095-0000	DOOR TILT SWITCH
12	0090-00126-03XF	SWITCH BACK-UP PLATE
13	0017-00101-0525	#5-40 x 9/16" PHIL. HD. M.S. (2 REQ'D.)
	A090-00096-0000	DOOR TILT SWITCH & BRKT. ASSY. (ITEMS 9 & 11 THRU 13)
14	0090-00903-9500	25¢ WINDOW (2 REQ'D.)
15	0090-00143-00XF	COIN PLEX RETAINER
16	0017-00003-0219	12 VOLT LAMP — G.E. #194 (2 REQ'D.)
17	0017-00031-0048	WEDGE SOCKET W/BRKT. (2 REQ'D.)
18	A090-00100-0000	BRKT. ASSY.
19	0017-00103-0084	#6-32 HEX NUT W/SEMS (4 REQ'D.)
20	A090-00089-0000	COIN METER W/DIODE
21	0017-00101-0124	#6 x 1/4 UNSLOT. HEX HD. SCR. (4 REQ'D.)
25	0090-00911-0000	INSULATOR (2 REQ'D.)
26	A090-00112-0000	COIN CHUTE & INSULATOR ASSY. (2 REQ'D.)
27	0010-00134-0000	SPRING
28	0010-00181-0000	SPRING
29	0017-00007-0083	1/8 x 1-5/8 ROLL PIN
30	0090-00129-00XF	PIVOT POST
31	0090-00167-00XF	PIVOT LEVER
32	0090-00182-00XF	REJECT LEVER
33	0017-00100-0018	E-RING
	A090-00088-0000	REJECT LEVER ASSY. (2 REQ'D.) (ITEMS 30 THRU 33)
34	A090-00105-0000	COIN ACCEPTOR FRAME ASSY. (2 REQ'D.)
35	0017-00005-0003	COIN ACCEPTOR W/STRING CUTTER (2 REQ'D.) (OR)
35	0017-00005-0211	COIN ACCEPTOR W/ANTI STRING DEVICE (2 REQ'D.) (OR)
35	0017-00005-0214	COIN ACCEPTOR W/STRING CUTTER (2 REQ'D.)
36	A090-00064-0000	ANTI-PENNY DEVICE
37	0017-00101-0099	#6 x 1/4 SLT. HEX HD. M.S. (2 REQ'D.)
38	0090-00162-00XF	COIN SWITCH MTG. BRKT.
39	0017-00005-0203	COIN SWITCH CHUTE
40	0017-00005-0195	COIN SWITCH
41	0010-00599-0000	COIN SWITCH WIRE
42	0017-00007-0015	PUSH-ON RING
	A090-00059-0400	COIN SWITCH & WIRE ASSY. (ITEMS 40 THRU 42)
43	0017-00101-0147	#4-40 x 3/4 PHIL. PAN. HD. M.S. (2 REQ'D.)
	A090-00077-0000	COIN GUIDE & SWITCH ASSY. (ITEMS 38 THRU 43)

NO. 337 — WACKO — UPRIGHT — HEADER FLUORESCENT LIGHT ASSY.

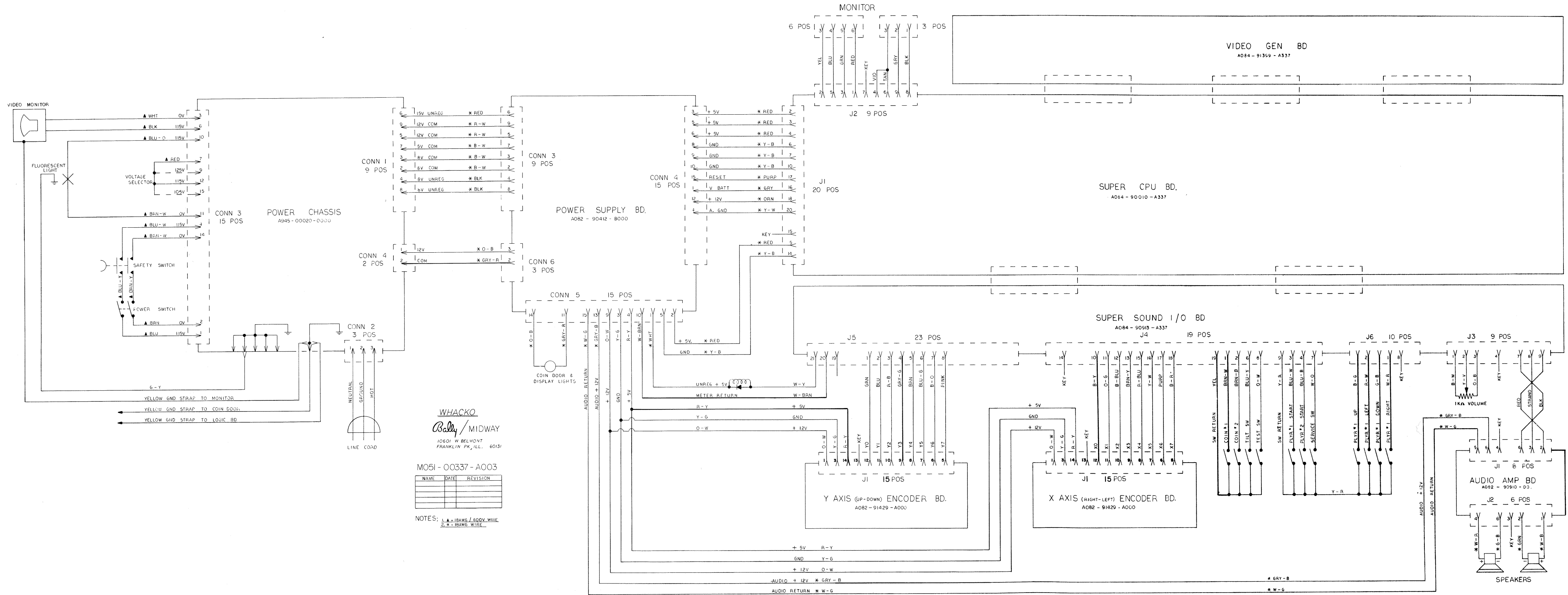


NO. 337 — WACKO — UPRIGHT — HEADER FLUORESCENT LIGHT ASSY. — PARTS LIST

ORDER BY PART NUMBER **ONLY**

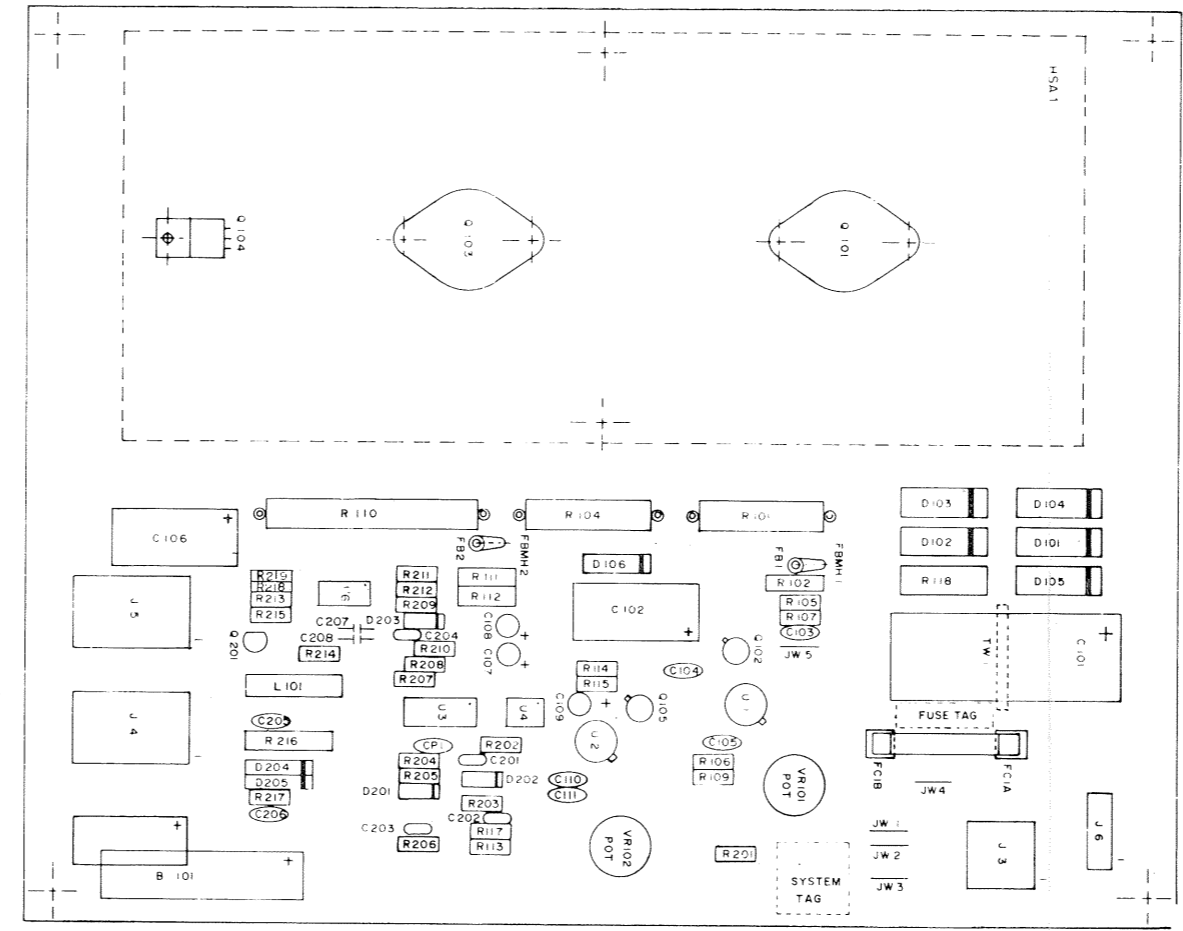
ITEM	PART NO.	DESCRIPTION
1	0595-00105-0000	FLUORESCENT BRKT.
2	0017-00003-0043	18" COOL WHITE FLUORESCENT LAMP
3	0017-00003-0445	LAMP LOCKS (2 REQ'D.)
4	0017-00031-0036	FLUORESCENT SOCKET (2 REQ'D.)
5	0017-00003-0412	FLUORESCENT STARTER HOLDER W/LEADS
	0017-00101-0573	#6-32 x 1/2 PHIL. RND. HD. M.S. (4 REQ'D.)
	0017-00104-0009	#6 EXT. WASHER (4 REQ'D.)
6	0017-00003-0019	FLUORESCENT STARTER
7	0017-00003-0026	BALLAST
	0017-00101-0598	#8-32 x 5/16 SLT. HEX HD. SCR. (4 REQ'D.)
8	A961-00042-0000	LINE FILTER ASSY.

