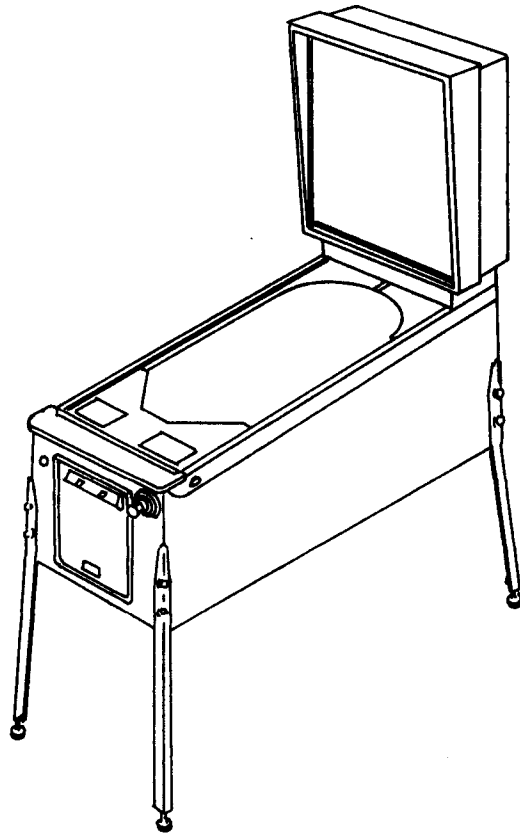


GamePlan

PINBALL

MODEL SPECIFICS



Andromeda

RULES OF PLAY & SCORING – ANDROMEDA

Top lanes score 3,000 points and advances bonus, lighting top lanes advances bonus multiplier. Stand up targets score 1,000 points and lights power bumper. Left saucer lane scores 30,000 points and locks ball for multiple ball play. Left single drop target scores 5,000 points advances bonus and scores lighted value.

Drop targets score 3,000 points each and advances bonus. All targets first time down score 50,000 points and advances spinner value. Second time scores 50,000 points advance spinner and lights right return lane for possible extra ball. Third scores 50,000 points advance spinner and lights right out lane for possible specials. Fourth time scores 50,000 points and awards special. Making left side of 3 drop targets lights upper right side lane for 20,000 points and three bonus advance. Making right side of drop targets lights lower right side lane for 20,000 points and 3 bonus advances. Making left side of drop targets lights upper right side lane for 20,000 points and 3 bonus advances.

Power bumpers score 100 or 1,000 points when lit.

Making middle stand up target when lit releases locked ball and all playfield scores are doubled.

Right return lane scores 3,000 points or extra ball when lit.

Right outlane scores 5,000 points or special when lit.

Slingshot kickers score 30 points.

Exceeding high score to date awards credits, if optioned, at the end of the game and the displayed high score to date is automatically updated.

Tilting the game results in loss of current ball and the flippers and all playfield features go dead. Slamming the machine results in loss of the game, and the game goes into a delay mode for approximately 15 seconds. The saucer is always active except during this delay. If a ball falls in the saucer hole during the slam delay it will be kicked out immediately after the delay.

At the end of the game, the game over tune plays and the match number shows in the ball in play / number of players display if optioned. The game goes into game over delay for approximately 5 seconds and then begins alternately flashing last game score and high score to date on the displays

GAME SPECIFIC DIP SWITCHES – ANDROMEDA

RECALL BONUS MULTIPLER

DIP Switch #7 controls whether bonus multiplier is held in memory. Switch setting for S7 are as follows:

<u>RECALL BONUS MULTIPLER</u>	<u>S7</u>
HELD	ON
NOT HELD	OFF

RECALL EXTRA BALL LANE

DIP Switch #13 controls whether the lit extra ball lane is held in memory. Switch setting for S13 are as follows:

<u>EXTRA BALL LANE</u>	<u>S13</u>
HELD	ON
NOT HELD	OFF

NUMBER OF SPECIALS PER GAME

DIP Switch #15 selects the number of specials per game.

<u>NUMBER OF SPECIALS PER GAME</u>	<u>S15</u>
2	ON
1	OFF

EXTRA BALL CONTROL

DIP Switch #16 controls the extra ball lane.

<u>EXTRA BALL CONTROL</u>	<u>S16</u>
ON	ON
OFF	OFF

RECALL SPINNER VALUE

DIP Switch #22 controls whether spinner values are held in memory.

<u>RECALL SPINNER VALUE</u>	<u>S22</u>
YES	ON
NO	OFF

SPINNER CONTROL

DIP switch #25 selects whether the spinner value starts with 100 or 1000 points.