III. Wiring Diagrams and Schematics



DESIGNATION LIST

DESIGNATION	DESCRIPTION	DESIGNATION	DESCRIPTION
C101	4700uf AX. ELECT.	R117	560ohm 1/4W 5%
C102	470uf AX. ELECT.	R118	150ohm 2W
C103	1uf AX. CER.	R201	270ohm 1/4W 5%
C104	47pf AX. CER.	R202	1.2K 1/4W 5%
C105	470uf AX. ELECT.	R203	1.1M 1/4W 5%
C106	100uf RD. TANT.	R204	3.3M 1/4W 5%
C107	1uf RD. TANT.	R205	10M 1/4W 5%
C109	4.7uf RD. TANT.	R206	100K 1/4W 5%
C110	1uf AX. CER.	R207	33K 1/4W 5%
C111	1uf AX. CER.	R208	2M 1/4W 5%
C201	.01uf MYLAR	R209	1M 1/4W 5%
C202	.033uf MYLAR	R210	1.2M 1/4W 5%
C203	.01uf MYLAR	R211	75K 1/4W 5%
C204	.047uf MYLAR	R212	75K 1/4W 5%
C205	820pf AX. CER.	R213	220K 1/4W 5%
C206	.01uf AX. CER.	R214	3.9K 1/4W 5%
C208	0.082uf MYLAR	R215	1.2K 1/4W 5%
C207		R216	82ohm 1W 10%
		R217	270ohm 1/4W 5%
		R218	110K 1/4W 5%
		R219	68ohm 1/2W 5%
		VR101,102	100ohm POT
CP1	1uf AX. CER.		
R101	18ohm 5W W/RES. SPACER	D101	A15F
R102	68ohm 1/2W 5%	D102	A15F
R104	10ohm 5W W/RES. SPACER	D103	A15F
R105	27ohm 1/4W 5%	D104	A15F
R106	270ohm 1/4W 5%	D105	A15F
R107	6.2K 1/4W 5%	D106	1N4001
		D201	1N4148
		D202	1N4148
		D203	1N4148
		D204	1N4001
		D205	1N4001
R109	1K 1/4W 5%		
R110	16ohm 15W W/RES. SPACER	Q102	2N2905
R111	6.8ohm 1/2W 5%	Q105	2N2905
R112	68ohm 1/2W 5%	Q201	2N4401
R113	1.2K 1/4W 5%		
R114	47ohm 1/4W 5%	U1	LM705 REG.
R115	160ohm 1/4W 5%	U2	LM305 REG.
		U3	LM3900
		U4	1N28
		U6	555
		L101,102	22uH INDUCTOR
		B101	BATTERY 3.6VDC 60DEG C
		F1	3 BA S-BLO FUSE
		FC1A,1B	FUSE CLIP
		FE1,2	FERRITE BEAD
		TW1	TIE WRAP
		J3	9PIN P.C. MOUNT CONN (MALE)
		J4	15PIN P.C. MOUNT CONN (FEMALE)
		J5	15PIN P.C. MOUNT CONN (MALE)
		J6	3PIN P.C. MOUNT CONN (MALE)
		LB1	FUSE TAG
		LB2	SYSTEM TAG
		HSA1	HEAT SINK ASS'Y 1
		MHSA1	MOUNTING HARD WARE (HEAT SINK) 2 SCREW 4 WASHER 2 HEXNUT
		JW1-5	JUMPER WIRE
		FBMH1,2	FERRITE BEAD MOUNTING HARDWARE

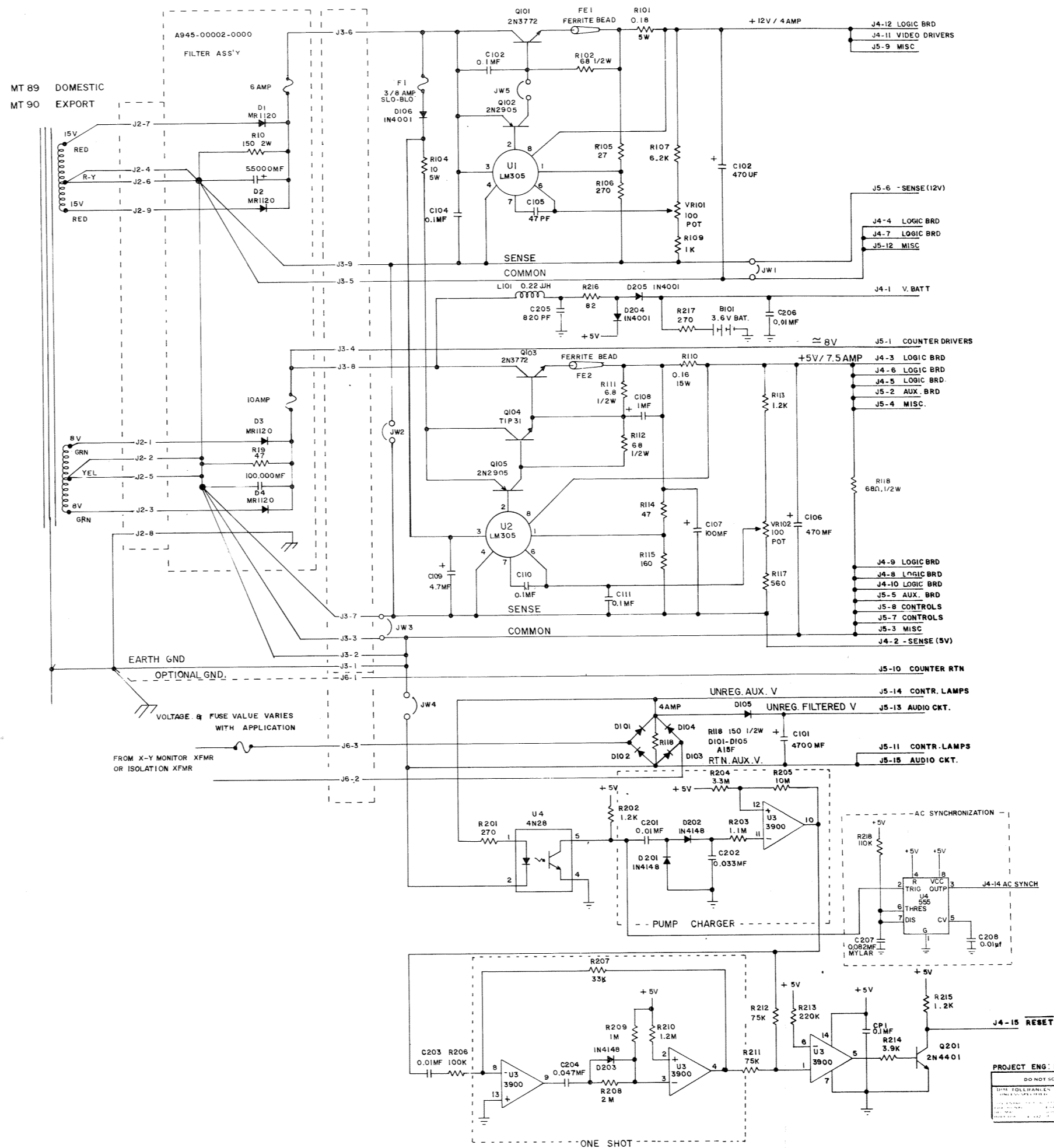


PROJ. ENG. L. DEKKER

DATE	5/14/82	SCALE	1:1
BY	LD	CHECKED	
FULL NO. REV. 1 PER.		MIDWAY MFG. CO.	
ASSEMBLY DRAWING 125VA PWRSPY		FRANKLIN, PA. U.S.A.	
A082-90412-0000		M051-00945-0006	

CROSS REFERENCE LIST

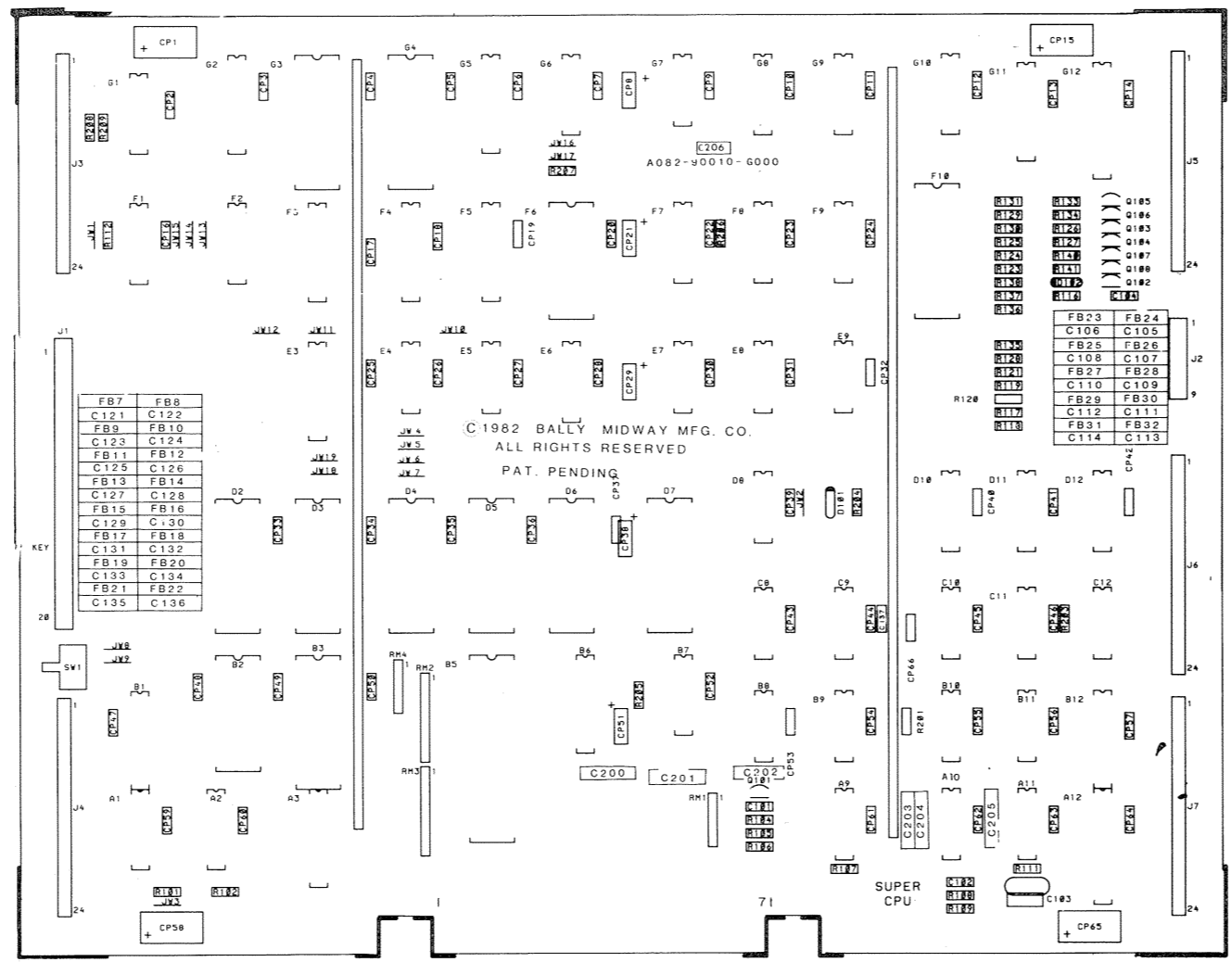
DESCRIPTION	Qty	DESIGNATION	PART #
47pf AX. CER.	1	C105	0945-00811-0100
820pf AX. CER.	1	C205	0945-00816-0400
01uf AX. CER.	2	C206,208	0945-00816-0100
01uf MYLAR	2	C201,203	0945-00816-0200
033uf MYLAR	1	C202	0945-00816-0500
047uf MYLAR	1	C204	0945-00816-0300
0.082uf AX. CER.	1	C207	0945-00816-1900
1uf AX. CER.	5	C103,104,110,111, CP1	0945-00811-0200
1uf RAD. TANT.	1	C108	0911-00811-0300
4.7uf RAD. TANT.	1	C109	0945-00811-0400
100uf RAD. TANT.	1	C107	0915-00811-0500
470uf AX. ELECT.	2	C102,106	0945-00816-0600
4700uf AX. ELECT.	1	C101	0945-00811-0700
16ohm 15W 5%	1	R110	0945-00815-0100
18ohm 5W 5%	1	R101	0945-00815-0200
6.8ohm 1/2W 5%	1	R111	0062-04703-1XXX
10ohm 5W 5%	1	R104	0945-00812-0100
27ohm 1/4W 5%	1	R105	0062-06883-1XXX
47ohm 1/4W 5%	1	R114	0062-08683-1XXX
68ohm 1/2W 5%	3	R102,112,219	0062-09803-1XXX
82ohm 1W 10%	1	R216	0062-104F5-1XXX
150ohm 2W 5%	1	R118	0945-00812-0200
160ohm 1/4W 5%	1	R115	0062-124B3-1XXX
270ohm 1/4W 5%	3	R106,201,217	0062-138B3-1XXX
560ohm 1/4W 5%	1	R117	0062-162B3-1XXX
1K 1/4W 5%	1	R109	0062-179B3-1XXX
1.2K 1/4W 5%	3	R113,202,215	0062-183B3-1XXX
3.9K 1/4W 5%	1	R214	0062-207B3-1XXX
6.2K 1/4W 5%	1	R107	0062-217B3-1XXX
33K 1/4W 5%	1	R207	0062-251B3-1XXX
75K 1/4W 5%	2	R211,212	0062-269B3-1XXX
100K 1/4W 5%	1	R206	0062-275B3-1XXX
110K 1/4W 5%	1	R218	0062-277B3-1XXX
220K 1/4W 5%	1	R213	0062-291B3-1XXX
1M 1/4W 5%	1	R209	0062-323B3-1XXX
1.2M 1/4W 5%	1	R203	0062-325B3-1XXX
2M 1/4W 5%	1	R208	0062-327B3-1XXX
3.3M 1/4W 5%	1	R204	0062-337B3-1XXX
10M 1/4W 5%	1	R205	0062-347B3-1XXX
100ohm POT	2	VR101,102	0945-00814-0000
LM305 REG.	2	U1,2	0945-00813-0100
555	1	U6	0929-00810-4500
LM3900	1	U3	0945-00813-0200
1N28	1	U4	0945-00813-0300
A15F RECTIFIER	5	D101-105	0945-00804-0200
1N4001	3	D106,204,205	0945-00804-0300
1N4148	3	D201-203	0945-00804-0500
2N2905	2	Q102,105	0945-00808-0300
2N4401	1	Q201	0945-00804-0400
BATTERY 3.6VDC 60DEG C	1	B101	0017-00003-0377
FUSE 3/8A S-BLO	1	F1	0945-00808-0400
FUSE CLIP	2	FC1A,1B	0017-00003-0214
TIE WRAP	1	TW1	0945-00814-0300
FERRITE BEAD	2	FB1,2	0017-00009-0225
FERRITE MOUNTING HDW.	2	FBMH1,2	0017-00033-0139
22uH INDUCTOR	1	L101	0945-00814-0200
FUSE TAG	1	LB1	M051-00945-A004
SYSTEM TAG	1	LB2	M051-00945-A009
P.C.B.	1		A080-90412-0000
HEAT SINK ASS'Y	1	HSA1	A945-00008-0000
(SEE HS ASS'Y DRAWING "XX NOTE")			
4-40 X 10 SLT RND	2	MHSA1A,2A	0017-00101-00727
4-40 HEX NUT	2	MHSA1E,2E	0017-00103-0002
WSH 4-120-.250-018	4	MHSA1B,1D	0017-00104-0071
		MHSA2B,2D	
3PIN P.C. MOUNT CONN. (MALE)	1	J6	0017-00021-0443
9PIN P.C. MOUNT CONN. (MALE)	1	J3	0017-00021-0425
15PIN P.C. MOUNT CONN. (FEMALE)	1	J4	0017-00021-0441
15PIN P.C. MOUNT CONN. (MALE)	1	J5	0017-00021-0440
22AWG T & R BARE 2.5"	5	JW1-5	0151-00087-0000



PROJECT ENG. L. DEKKER		DESIGNED BY SATANPULLLOW		MIDWAY MFG. CO.	
DO NOT SCALE DRG	DATE	FULL	NO. REV. 1 PER.	FRANKLIN PA. U.S.A.	
DATE TOLERANCES	DATE	POWER SUPPLY 125VA		PART NO.	
DATE	DATE	W/CKT SUPPORT		M051-00945-D007	
DATE	DATE	A082-90412-D000		DATE	
5/3/82					

DESIGNATION LIST

DESIGNATION	DESCRIPTION	DESIGNATION	DESCRIPTION	DESIGNATION	DESCRIPTION
C101	33PF AX. CER.	R201	1K OHM "	F1	4053
C102	0.1UF AX. CER.	R203-R207	1K OHM "	F2	4017
C103	0.1UF MYLAR	R208,R209	4.7KOHM "	F3	74LS245
C104	390PF AX. CER.			F4, F5	74LS273
C105 - C110	47 PF AX. CER.	RM1	4.7K 6 PIN S.I.P.	F6	8116
C111 - C114	820 PF AX. CER.	RM2, RM3	4.7K 10 PIN S.I.P.	F7	74LS174
C121-C137	390 PF AX. CER.	RM4	4.7K 6 PIN S.I.P.	F8, F9	74LS157
C200	820 PF AX. CER.			F10	93419
C201, C202	390 PF AX. CER.	D101	IN5817	G1	74LS153
C203	100 PF AX. CER.	D102	4148	G2	74LS273
C204	470 PF AX. CER.	Q101	2N4403	G3	EPROM
C206	100 PF AX. CER.	Q102	2N4123	G4	74LS273
		Q103-Q108	MPSA70	G5	74LS153
CP1	470UF 16V ELECT. AX.			G6	74LS86
CP2-CP7	0.01UF 50V AX. CER.	A1	74LS161	G7	74LS174
CP8	10UF 25V AX. TANT.	A2	74LS367	G8	74LS157
CP9 - CP14	0.01UF 50V AX. CER.	A3	74LS245	G9, G10	74LS157
CP15 - CP20	470UF 16V ELECT. AX.	A4	74LS245	G11	CUSTOM IC
CP21	10UF	A5	74LS74	G12	V-T GEN.
CP22-CP28	0.01UF	A10	74S74		
CP29	10UF	A11	74S04		
CP30 - CP37	0.01UF	A12	H-T		
CP38	10UF	B1	74LS244		
CP39-CP50	0.01UF	B2	CMOS RAM		
CP51	10UF	B3	MK3882		
CP52-CP57	0.01UF	B5	74LS244		
CP58	470UF 16V ELECT. AX.	B6	74LS133		
CP59 - CP64	0.01UF	B7	74LS133		
CP65	470UF	B8	74LS32		
CP66	0.1UF 50V AX. CER.	B9	74S04		
		B10	74LS74		
R101	4.7K OHM 1/4W CRBN.	B11	74LS32		
R102	1K OHM "	B12	V&H-T		
R104	1.2K OHM "				
R105	220 OHM "				
R106	22 OHM "				
R107	1K OHM "	C8	74LS08		
R108	330 OHM "	C9	74LS74		
R109	1K OHM "	C10	74S04		
R111	330 OHM "	C11, C12	74LS20		
R112	1K OHM "				
R117, R118	560 OHM "	D2	EPROM		
R119	100 OHM "	D3	EPROM		
R120	820 OHM "	D4	EPROM		
R121	470 OHM "	D5	EPROM		
R123	510 OHM "	D6	EPROM		
R124	1K OHM "	D7	EPROM		
R125	2K OHM "	D8	74LS04		
R126, R127	10 OHM "	D10-D12	74LS157		
R128	470 OHM "				
R129	1K OHM "	E3	NVR CONTROLLER		
R130	510 OHM "	E4, E5	74LS32		
R131	2K OHM "	E6	74LS138		
R133, R134	10 OHM "	E7	74LS86		
R135	470 OHM "	E8	74LS27		
R136	510 OHM "	E9	74LS04		
R137	1K OHM "				
R138	2K OHM "				
R140, R141	10 OHM "				