<u>SPINNER CONTROL</u>	<u>S25</u>
1000	ON
100	OFF

SOLENOID IDENTIFICATION – ANDROMEDA

The solenoid checkout section of the diagnostic routine actuates each solenoid on the playfield. The solenoid number is shown in each display as the solenoid is being actuated. The following list identifies each solenoid by number:

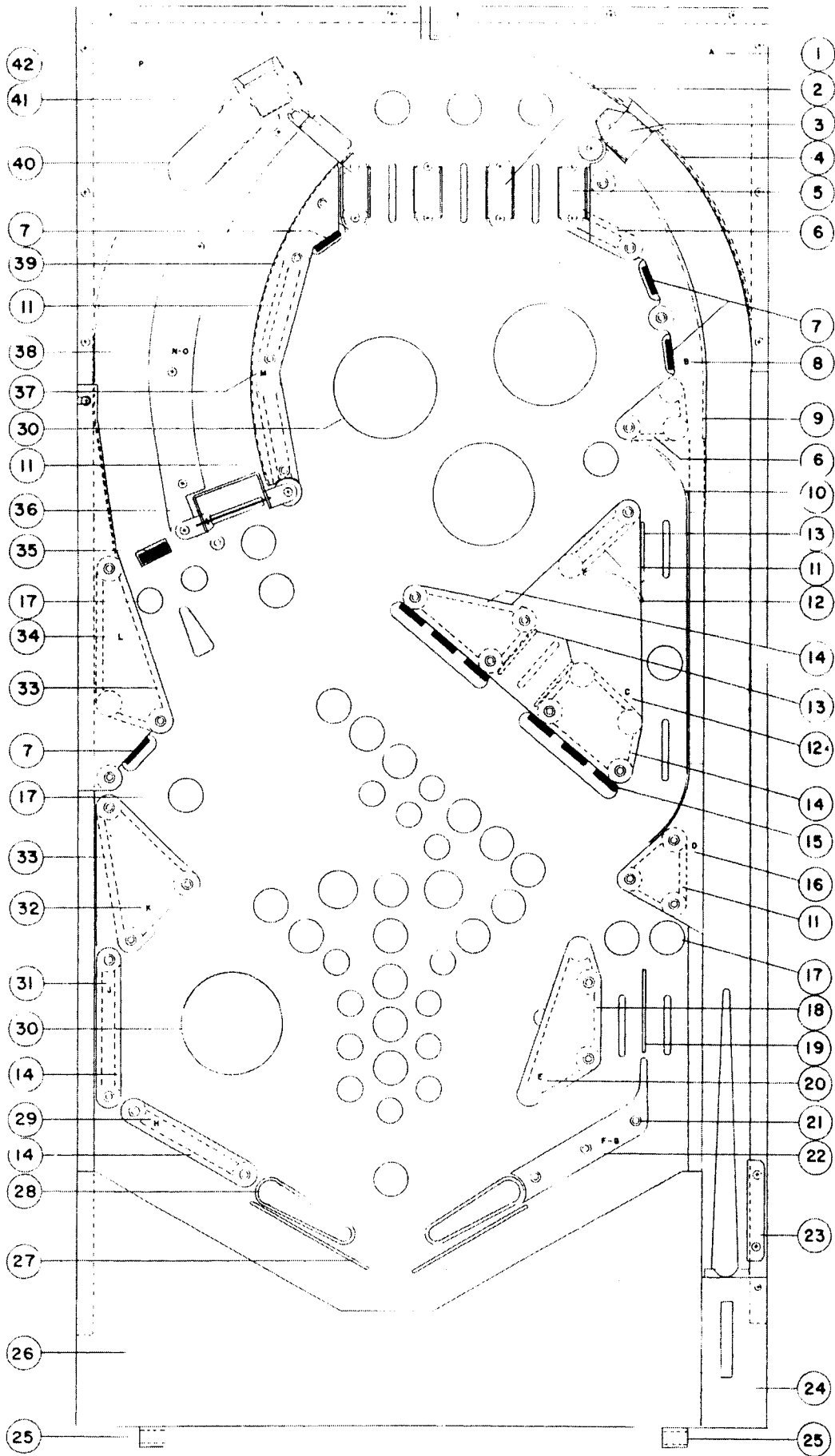
Out Hole #2 Right.....	01
Out Hole #1 Left.....	02
Eject Hole.....	03
Top Left Bumper.....	04
Top Right Bumper.....	05
Middle Bumper.....	06
Single Drop Target.....	07
Drop Bank.....	08
Bottom Bumper.....	09
Slingshot.....	10
Knocker.....	11
Bright Lights.....	12
Not Used.....	13
Not Used.....	14
General Illumination Relay.....	15
Feature Lamps.....	16

SWITCH # IDENTIFICATION – ANDROMEDA

In the switch checkout section of the diagnostic routine, the number of the closed switch is shown in each display. Closing any switch causes its number to be displayed. The following list identifies each switch by number.

None Closed.....	00
Accounting Reset.....	01
Credit Button.....	02
Slam Switch.....	03
Spinner.....	04
Coin Chute 2.....	05
Coin Chute 3.....	06
Coin Chute 1.....	07
Tilt Switch.....	08
10 Point Rebounds.....	09
Outhole #2 Right.....	10
Outhole #1 Left.....	11
Bumper Top Left.....	12
Bumper Top Right.....	13
Bumper Middle.....	14
Bumper Bottom.....	15
Right Slingshot.....	16
Drop Target 1 Left.....	17
Drop Target 2.....	18
Drop Target 3.....	19
Drop Target 4.....	20
Drop Target 5.....	21
Drop Target 6 Right.....	22
Single Drop Target.....	23
Eject Hole.....	24
Return Lane.....	25
Diagnostic and Accounting.....	26
Left Stand Up Target.....	27
Top Right Stand Up Target.....	28
Bottom Right Stand Up Target.....	29
Top Lane Left 1.....	30
Top Lane Middle 2.....	31
Top Lane Right 3.....	32
Not Used.....	33
Not Used.....	34
Between Target Rollover.....	35
Launch Ball Stand Up.....	36
Outlane.....	37
Side Lane Rollover Bottom.....	38
Side Lane Rollover Top.....	39
Lane Shift.....	40

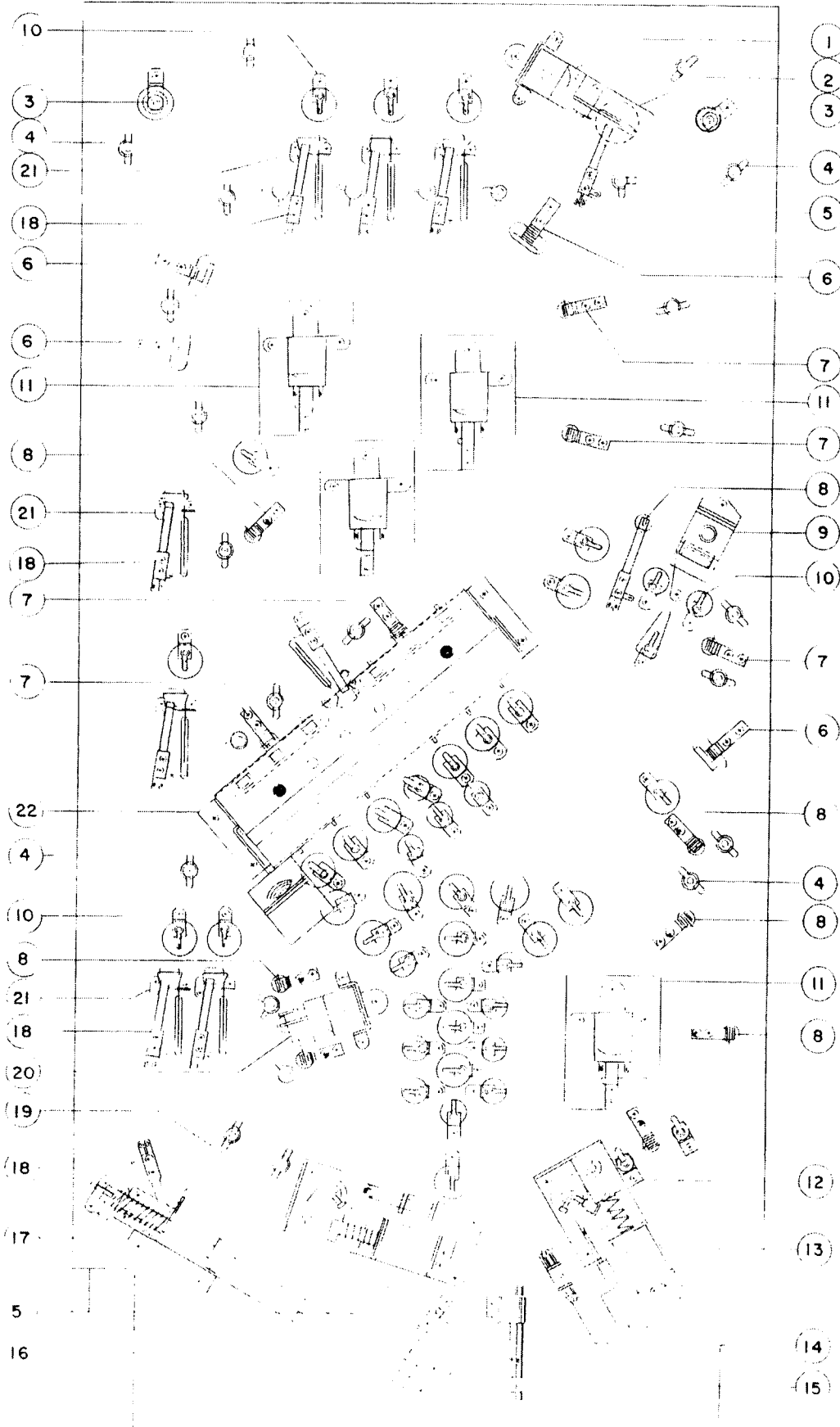
PLAYFIELD TOP DIAGRAM - ANDROMEDA



PLAYFIELD TOP PARTS LIST - ANDROMEDA

<u>ITEM</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>ITEM</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	08-00179	OVERLAY (A)	20	08-00189	OVERLAY (E)
2	03-40042	1½" BALL GUIDE	21	08-30036	POST CAP
3	10-00003	BALL GATE	22	08-30191	OVERLAY (F)
4	04-01195	UPPER BALL RUN		08-30192	OVERLAY (G)
5	03-40017	1½" BALL GUIDE - 1 SIDED	23	04-00101	RAIL GUARD
6	08-30006	1½ I.D. RUBBER RING	24	04-00365	SHOOTER INDICATOR
7	10-10056	TARGET SWITCH	25	04-00136A	PLAYFIELD SUPPORT BRK'T
8	08-00180	OVERLAY (B)	26	04-00364	BOTTOM ARCH
9	06-00036	BALL GUIDE WIRE	27	06-00010	BALL GUIDE WIRE
10	04-01198	BALL RUN	28	08-30001	FLIPPER RUBBER
11	08-30014	1½ I.D. RUBBER RING	29	08-00187	OVERLAY (H)
12	06-00081	BALL GUIDE WIRE	30	10-10004B	POWER BUMPER
12A	08-00190	OVERLAY (C)	31	08-00185	OVERLAY (K)
13	06-00017	BALL GUIDE WIRE	32	08-00186	OVERLAY (J)
14	08-30012	2" I.D. RUBBER RING	33	08-30009	2½ I.D. RUBBER RING
15	03-10011	TARGET (WHITE)	34	08-00184	OVERLAY (L)
16	08-00188	RITE LOWER BALL RUN (D)	35	10-10568	SINGLE DROP TARGET
17	03-40093	1 3/16 GREEN TRANS. INSERT	36	10-10550	SPINNER ASS'Y
	03-40092	1 3/16 RED TRANS. INSERT		04-00016A	SPINNER GATE
	03-40022	1" YELLOW INSERT		10-00014A	SPINNER ASS'Y
	03-40044	1" AMBER INSERT		06-00003A	SPINNER SWITCH WIRE
	03-40085	3/4" YELLOW INSERT		13-40001A	NYLON WASHER
	03-40046	3/4" BLUE INSERT	37	08-00183	OVERLAY (M)
	03-40084	3/4" ORANGE INSERT	38	08-00182	OVERLAY (N)
	03-40076	3/4" GREEN INSERT		08-00181	OVERLAY (CLEAR) (O)
	03-40018	3/4" WHITE INSERT	39	06-00088	BALL GUIDE WIRE
	03-40045	1" BLUE INSERT	40	04-00373	GATE BRACKET
	03-40086	1½ GREEN TRIANGLE INSERT		06-00047	WIRE GATE
	03-40020	1" WHITE INSERT	41	10-00004	BALL REBOUND ASS'Y
18	08-30013	3" I.D. RUBBER RING	42	08-00178	OVERLAY (P)
19	06-00022	BALL GUIDE WIRE			