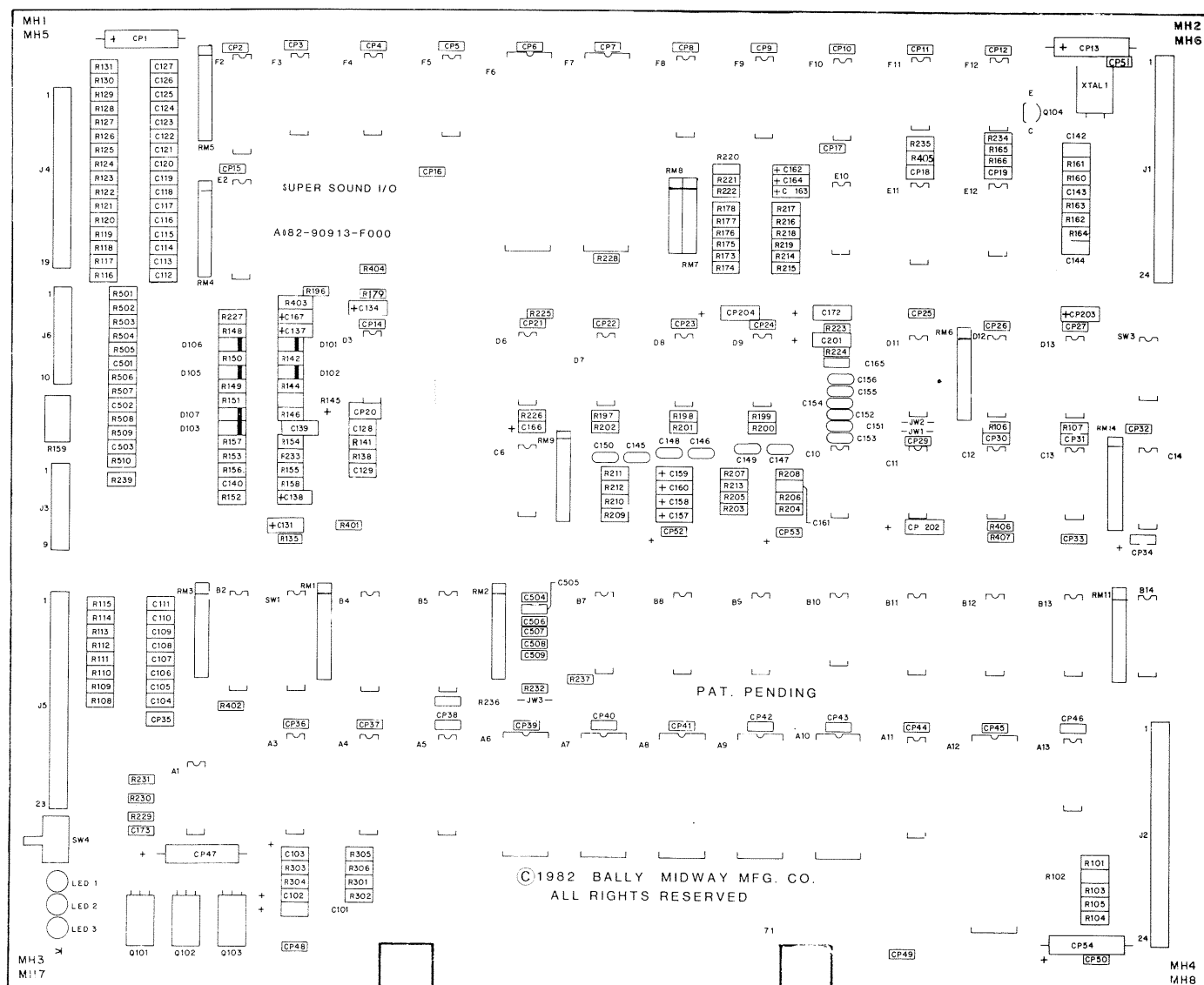
DESCRIPTION	QTY.	DESIGNATION	PART NOS.	DESCRIPTION	QTY.	DESIGNATION	PART NOS.
33 PF AX. CER.	1	C101	9986-00800-0300	74LS161	1	A1	9986-00803-1003
47 PF AX. CER.	6	C105 - C110	9986-00800-2800	74LS174	2	F7, G8	9986-00803-9800
100 PF AX. CER.	2	C203, C206	9986-00800-1000	74LS244	2	B1, B6	9986-00803-0800
390 PF AX. CER.	20	C104, C121-C137, C201, C202	9986-00800-3000	74LS245	2	A3, F3	9986-00803-0900
470 PF AX. CER.	1	C204	9986-00800-3502	74LS273	4	F4, F5, G2, G5	9986-00803-1001
820 PF AX. CER.	5	C111-C114, C200	9986-00800-3501	74LS367	1	A2	9986-00803-2200
0.01UF 50V AX. CER.	56	CP2-CP7, CP9-CP14, CP16-CP20, CP22-CP28, CP30-CP37, CP39-CP50, CP52-CP57, CP59-CP64	9986-00800-2200	MK3380	1	B5	9986-00803-7800
		C103	9986-00800-0100	4017	1	F3	9986-00803-7700
0.1MF 100V MYLAR	1	C102, CP66	9986-00800-0200	CMOS RAM	1	B2	9986-00803-2000
0.1MF 50V AX. CER.	2	CP8, CP21, CP29, CP38, CP51	9986-00800-3400	93419	1	F1	9986-00803-8100
10MF 25V AX. TANT.	5	CP1, CP15, CP58, CP65	9986-00800-3300	H-T GEN.	1	F10	9986-00803-1008
470UF 16V AX. ELECT.	4			6116	1	F10	9986-00803-9600
				V-T GEN.	1	A12	9986-00803-8900
10 OHM 1/4W CRBN.	6	R126, R127, R133, R134, R140, R141	0062-051B3-1XXX	MISC. CUSTOM	1	G11	9986-00803-9000
22 OHM "	1	R106	0062-063B3-1XXX	NVR CONTROLLER	1	E3	9986-00803-9100
100 OHM "	1	R109	0062-110B3-1XXX	EPROM	1	D2	9986-00803-9200
220 OHM "	1	R105	0062-133B3-1XXX	EPROM	1	D3	9986-00803-9000
330 OHM "	2	R108, R111	0062-144B3-1XXX	EPROM	1	D4	9986-00803-9100
470 OHM "	3	R121, R128, R135	0062-156B3-1XXX	EPROM	1	D5	9986-00803-9100
510 OHM "	2	R123, R130, R136	0062-159B3-1XXX	EPROM	1	D6	9986-00803-9200
560 OHM "	3	R117, R118	0062-162B3-1XXX	EPROM	1	D7	9986-00803-8800
820 OHM "	1	R120	0062-174B3-1XXX	8 PIN IC SOCKET	2	G3	9986-00804-3600
1K OHM "	13	R102, R107, R109, R116, R124, R129, R137, R201, R203-R207	0062-179B3-1XXX	16 PIN " "	2	G4	9986-00804-3700
		R104	0062-183B3-1XXX	20 PIN " "	3		9986-00804-3800
1.2K OHM "	1	R125, R131, R138	0062-193B3-1XXX	ICSA12, ICSG12	1		9986-00804-3700
2K OHM "	3	R101, R12, R208, R209	0062-211B3-1XXX	ICSA12A, ICSG12A	1		9986-00804-3800
4.7K OHM "	4			ICSA12, ICSE3, ICSG11	1		9986-00804-3800
4.7K 6PINS.I.P.	2	RM1, RM4	9986-00804-2400	ICSB2, ICSF6	1		9986-00804-3400
4.7K 10PIN S.I.P.	2	RM2, RM3	9986-00804-4600	ICSB3, ICSB2, ICSB3, ICSB4, ICSB5, ICSB6, ICSB7, ICSF10, ICSG3, ICSG4, ICSB5	10		9986-00804-3900
IN5817	1	D101	9986-00801-0300	FERRITE BEADS	26		9986-00804-3500
4148	1	D102	9986-00801-0100	KK100 RT. ANGLE 2 PIN CONN.	1	J2A	0316-00804-0002
2N4403	1	Q101	9986-00802-0200	KK100 RT. ANGLE 6 PIN CONN.	1	J2	9986-00804-4200
2N4123	1	Q102	9986-00802-0100	KK156 RT. ANGLE 5 PIN CONN.	1	J1A	9986-00804-4400
MPSA70	6	Q103-Q108	9986-00802-0300	KK156 RT. ANGLE 14 PIN CONN.	5	J1	9986-00804-4500
				KK100 RT. ANGLE 24 PIN CONN.	5	J3, J4, J5, J6, J7	9986-00804-4700
74LS04	3	A11, B9, C10	9986-00803-0400	ZERO OHM RESISTORS	19	JW1-JW19	9986-00804-4000
74LS04	2	D8, E9	9986-00803-1007				
74LS08	1	C8	9986-00803-1006				
74LS20	2	C11, C12	9986-00803-1004	SWITCH P.C. MOUNTING	1	SW1	9986-00804-3100
74LS27	1	E8	9986-00803-9500				
74LS32	4	B8, B11, E4, E5	9986-00803-0600	19.968MHZ CRYSTAL	1	XTAL	9986-00804-4900
7474	1	A9	9986-00803-1009				
74S74	1	A10	9986-00803-1500	BUS BAR	2	BB1, BB2	9986-00804-4100
74LS74	2	B10, C9	9986-00803-1005				
74LS86	2	E7, G7	9986-00803-9900				
74LS133	1	B7	9986-00803-1002	FLEX-PAC	5	J3, J4, J5, J6, J7	9986-00804-4800
74LS138	1	E6	9986-00803-1900				
74LS153	2	G1, G6	9986-00803-1000				
74LS157	7	D10, D11, D12, F8, F9, G9, G10	9986-00803-9700				

CROSS REFERENCE LIST

PROJECT ENG	A. GOSH	USED ON	WACKO	REVISIONS
DATE	02/14/83	SCALE	FULL	NO REQD I PER
SUPER CPU BOARD ASSY DWG.			PART NO. M051-00337 - A005	
A082-90010-6000			FRANKLIN MFG. CO.	