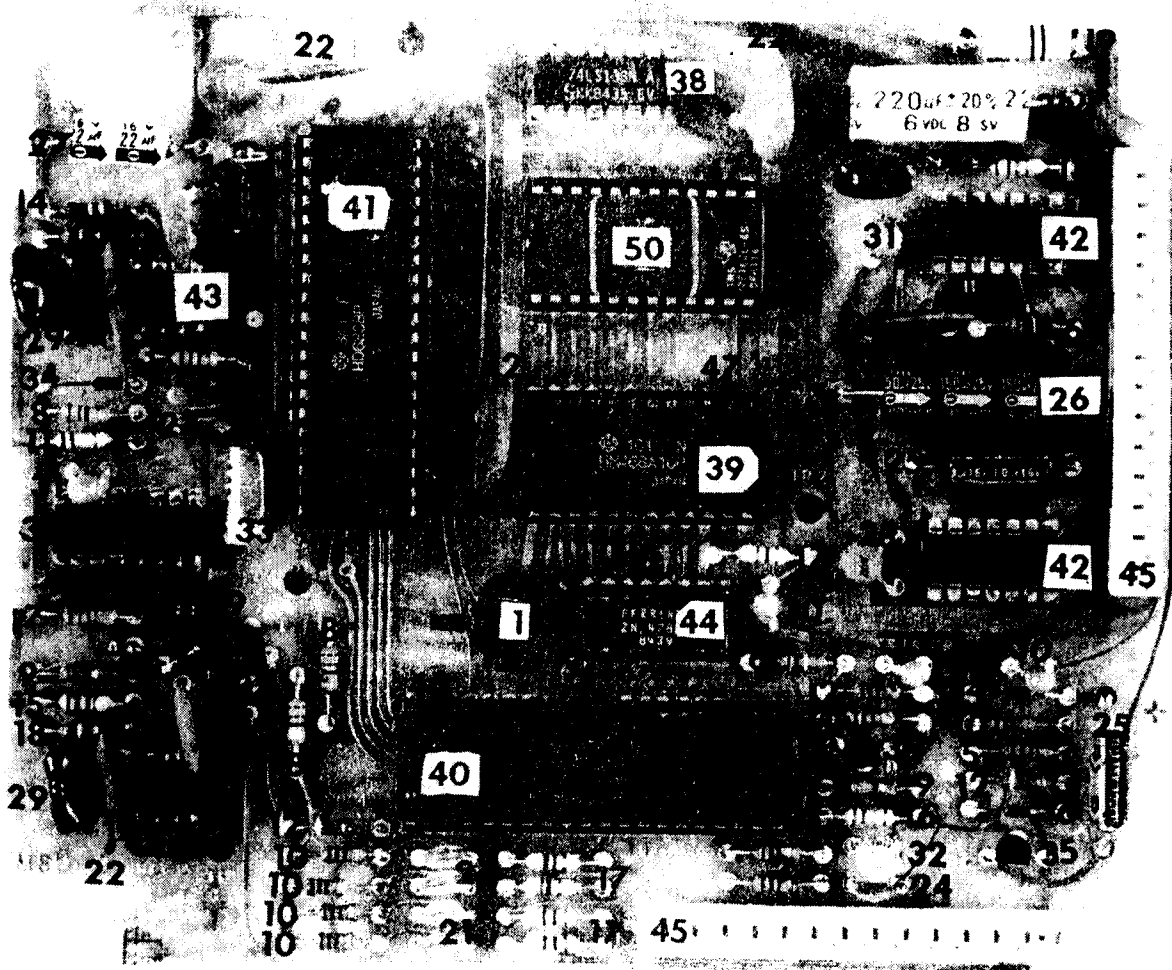
PLAYFIELD BOTTOM DIAGRAM - ANDROMEDA



PLAYFIELD BOTTOM PARTS LIST - ANDROMEDA

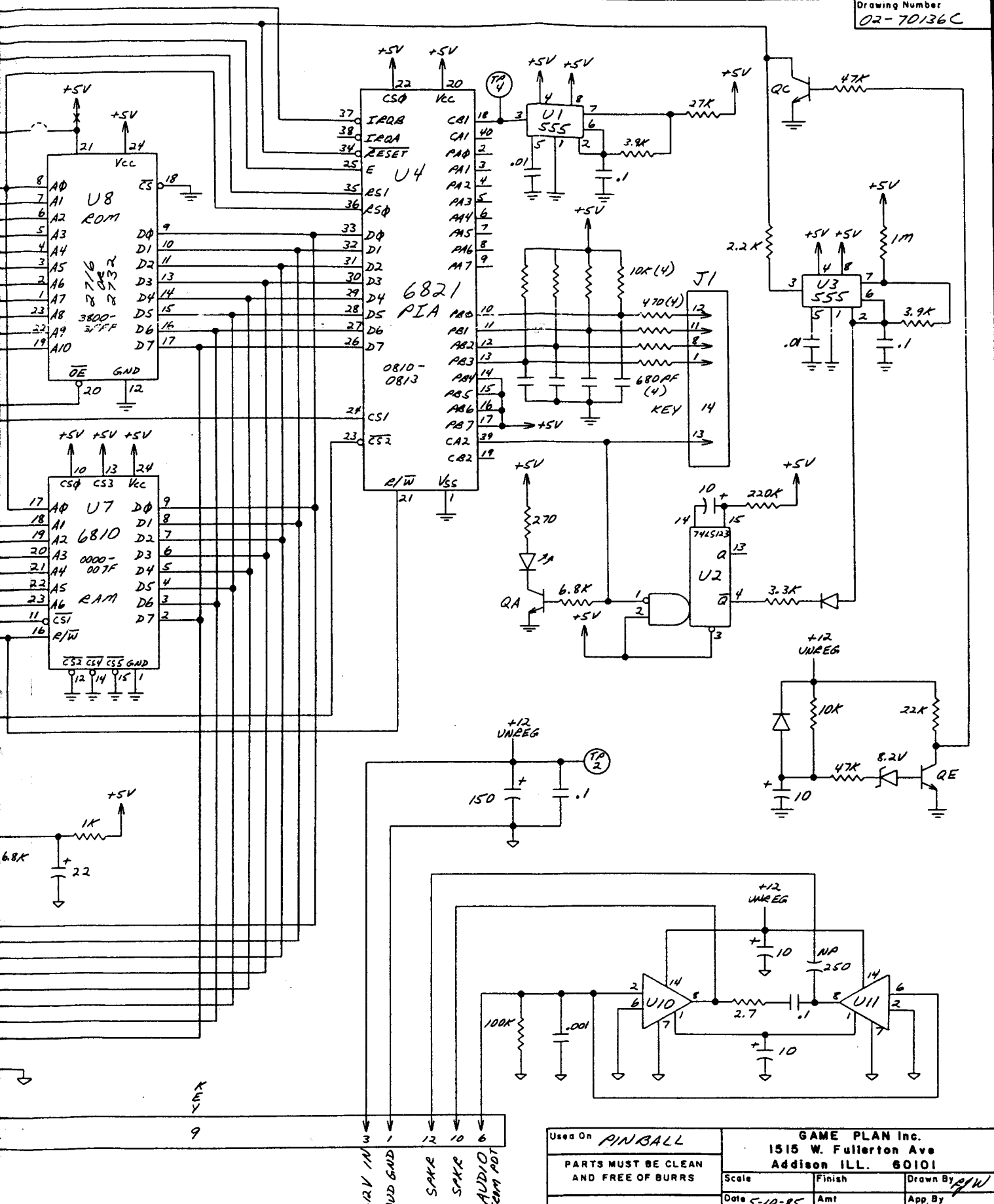
<u>ITEM</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>	<u>ITEM</u>	<u>PART NO.</u>	<u>DESCRIPTION</u>
1	08-00179	OVERLAY (A)	20	08-00189	OVERLAY (E)
2	03-40042	1½" BALL GUIDE	21	08-30036	POST CAP
3	10-00003	BALL GATE	22	08-30191	OVERLAY (F)
4	04-01195	UPPER BALL RUN		08-30192	OVERLAY (G)
5	03-40017	1½" BALL GUIDE - 1 SIDED	23	04-00101	RAIL GUARD
6	08-30006	1¼ I.D. RUBBER RING	24	04-00365	SHOOTER INDICATOR
7	10-10056	TARGET SWITCH	25	04-00136A	PLAYFIELD SUPPORT BRK'T
8	08-00180	OVERLAY (B)	26	04-00364	BOTTOM ARCH
9	06-00036	BALL GUIDE WIRE	27	06-00010	BALL GUIDE WIRE
10	04-01198	BALL RUN	28	08-30001	FLIPPER RUBBER
11	08-30014	1½ I.D. RUBBER RING	29	08-00187	OVERLAY (H)
12	06-00081	BALL GUIDE WIRE	30	10-10004B	POWER BUMPER
12A	08-00190	OVERLAY (C)	31	08-00185	OVERLAY (K)