DESIGNATION LIST

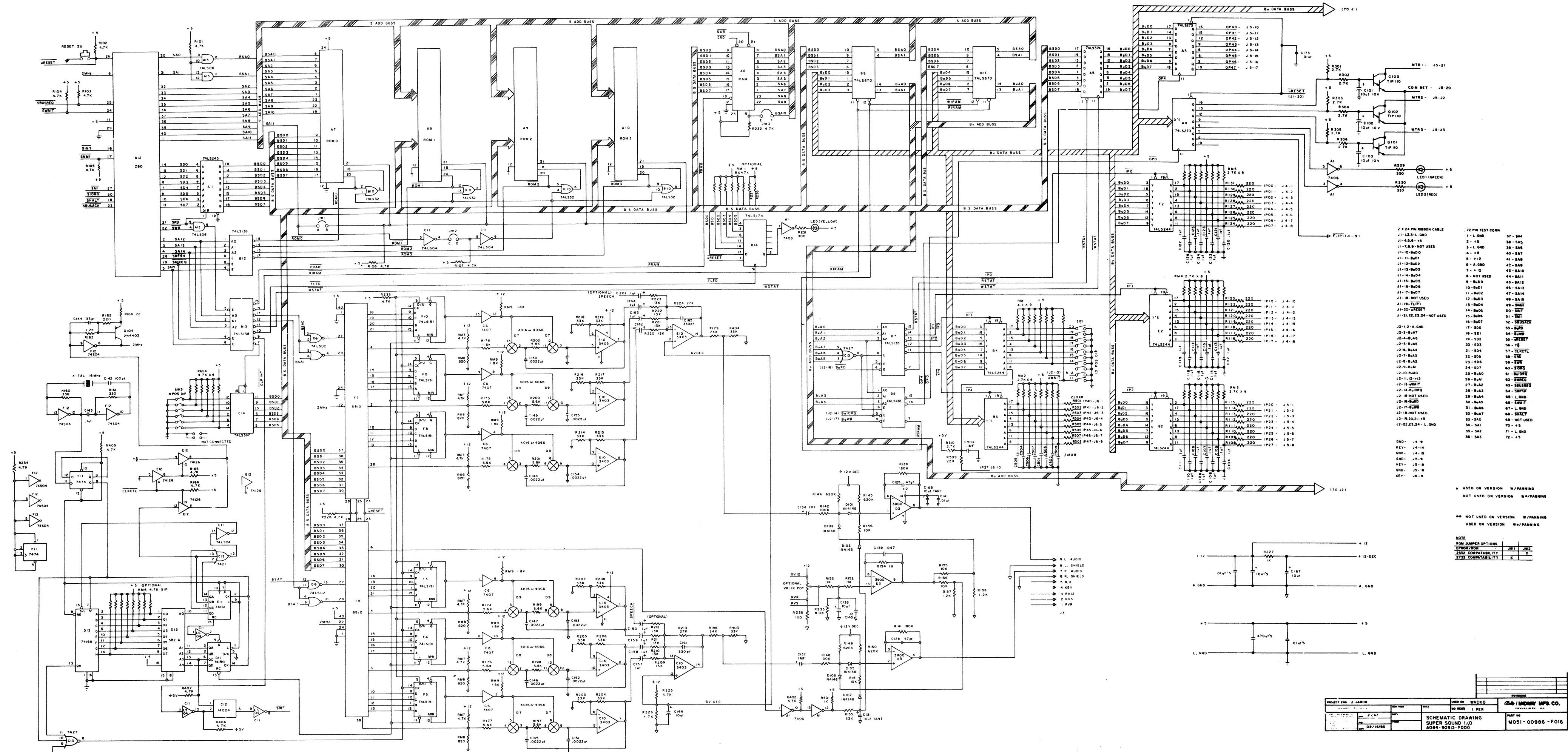
DESIGNATION	DESCRIPTION	DESIGNATION	DESCRIPTION
C101-C103	10MF 25V AX. TANT.	RM1	4.7K OHM 10 PIN S.I.P.
C104-C127	.1MF 50V AX. CER.	RM2-RM5	2.7K " 10 PIN S.I.P.
C128-C129	47PF 50V AX. CER.	RM7	4.7K " 8 PIN S.I.P.
C131	10MF 25V AX. TANT.	RM8	820 " 8 PIN S.I.P.
C134	.1MF 20V AX. TANT.	RM9	1.8K " 10 PIN S.I.P.
C137	" " " "	RM14	4.7K " 10 PIN S.I.P.
C138	10MF 25V AX. TANT.		
C139	.047MF 100V MYLAR	D101-D103	IN4148
C140	.01MF 50V AX. CER.	D105-D107	IN4148
C142	100PF 50V AX. CER.		
C143	.1MF 50V AX. CER.	Q101-Q103	TIP 110
C144	33PF 50V AX. CER.	Q104	2N4403
C145-C156	.0022MF 100V 10% MYLAR	7406	74LS08
C157-C159	IMF 20V AX. TANT.	" A4	74LS273
C161	330PF 50V AX. CER.	" A5	74LS374
C162-C164	IMF 20V AX. TANT.	" A6	1K X 8 RAM
C165	330PF 50V AX. CER.	" A7	ROM/EPROM 0
C166, C167	10MF 25V AX. TANT.	" A8	" " " "
C172	10MF 25V AX. TANT.	" A9	" " " "
C173	.01MF 50V AX. CER.	" A10	" " " "
C501-C509	.1MF 50V AX. CER.	" A11	74LS245
CP1	470MF 16V AX. ELECT.	" A12	Z-80 CPU
CP2-CP12	.01MF 50V AX. CER.	" AI3	74LS08
CP13	470MF 16V AX. ELECT.	" B2, B4, B5	74LS244
CP14-CP19	.01MF 50V AX. CER.	" B7, B8	74LS138
CP20	10MF 25V AX. TANT.	" B9	74LS670
CP21-CP27	.01MF 50V AX. CER.	" B10	74LS32
CP29-CP33	.01MF 50V AX. CER.	" B11	74LS670
CP34	10MF 25V AX. TANT.	" B12, B13	74LS138
CP35-CP46	.01MF 50V AX. CER.	" B14	74LS174
CP47	470MF 16V AX. ELECT.	" C6	7407
CP48-CP51	.01MF 50V AX. CER.	" C10	MC3403
CP52, CP53	10MF 25V AX. TANT.	" C11	74LS04
CP54	470MF 16V AX. ELECT.	" C12	MCI4024
CP202-CP204	10MF 25V AX. TANT.		
R101-R107	4.7K OHM 1/4W 5% CARBON	ICCS13	7427
R108-R131	220 " " " "	" C14	74LS367
R135	33K " " " "	" D3	LM3900
R138	180K " " " "	" D6	74LS02
R141	180K " " " "	" D7-D9	MCI4016
R142	100K " " " "	" D11	74190
R144, R145	620K " " " "	" D12	PROMSB2A
R146	10K " " " "	" D13	74166
R148	100K " " " "	" E2	74LS244
R149, R150	620K " " " "	" E10	MC3403
R151	10K " " " "	" E11	74161
R152	IMEG. " " " "	" E12	74126
R153	1K " " " "	" F2	74LS244
R154	IMEG. " " " "	" F3-F5	74LS191
R155, R156	10K " " " "	" F6, F7	AY-3-8910
R157, R158	1.2K " " " "	" F8, F10	74LS191
R160, R161	330 " " " "	" F11	7474
R162	2.20 " " " "	" F12	74S04
R163	1.2K " " " "		
R164	22 " " " "	ICSA6-ICSA10	24 PIN IC SOCKET
R165, R166	4.7K " " " "	" A12	40 PIN " "
R173-R178	5.6K " " " "	" D12	16 PIN " "
R179	24K " " " "	" F6, F7	40 PIN " "
R186	24K " " " "		
R197-R202	5.6K OHM 1/4W 5% CARBON	J1, J2	24 PIN KK100 RT. ANGLE CONN.
R203-R208	33K " " " "	J3	9 PIN KK100 RT. ANGLE W/ 4 OMIT
R209-R211	13K " " " "	J4	19 PIN KK100 RT. ANGLE W/ 14 OMIT
R213	27K " " " "	J5	23 PIN KK100 RT. ANGLE W/ 19 OMIT
R214-R219	33K " " " "	J6	10 PIN KK100 RT. ANGLE W/ 8 OMIT
R220-R222	13K " " " "		
R224	27K " " " "		
R225, R226	4.7K " " " "		
R227	1K " " " "		
R228	4.7K " " " "		
R231	300 " " " "	JW1, JW2	JUMPER WIRE
R232	4.7K " " " "		
R233	3K " " " "	LED 3	YELLOW LED
R234, R235	4.7K " " " "		
R239	100 " " " "	SW1	10 POSITION DIP
R301-R306	2.7K " " " "	SW3	8 " " "
R401	1K " " " "	SW4	PUSH BUTTON SW.
R402	4.7K " " " "		
R403-R404	33K " " " "	XTAL 1	16 MHZ CRYSTAL
R405-R407	4.7K " " " "		
R501-R509	220 " " " "	MHQ101-MHQ103	SNAP
R510	2.7K " " " "	MH1-MH4	SPACER
		MH5-MH8	6-32 X 6 M.S.



CROSS REFERENCE LIST

DESCRIPTION	QTY	DESIGNATION	PART NOS.	DESCRIPTION	QTY	DESIGNATION	PART NOS.
33PF 50V 5% AX. CER.	1	C144	0986-00800-0900	74LS08	1	IC A13	0986-00803-7300
47 PF 50V AX. CER.	2	C128, C129	0986-00800-2800	7427	1	" C13	0986-00803-7200
100PF 50V 5% AX. CER.	1	C142	0986-00800-1000	74LS32	1	" B10	0986-00803-6100
330PF 50V AX. CER.	2	C161, C165	0986-00800-1300	7474	1	" F11	0986-00803-6700
.0022MF 100V 10% MYLAR	12	C145-C156	0986-00800-1200	74126	1	" E12	0986-00803-6800
.047MF 100V MYLAR	1	C139	0986-00800-2600	74LS138	4	" B7, B8, B12, B13	0986-00803-6500
.01MF 50V AX. CER.	47	CP2-CP12, CP14-CP19, CP21-CP27, CP29-CP33, CP35-CP46, CP48-CP51, CP140, C173	0986-00800-2000	74161	1	" E11	0986-00803-5100
.1MF 50V AX. CER.	34	CP104-C127, C143, C501-C509	0986-00800-1100	74166	1	" D13	0986-00803-5300
IMF 20V AX. TANT.	8	C134, C137, C157-C159, C162-C164	0986-00800-1400	74LS174	1	" B14	0986-00803-7500
10MF 25V AX. TANT.	15	CP34, CP52-CP53, CP202-CP204, CP20, CP101-C103, C131, C138, C166, C167, C172	0986-00800-0700	74LS191	1	" D11	0986-00803-9400
470 MF 16V AX. ELECT.	4	CP1, CP13, CP47, CP54	0986-00800-2700	74LS191	6	" F3-F5, F8-F10	0986-00803-5600
				74LS244	5	" B2, B4, B5, E 2, F2	0986-00803-4800
				74LS245	1	" A11	0986-00803-6400
				74LS273	1	" A4	0986-00803-4700
				74LS367	1	" C14	0986-00803-7000
				74LS374	1	" A5	0986-00803-4600
				74LS670	2	" B9, B11	0986-00803-6300
22 OHM 1/4W 5% CARBON	1	R164	0062-06383-1XXX	AY-3-8910	2	" F6, F7	0986-00803-8500
100 " " " "	1	R239	0062-11083-1XXX	LM3900	1	" D3	0986-00803-4900
220 " " " "	34	R108-R131, R162, R501-R509	0062-13383-1XXX	MC3403	2	" C10, E10	0986-00803-5000
300 " " " "	1	R231	0062-14183-1XXX	MCI4016	3	" D7-D9	0986-00803-6200
330 " " " "	2	R160-R161	0062-14483-1XXX	MCI4024	1	" C12	0986-00803-7100
1K " " " "	3	R153, R227, R401	0062-17983-1XXX	PROM SB2-A	1	" A6	0986-00803-8200
1.2K " " " "	3	R157, R158, R163	0062-18383-1XXX	RAM 1K X 8	1	" A7	0986-00803-8000
3K " " " "	7	R301-R306, R510	0062-19983-1XXX	ROM/EPROM 0	1	" A8	EPROM/ROM
4.7K " " " "	19	R233	0062-20183-1XXX	" " " "	1	" A9	OPTIONS KIT
				" " " "	1	" A10	0337-00803-0002
				" " " "	1	" A12	
5.6K " " " "	12	R173-R178, R197-R202	0062-21583-1XXX	Z-80 (3880)	1		0986-00803-5500
10K " " " "	4	R146, R151, R155, R156	0062-22783-1XXX	16 PIN IC SOCKET	1	ICSD12	0986-00804-1400
13K " " " "	6	R209-R211, R220-R222	0062-23383-1XXX	24 PIN " "	5	ICSA6-ICSA10	0986-00804-1600
24K " " " "	2	R179, R196	0062-24583-1XXX	40 PIN " "	3	ICSA12, ICSF6, ICSF7	0986-00804-1500
27K " " " "	2	R213, R224	0062-24783-1XXX	9 PIN KK100 RT. ANGLE W/4 OMIT	1	J3	3000-16366-0901
33K " " " "	15	R135, R203-R208, R214-R219, R403-R404	0062-25183-1XXX	10 PIN KK100 RT. ANGLE W/8 OMIT	1	J6	3000-16366-1001
				19 PIN KK100 RT. ANGLE W/14 OMIT	1	J4	3000-16366-1901
100K " " " "	2	R142, R148	0062-27583-1XXX	23 PIN KK100 RT. ANGLE W/19 OMIT	1	J5	3000-16366-2301
180K " " " "	2	R138, R141	0062-28783-1XXX	24 PIN KK100 RT. ANGLE	2	J1, J2	0986-00804-4700
620K " " " "	4	R144, R145, R149, R150	0062-31383-1XXX	JUMPER WIRE	2	JW1, JW2	0986-00804-4000
IMEG. " " " "	2	R152, R154	0062-32383-1XXX	YELLOW LED	1	LED 3	0986-00804-2000
				8 POSITION DIP SW.	1	SW3	0986-00805-0900
820 OHM 8 PIN S.I.P.	1	RM8	0986-00805-0800	10 POSITION DIP SW.	1	SW1	0986-00805-1000
1.8K " 10 PIN S.I.P.	1	RM9	0986-00805-0600	PB SWITCH	1	SW4	0986-00804-1700
2.7K " 10 PIN S.I.P.	4	RM2-RM5	0986-00805-0500				
4.7K " 8 PIN S.I.P.	1	RM7	0986-00805-0400				
4.7K " 10 PIN S.I.P.	2	RM1, RM4	0986-00805-0300				
IN4148	6	D101-D103, D105-D107	0986-00801-0200	16 MHZ CRYSTAL W/3RD LEAD	1	XTAL 1	0986-00805-1100
2N4403	1	Q104	0986-00802-0500				
TIP 110	3	Q101-Q103	0986-00802-0400	SNAPS	3	MHQ101-MHQ103	0017-00007-0134
				SPACER	4	MH1-MH4	0986-00702-00XF
74LS02	1	D6	0986-00803-7400	6-32 X 6 M.S.	4	MH5-MH8	0017-00101-0153
74LS04	1	C11	0986-00803-6900				
74S04	1	F12	0986-00803-6600	SUPER SOUND I/O BOARD	1		A080-90913-F000
7406	1	A1	0986-00803-7600				
7407	1	C6	0986-00803-5900				