13	06-00017	BALL GUIDE WIRE	32	08-00186	OVERLAY (J)
14	08-30012	2" I.D. RUBBER RING	33	08-30009	2½ I.D. RUBBER RING
15	03-10011	TARGET (WHITE)	34	08-00184	OVERLAY (L)
16	08-00188	RITE LOWER BALL RUN (D)	35	10-10568	SINGLE DROP TARGET
17	03-40093	1 3/16 GREEN TRANS. INSERT	36	10-10550	SPINNER ASS'Y
	03-40092	1 3/16 RED TRANS. INSERT		04-00016A	SPINNER GATE
	03-40022	1" YELLOW INSERT		10-00014A	SPINNER ASS'Y
	03-40044	1" AMBER INSERT		06-00003A	SPINNER SWITCH WIRE
	03-40085	¾" YELLOW INSERT		13-40001A	NYLON WASHER
	03-40046	¾" BLUE INSERT	37	08-00183	OVERLAY (M)
	03-40084	¾" ORANGE INSERT	38	08-00182	OVERLAY (N)
	03-40076	¾" GREEN INSERT		08-00181	OVERLAY (CLEAR) (O)
	03-40018	¾" WHITE INSERT	39	06-00088	BALL GUIDE WIRE
	03-40045	1" BLUE INSERT	40	04-00373	GATE BRACKET
	03-40086	1½ GREEN TRIANGLE INSERT		06-00047	WIRE GATE
	03-40020	1" WHITE INSERT	41	10-00004	BALL REBOUND ASS'Y
18	08-30013	3" I.D. RUBBER RING	42	08-00178	OVERLAY (P)
19	06-00022	BALL GUIDE WIRE			

MSU-3 DIAGRAM - ANDROMEDA



MSU-3 PARTS LIST - ANDROMEDA

ITEM	PART NO.	DESCRIPTION	ITEM	PART NO.	DESCRIPTION
1	22-10002N	PUSHBUTTON SWITCH	27	24-10004N	22MFD 16V AXIAL LYTIC CAP
2	23-00011N	1K OHM $\pm 5\%$, $\frac{1}{2}$ WATT RESISTOR	28	24-10006N	250MFD, 15V NP " " "
3	23-00004N	2.2K OHM " " "	29	24-20001N	.1 MFD $\pm 10\%$, 100V MYLAR CAP
4	23-00006N	100 OHM " " "	30	24-30001N	1 MFD $\pm 10\%$ 35V DIPPED TANTA
5	23-00007N	22K OHM " " "	31	24-30002N	10MFD $\pm 10\%$ 16V " "
6	23-00008N	100K OHM " " "	32	24-30003N	22 MFD $\pm 10\%$, 10V" "
7	23-00010N	270 OHM " " "	33	21-90004N	3.579 MHZ. CRYSTAL
8	23-00013N	3.3K OHM " " "	34	25-00002N	IN4148 DIODE
9	23-00014N	6.8K OHM " " "	35	25-10004N	2N3904 TRANSISTOR
10	23-00015N	10K OHM " " "	36	25-30003N	IN959B ZENER DIODE
11	23-00016N	220K OHM " " "	37	26-00011N	74LS123 I.C.
12	23-00020N	47K OHM " " "	38	26-00012N	74LS138 I.C.
13	23-00022N	2.7 OHM " " "	39	26-30010N	6810 NMOS RAM
14	23-00025N	1M OHM " " "	40	26-40004N	6821 PIA
15	23-00026N	27K OHM " " "	41	26-40005N	6808 CPU
16	23-00027N	3.3M OHM " " "	42	26-60003N	LM380 I.C.
17	23-00035N	470 OHM " " "	43	26-60004N	555 I.C.
18	23-00047N	3.9K OHM " " "	44	26-60022N	ZN428E-8 I.C.
19	21-40002N	.22 UH 2A RF CHOKE	45	29-00004N	SL-156 15 PIN HEADER
20	24-00001N	.01 MFD $\pm 10\%$ 50V CERAMIC DISC	46	29-50002N	40 PIN I.C. SOCKET
21	24-00004N	680 PF $\pm 10\%$, 100V	47	29-50004N	24 PIN I.C. SOCKET
22	24-00005N	.1 MFD $\pm 80/20\%$, 25V " "	48	29-50009N	16 PIN I.C. SOCKET
23	24-00003N	.001 MFD $\pm 10\%$, 100V " "	49	31-10001N	LED
24	24-00016N	39PF $\pm 10\%$, 50V " "	50	26-30271	MOD 850 SOUND PROM
25	24-10001N	10MFD, 26V AXIAL LYTIC CAP	51	20-00098B	P.C. BOARD
26	24-10003N	150 MFD, 25V " " "			