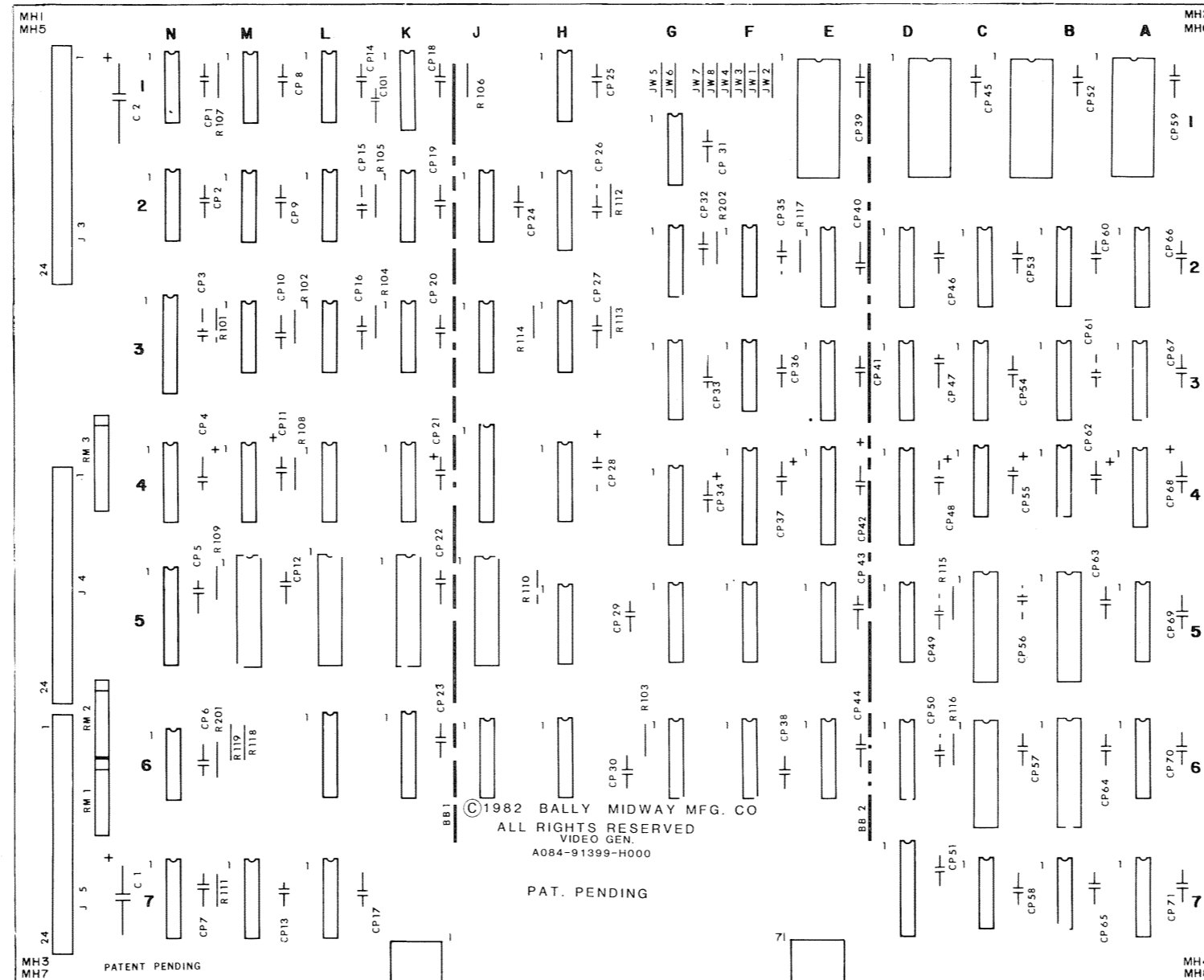
PROJECT ENG: C. MEDNICK		USED ON WACKO		Bally / MIDWAY	
DO NOT SCALE DIMS	HEAT TREAT	SCALE	FULL	NO. REQ'D	PER I
TYP. TOLERANCE UNLESS OTHERWISE SPECIFIED	DRN: RLW	DATE	02/14/83	ASSEMBLY DRAWING SUPER SOUND I/O P.C. BOARD A082-90913-F000	
				M051-00337-A006	



- 72 PIN TEST CONN
- | | |
|--------------|-----------|
| 1 - L GND | 37 - SA4 |
| 2 - +5 | 38 - SA5 |
| 3 - L GND | 39 - SA6 |
| 4 - +5 | 40 - SA7 |
| 5 - +12 | 41 - SA8 |
| 6 - A GND | 42 - SA9 |
| 7 - +12 | 43 - SA10 |
| 8 - NOT USED | 44 - BA11 |
| 9 - BUD0 | 45 - BA12 |
| 10 - BUD1 | 46 - SA13 |
| 11 - BUD2 | 47 - SA14 |
| 12 - BUD3 | 48 - SA15 |
| 13 - BUD4 | 49 - SW1 |
| 14 - BUD5 | 50 - SW2 |
| 15 - BUD6 | 51 - SW3 |
| 16 - BUD7 | 52 - SW4 |
| 17 - BUD8 | 53 - SW5 |
| 18 - SW6 | 54 - SW6 |
| 19 - SW7 | 55 - SW7 |
| 20 - SW8 | 56 - SW8 |
| 21 - SW9 | 57 - SW9 |
| 22 - SW10 | 58 - SW10 |
| 23 - SW11 | 59 - SW11 |
| 24 - SW12 | 60 - SW12 |
| 25 - SW13 | 61 - SW13 |
| 26 - SW14 | 62 - SW14 |
| 27 - SW15 | 63 - SW15 |
| 28 - SW16 | 64 - SW16 |
| 29 - SW17 | 65 - SW17 |
| 30 - SW18 | 66 - SW18 |
| 31 - SW19 | 67 - SW19 |
| 32 - SW20 | 68 - SW20 |
| 33 - SW21 | 69 - SW21 |
| 34 - SW22 | 70 - SW22 |
| 35 - SW23 | 71 - SW23 |
| 36 - SW24 | 72 - SW24 |
- NOTE: USED ON VERSION W/PANNING / NOT USED ON VERSION W/PANNING
- NOTE: ROW JUMPER OPTIONS
- | TRIP POINT | J1 | J2 |
|--------------------|----|----|
| 2532 COMPATIBILITY | X | X |
| 2732 COMPATIBILITY | X | X |

DESIGNATION LIST

DESIGNATION	DESCRIPTION	DESIGNATION	DESCRIPTION	DESIGNATION	DESCRIPTION
CI, 2	100 μf AX. ELECT	IC D 1	EPROM	IC L 1	74 LS 20
CI01	100 pf AX. CER.	IC D 2	74 LS194	IC L 2	7408
		IC D 3	74 LS194	IC L 3	7474
CP1-3, 5-10		IC D 4	74 LS273	IC L 4	74 LS283
CP12-20, 22-27,		IC D 5	74 LS157	IC L 5	422
CP29-33, 35, 36,		IC D 6	74 LS157	IC L 6	2114-2
CP38-41, 43-47, .01μf AX. CER.		IC D 7	74 LS273	IC L 7	74 LS157
CP49-54, 56-61,		IC E 2	74 LS194	IC M 1	7430
CP63-67, 69-71.		IC E 3	74 LS194	IC M 2	7432
		IC E 4	74 LS374	IC M 3	74 S 74
		IC E 5	74 LS157	IC M 4	74161
		IC E 6	74 LS157	IC M 5	422
				IC M 7	74 LS157
		IC F 2	7400	IC N 1	7430
		IC F 3	74 S 04	IC N 2	7427
CP4, 11, 21, 28, 34,		IC F 4	74 LS374	IC N 3	74 LS273
CP37, 42, 48, 55, 10μf 25V AX. TANT.		IC F 5	74 LS157	IC N 4	74 LS283
CP62, 68.		IC F 6	74 LS157	IC N 5	74 LS245
				IC N 6	7404
				IC N 7	74 LS157
		IC G 1	74 LS 86	ICS A1, B1, C1, D1.	28 PIN IC SOCKET
		IC G 2	74 LS 20	ICS B5, 6, C5, 6,	22 PIN IC SOCKET
		IC G 3	74 LS 283	J5, K5, L5, M5.	
		IC G 4	74 LS 283	ICS K6, L6.	18 PIN IC SOCKET
		IC G 5	74 LS 283	J3, 4, 5	24 PIN RIGHT ANGLE CONN.
		IC G 6	74 LS157	JW1-JW8	JUMPER WIRE
		IC H 1	74 LS 86	BB1, 2	BUSS BAR
		IC H 2	74174	PCMHI-4	PC BD SPACER
		IC H 3	74 S 74	PCMHS-8	PC MTG SCREW
		IC H 4	74175	A080-91399-H000	VID. GEN. PC
		IC H 5	74174		
		IC H 6	74 LS157		
		IC J 2	7430		
		IC J 3	7430		
		IC J 4	74 LS 273		
		IC J 5	422		
		IC J 6	74 LS157		
		IC K 1	74161		
		IC K 2	7430		
		IC K 3	7474		
		IC K 4	74161		
		IC K 5	422		
		IC K 6	2114-2		
IC C 1	EPROM				
IC C 2	74 LS194				
IC C 3	74 LS194				
IC C 4	74 LS32				
IC C 5	422				
IC C 6	422				
IC C 7	74 LS32				