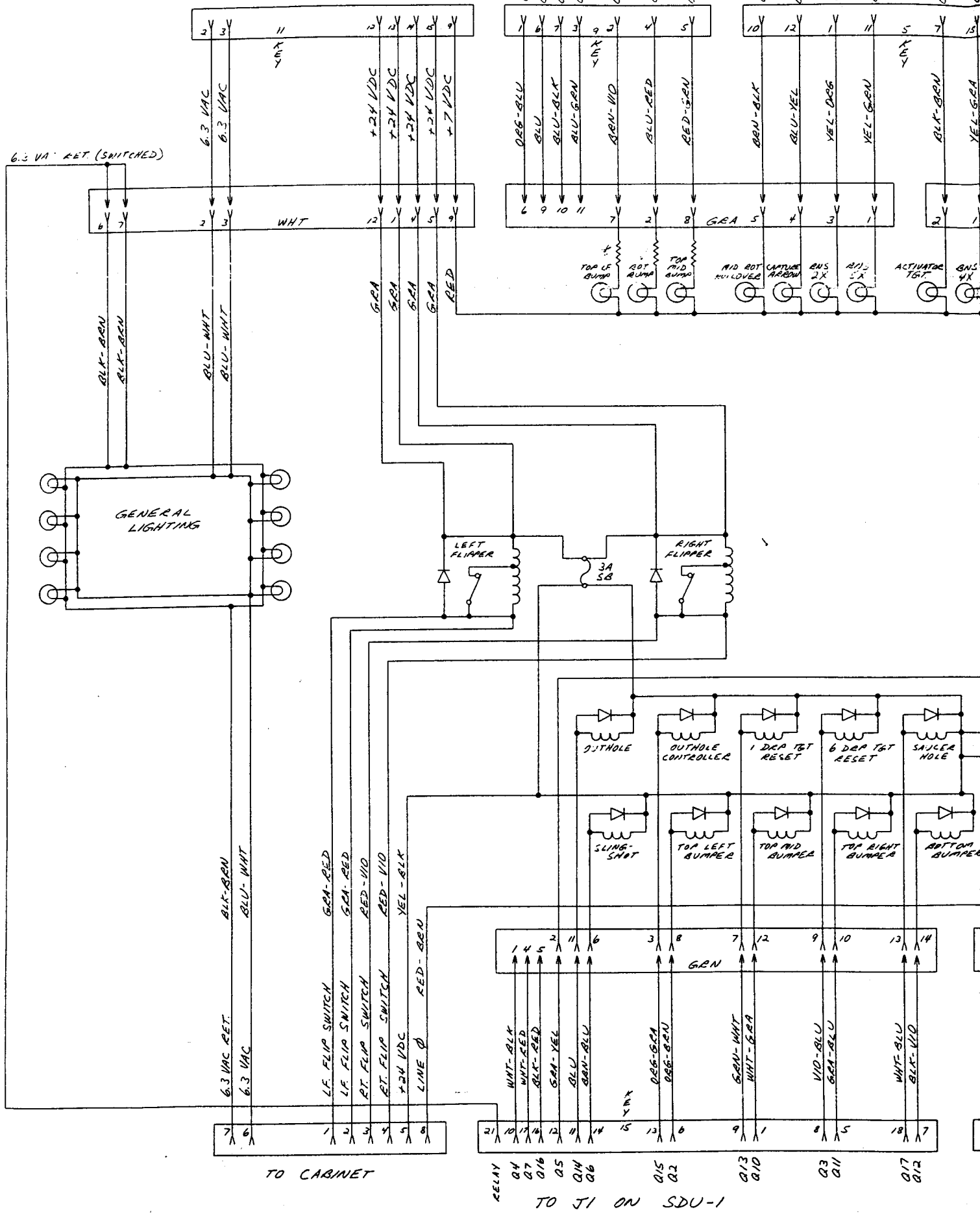
ISSUE	CHANGE	DATE

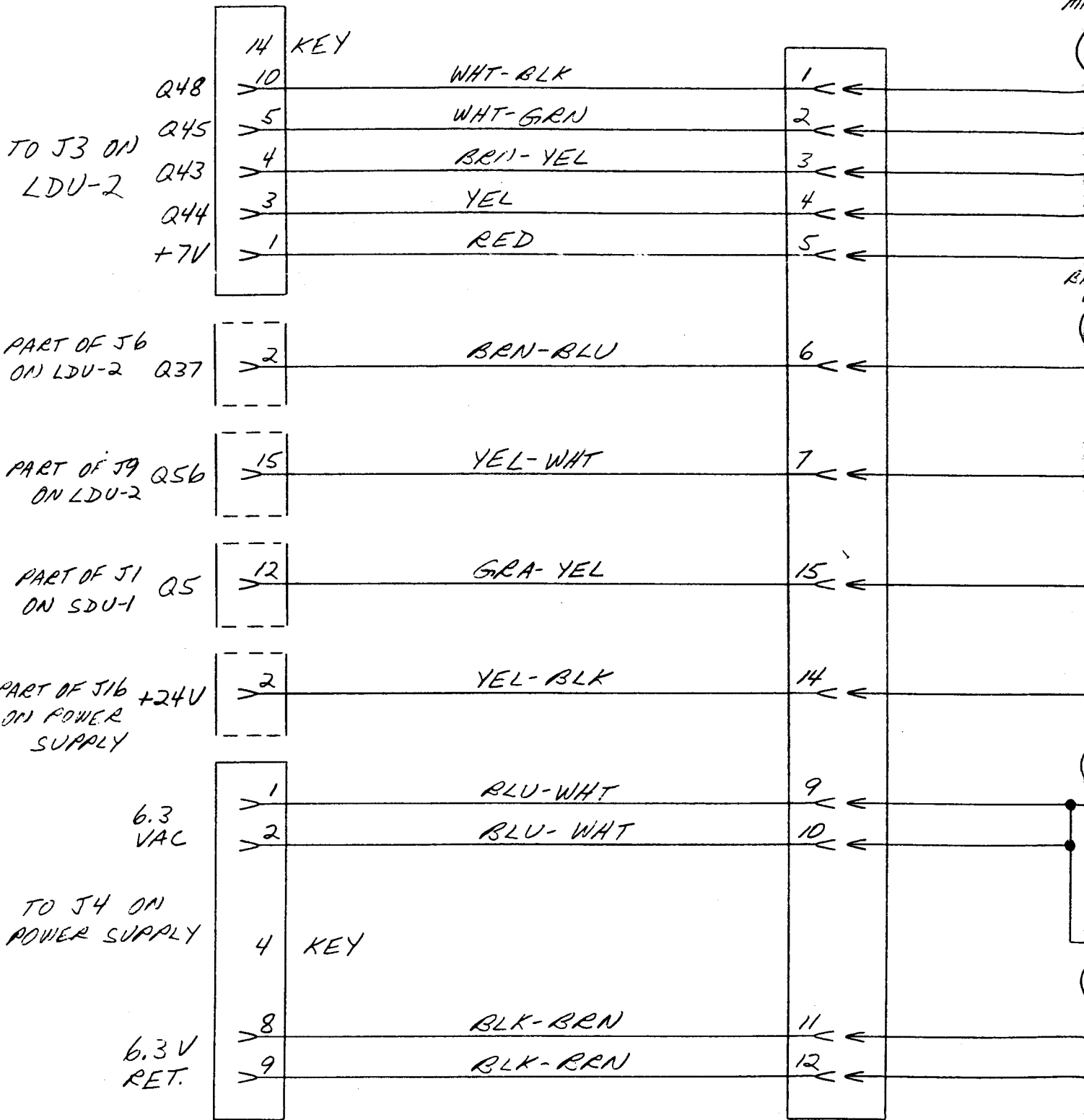
Used On	PINBALL		
PARTS MUST BE CLEAN AND FREE OF BURRS	GAME PLAN Inc. 1515 W. Fullerton Ave Addison ILL. 60101		
Tolerances Unless Specified	Scale	Finish	Drawn By <i>AJW</i>
Fractional ----- ± .015	Date 5-10-85	Amt	App. By
Decimal ----- ± .005	Mat'l	Drawing Number 02-70136C	
Angles ----- ± 1/2	MSU-3 SCHEMATIC		
Screw Threads ----- Class 2			

TO J15 ON POWER SUPPLY

TO J9 ON LDU-2

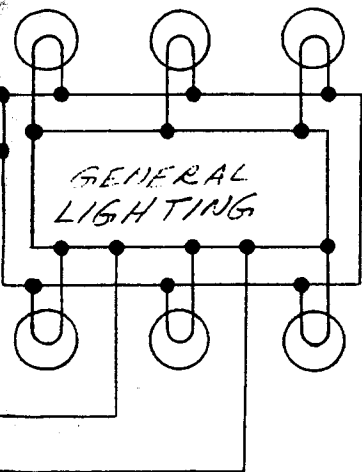
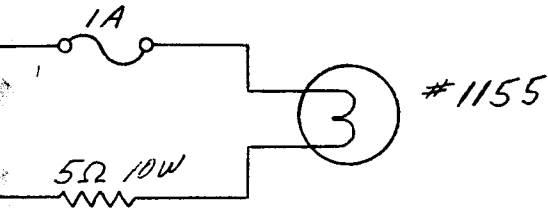
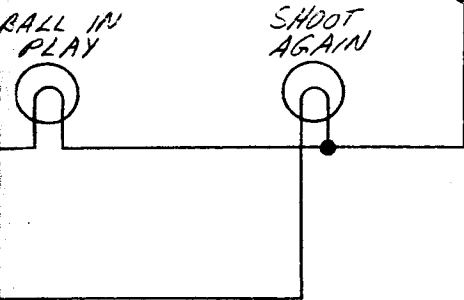
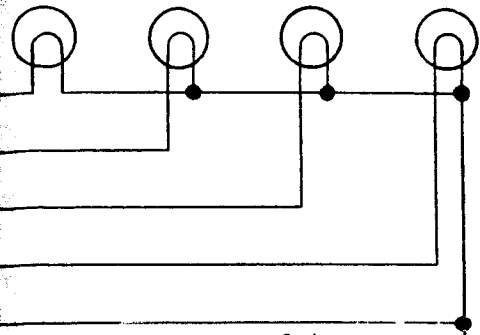
TO J5 ON LDU-2





ISSUE	CHA

MATCH GAME HI SCORE TILT
OVER TO DATE



Used On *ANDROMEDA*

PARTS MUST BE CLEAN
AND FREE OF BURRS

Tolerances Unless Specified

Fractional ----- ± .015
 Decimal ----- ± .005
 Angles ----- ± 1/2
 Screw Threads ----- Class 2

GAME PLAN Inc.
1515 W. Fullerton Ave
Addison ILL. 60101

Scale _____ Finish _____ Drawn By *RJW*

Date *8-7-85* Amt _____ App. By _____

Mat'l _____ Drawing Number *02-70139R*

MODEL 850 INSERT

CHANGE

DATE