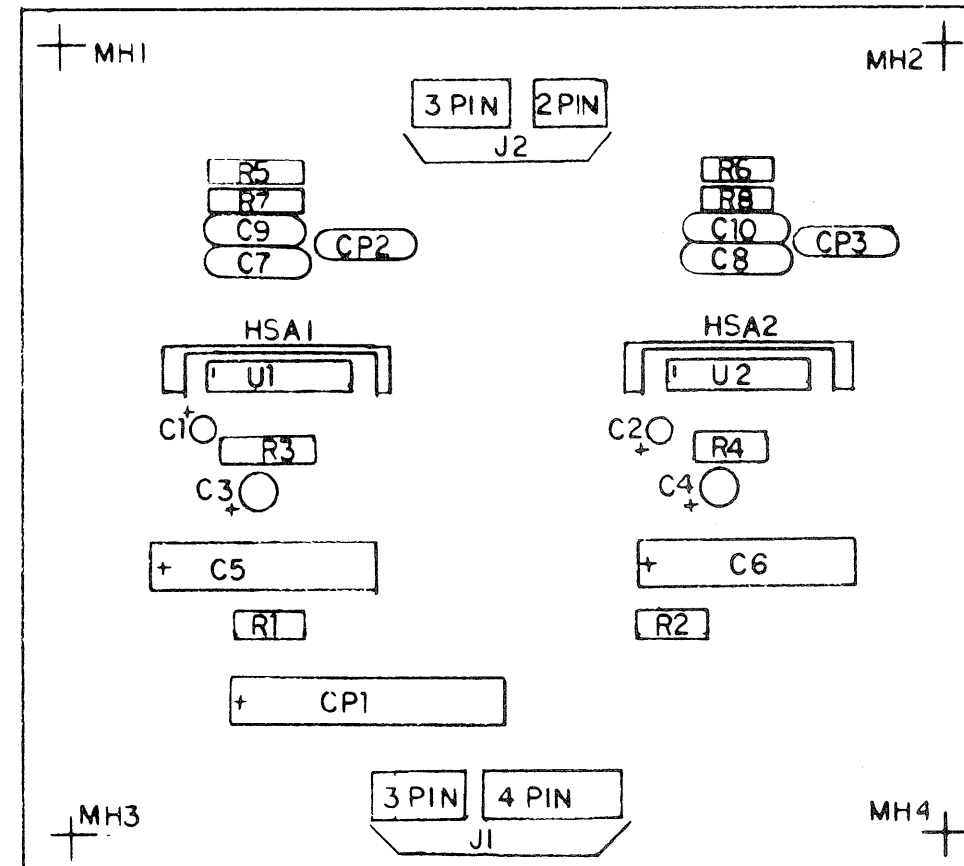
CROSS REFERENCE LIST

DESCRIPTION	Q'TY	DESIGNATION	PART NO.
100 PF 50V AX. CER.	60	C101	0986-00800-1000
01 μf 50V AX. CER.		CP1-3, CP5-10,	0986-00800-2500
		CP12-20, CP22-27,	
		CP29-33, CP35, 36,	
		CP38-41, CP43-47,	
		CP49-54, CP56-61,	
		CP63-67, CP69-71.	
10 μf 25 V AX. TANT.	11	CP4, 11, 21, 28, 34, 37,	0986-00800-2400
		CP42, 48, 55, 62, 68.	
100 μf 25 V AX. ELECT.	2	C1, 2.	0986-00800-1800
1 K 1/4 W CRBN. FLM.	21	R101-119, 201, 202.	0062-17983-1XXX
1 K 8 PIN SIP	2	RM1, 2.	0986-00804-1100
1 K 10 PIN SIP	1	RM3	0986-00804-1000
2114-2	2	K6, L6.	0986-00803-2300
7400	1	F2	0986-00803-2800
7404	1	N6	0986-00803-8300
74 S 04	1	F3	0986-00803-3100
7408	1	L2	0986-00803-3200
74 LS20	2	G2, L1	0986-00803-3400
7427	1	N2	0986-00803-3500
7430	5	J2, J3, K2, M1, N1	0986-00803-3600
7432	1	M2	0986-00803-4400
74 LS32	4	B4, 7, C4, 7,	0986-00803-3700
7474	2	K3, L3	0986-00803-4500
74 S 74	2	H3, M3	0986-00803-4100
74 LS86	2	G1, H1	0986-00803-4200
74 LS157	18	A2, 3, 4, 5, 6, 7, D5, 6,	0986-00803-2400
		E5, 6, F5, 6, G6, H6,	
		J6, L7, M7, N7.	
74161	3	K1, K4, M4.	0986-00803-2500
74174	2	H2, 5	0986-00803-2600
74175	1	H4	0986-00803-2700
74 LS194	8	B2, 3, C2, 3, D2, 3, E2, 3.	0986-00803-2900
74 LS245	1	N5	0986-00803-3000
74 LS273	4	D4, 7, J4, N3	0986-00803-3800
74 LS283	5	G3, 4, 5, L4, N4,	0986-00803-3900
74 LS374	2	E4, F4	0986-00803-4000
93422	4	J5, K5, L5, M5	0986-00804-0800
93422	4	B5, B6, C5, C6	0986-00803-1010
EPROM	1	A1 (VGA)	ROM/EPROM OPTIONS KIT 0337-00803-0003
EPROM	1	B1 (VGB)	
EPROM	1	C1 (VGC)	
EPROM	1	D1 (VGD)	
JUMPER WIRE	8	JW1-8	0986-00805-0200
BUSS BAR	2	BB1, 2	0986-00804-0900
P.C. BOARD	1		A080-91399-E000
24 PIN RIGHT ANGLE CONN.	3	J3, 4, 5	0986-00804-4700
28 PIN SOCKET	4	ICS A1, B1, C1, D1	0986-00804-0300
22 PIN SOCKET	8	ICS B5, 6, C5, 6, J5, K5, L5, M5	0986-00804-0700
18 PIN SOCKET	2	ICS K6 L6	0986-00804-0600
PC BD SPACER	4	PCMHI-PCM4	0986-00701-00XF
PC MTG SCREW	4	PCMHS-PCM8	0017-00101-0339

PROJECT ENG. A. GOSH	USED ON WACKO	Bally / MIDWAY MFG. CO.
DO NOT SCALE DIMS	SCALE FULL	FRANKLIN PK., ILL.
DIM TOLERANCES UNLESS SPECIFIED	NO. REQ'D ONE PER	PART NO. M051-00337-A007
DATE 02/14/83	VIDEO GENERATOR P.C. ASSY DWG	A082-91399-H000

DESIGNATION LIST

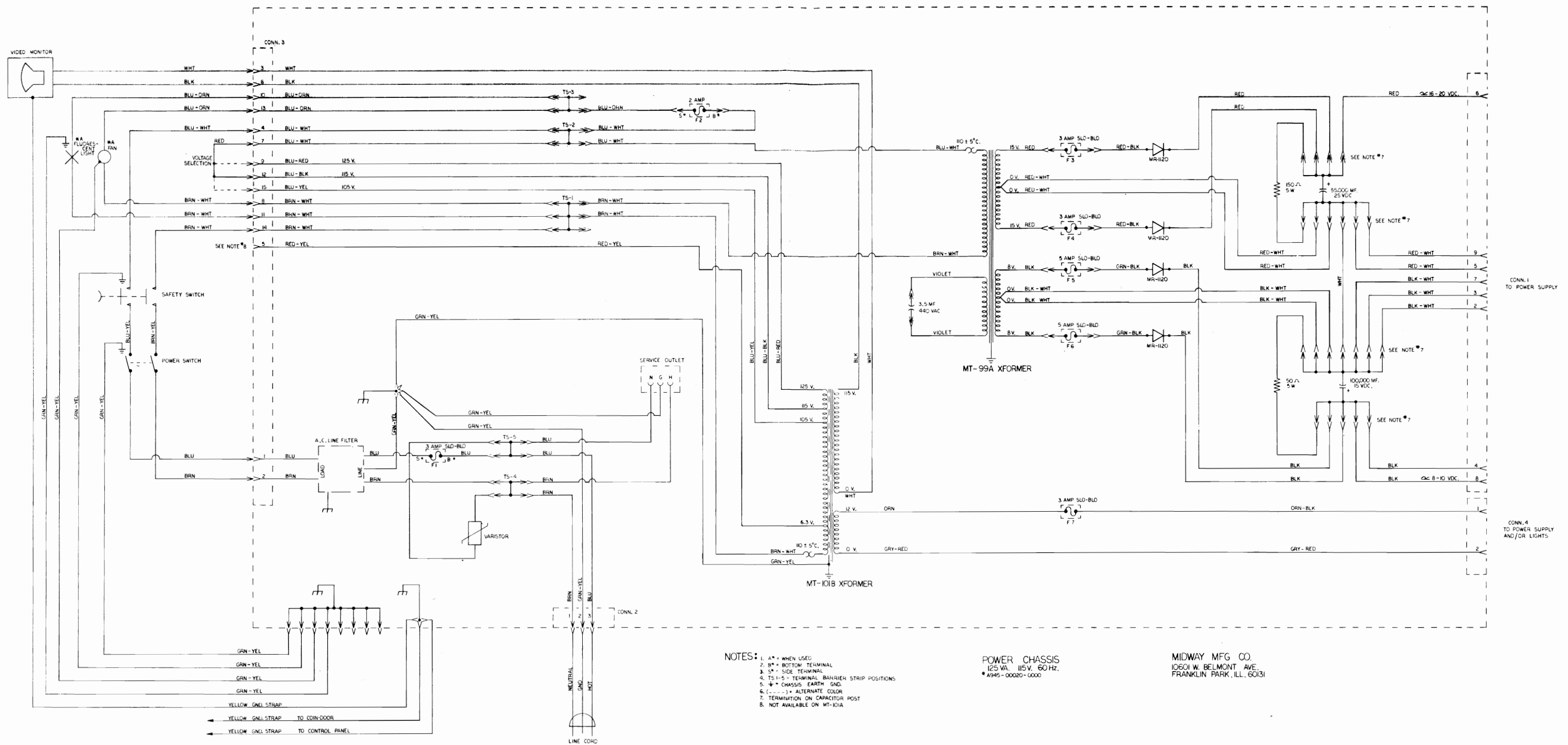
DESIGNATION	DESCRIPTION
C1,C2	4.7mf 25v rd.tant.
C3,C4	22mf 6v " "
C5,C6	470mf 6v ax.elect.
C7-C10	.1mf 50v ax.cr.
CP1	220mf 25v ax.elect.
CP2,CP3	.1mf 50v ax.cr.
R1,R2	2.7K Ω 1/4w 5% CRBN.
R3,R4	27 Ω " " " "
R5-R8	1 Ω 1/2w " "
U1,U2	MB3730
J1	3 PIN STRT.KK156
J2	4 " " " "
HSA1,2	HEATSINK ASSY.
MHI-MH4	HEYCO BUSHING



CROSS REFERENCE LIST

DESCRIPTION	QTY	DESIGNATION	PART NO
.1mf 50v ax.cr.	6	C7-C10, CP2,CP3	0986-008001100
4.7mf 25v rd.tant.	2	C1,C2	0986-008003100
22mf 6v " "	2	C3,C4	0986-008001600
220mf 25v ax.elect.	1	CP1	0986-008003200
470mf 6v " "	2	C5,C6	0986-008001700
1 Ω 1/2w 5%	4	R5-R8	0062-026D3-1XXX
27 Ω 1/4w " "	2	R3,R4	0062-068B3-1XXX
2.7K " " " "	2	R1,R2	0062-199B3-1XXX
MB3730	2	U1,U2	0066-188XX-XX4X
2 PIN STRT.KK156	1	J2	3000-16367-0200
3 " " " "	2	J1,J2	3000-16367-0300
4 " " " "	1	J1	3000-16367-0400
HEATSINK ASSY.	2	HSA1, HSA2	A986-00010-E000
HEYCO BUSHING	4	MHI-MH4	0017-00042-0014
PC BOARD	1		A080-90910-E000

PROJECT ENG. C.MEDNICK		THIS DWG. IS CONFIDENTIAL & PROPERTY OF MIDWAY MFG. CO.			
DIM. TOLERANCES UNLESS OTHERWISE SPEC. CONCENTRICITY T.I.R. .002 FRACTIONAL $\pm 1/64$ DECIMAL $\pm .005$ HOLE DIA. $+ .002 - .000$ ANGLE $\pm 1/2^\circ$ DO NOT SCALE DWG		FIRST USED ON TRON DRN TJK MECHCHK ELEC. CHK C.M.M.	DATE 9-1-82 SCALE FULL	MIDWAY MFG. CO. FRANKLIN PK., IL. 60131 A BALLY CO.	
DUAL PWR. AMP. ASSY A080-90910-E000				REVISIONS PART NO. M051-00986-E010	



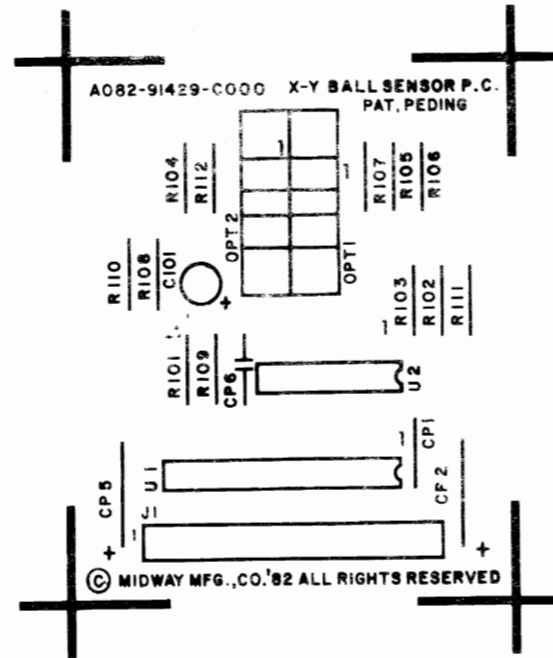
- NOTES:
1. A* = WHEN USED
 2. B* = BOTTOM TERMINAL
 3. S* = SIDE TERMINAL
 4. TS 1-5 = TERMINAL BARRIER STRIP POSITIONS
 5. * = CHASSIS EARTH GND.
 6. (---) = ALTERNATE COLOR
 7. TERMINATION ON CAPACITOR POST
 8. NOT AVAILABLE ON MT-101A

POWER CHASSIS
125 VA, 115V, 60 Hz.
#A945-00020-0000

MIDWAY MFG CO.
10601 W. BELMONT AVE.
FRANKLIN PARK, ILL. 60131

DESIGNATION LIST

DESIGNATION NO.	DESCRIPTION
C 101	4.7 µf TANT 16V RAD.
CP 1	.01 µf 50V AX. CER.
CP 2	10 µf 16V AX. ELECT.
CP 5	10 µf 16V AX. ELECT.
CP 6	.01 µf 50V AX. CER.
R 101	4.7 K 1/4 W 5%
R 102	4.7 K " "
R 103	200 K " "
R 104	200K " "
R 105	6.2 K " "
R 106	120 ohm " "
R 107	30 K " "
R 108	91 K " "
R 109	200 K " "
R 110	200 K " "
R 111	4.7 K " "
R 112	6.2 K " "
OPT 1, OPT 2	OPTICAL SENSORS
U 1	74 LS491
U 2	LM 339
J 1	15 PIN KK-100 RT. ANGLE PIN 13 OMITTED
SCREW	5-40 X 6 SLT RND MS NY NT
PLATE	PLATE - NUT FIN.
A080-91429-C000	P.C. BOARD

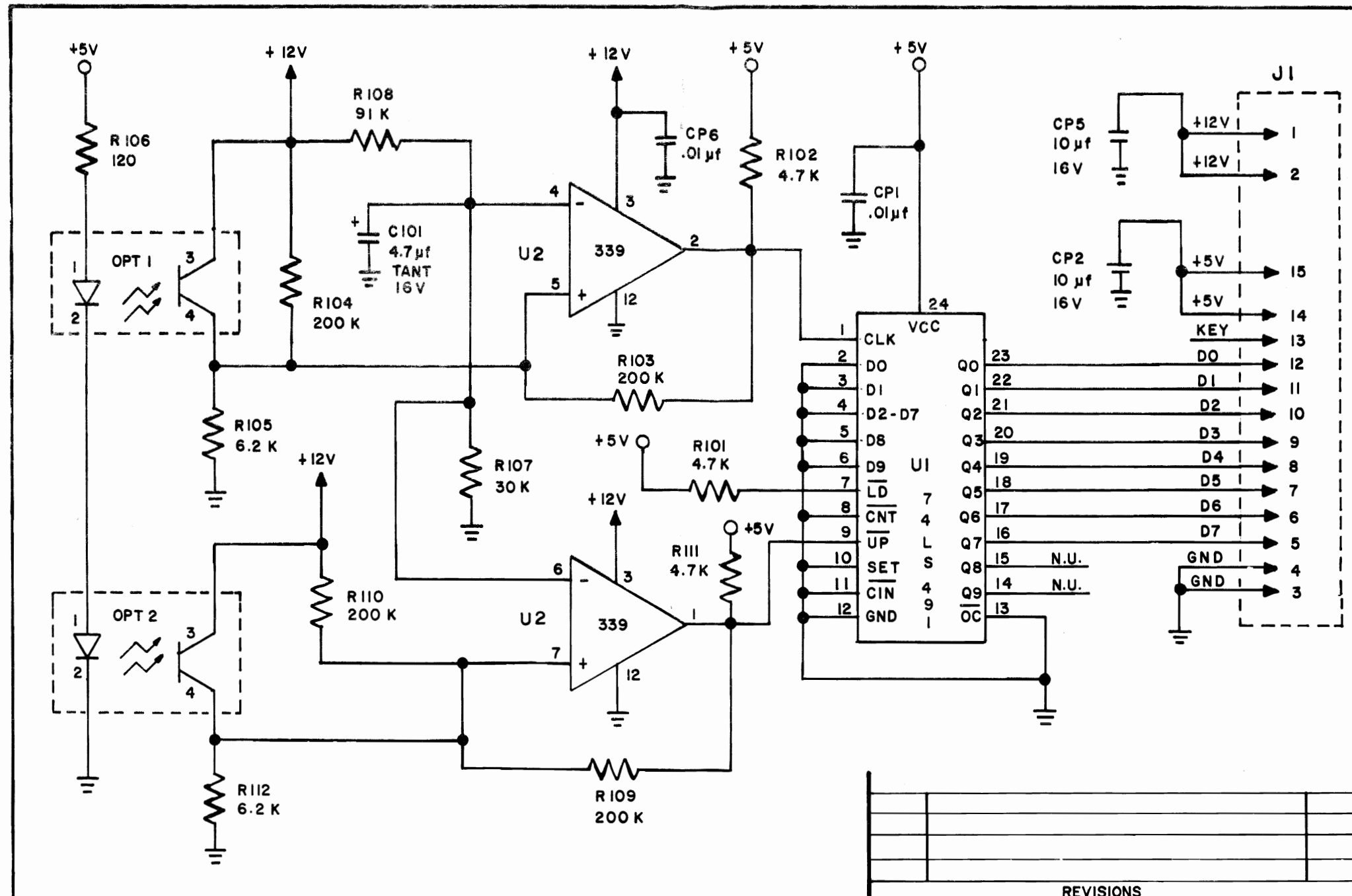


CROSS REFERENCE LIST

DESCRIPTION	Q'TY	DESIGNATION NO.	PART NO.
.01 µf 50V AX. CER.	2	CP1, CP6	0628-00800-0100
4.7 µf 16V RAD. TANT.	1	C 101	0628-00800 0200
10 µf 16V AX. ELECT.	2	CP2, CP5	0628-00800-0300
120 ohm 1/4 W 5%	1	R 106	0062-116 B3-1XXX
4.7 K " "	3	R 101, R102, R111	0062-211 B3-1XXX
6.2 K " "	2	R 105, R112	0062-217 B3-1XXX
30 K " "	1	R 107	0062-249 B3-1XXX
91 K " "	1	R 108	0062-273 B3-1XXX
200 K " "	4	R 103, R104, R109, R110	0062-289 B3-1XXX
74 LS491	1	U 1	0628-00803-2700
LM 339	1	U 2	0628-00803-2900
OPTICAL SENSORS	2	OPT 1, OPT 2	0639-00804-0001
15 PIN KK-100 RT. ANGLE PIN 13 OMITTED	1	J 1	3000-16366-1502
SCREW	4	—	0017-00101-0084
PLATE-NUT	2	—	0643-00112-0080
P.C BOARD	1	—	A080-91429-C000

REVISIONS		

PROJECT ENG: J. BOYDSTON			USED ON WACKO		MIDWAY MFG. CO. FRANKLIN PK. ILL.
DO NOT SCALE DWG.		HEAT TREAT	SCALE FULL	NO. REQ'D 1 PER	
DIM. TOLERANCES UNLESS SPECIFIED		DRN. <i>TBE</i>	MAT'L.	ASSEMBLY DWG X-Y BALL SENSOR A082-91429-C000	
CONCENTRICITY T.I.R. 003		CKD.	FINISH		
FRACTIONAL 1/64		DATE 02/8/83			
DECIMAL 005					
HOLE DIA +.002-.000				PART NO. M051-00114-C010	



REVISIONS	

PROJECT ENG: J. BOYDSTON		USED ON WACKO		<i>Bally</i> / MIDWAY MFG. CO. FRANKLIN PK. ILL.			
DO NOT SCALE DWG.		HEAT TREAT	SCALE FULL			NO. REQ'D 1 PER	
DIM. TOLERANCES UNLESS SPECIFIED		MAT'L.		SCHEMATIC DWG X-Y BALL SENSOR P.C. A082-91429-C000			
CONCENTRICITY TYP. .003		FINISH				PART NO. M051-00114 - C011	
FRACTIONAL 1/64							
DECIMAL005							
HOLE DIA +.002 - .000							
DRM. TBB	CKD.	DATE 02/8/83					

WACKO	
OPTION SWITCH SETTINGS	
SWITCH NO. 1 — AT B3 — LOCATED ON SOUND I/O P.C. BOARD	
DURING GAME PLAY:	SW#1 SW#2 SW#3 SW#4 SW#5 SW#6 SW#7 SW#8 SW#9 SW#10 NOT NOT NOT NOT NOT NOT NOT NOT USED USED USED USED USED USED USED USED
UPRIGHT/MINI COCKTAIL TABLE	ON OFF
FREEZE VIDEO **NORMAL OPERATION	ON OFF
SWITCH NO. 3 — AT D14 — LOCATED ON SOUND I/O P.C. BOARD	
**NORMAL OPERATION SOUND I/O DIAGNOSTIC MODE	SW#1 SW#2 SW#3 SW#4 OFF ON
**NORMAL OPERATION RAM/ROM TEST INDICATES TEST RESULTS VIA YELLOW LED ON SOUND I/O BOARD: FAST FLASH = BAD ROM SLOW FLASH = BAD RAM	OFF ON
**NORMAL OPERATION OSCILLATOR TEST	OFF ON
**NORMAL OPERATION FILTER TEST	OFF ON
* NO EFFECT IF SW#1 OF SWITCH NO. 3 IS IN THE "OFF" POSITION. ** FACTORY RECOMMENDED SETTINGS.	
PART NO. M051-00337-A007	

THE REMAINDER OF YOUR NEW GAME'S MOST COMMON OPTION SETTINGS ARE CONDUCTED DURING THE **MACHINE SETUP** PORTION OF THE SELF-TEST MODE AND WILL BE COVERED IN DETAIL IN THAT SECTION OF YOUR MANUAL.