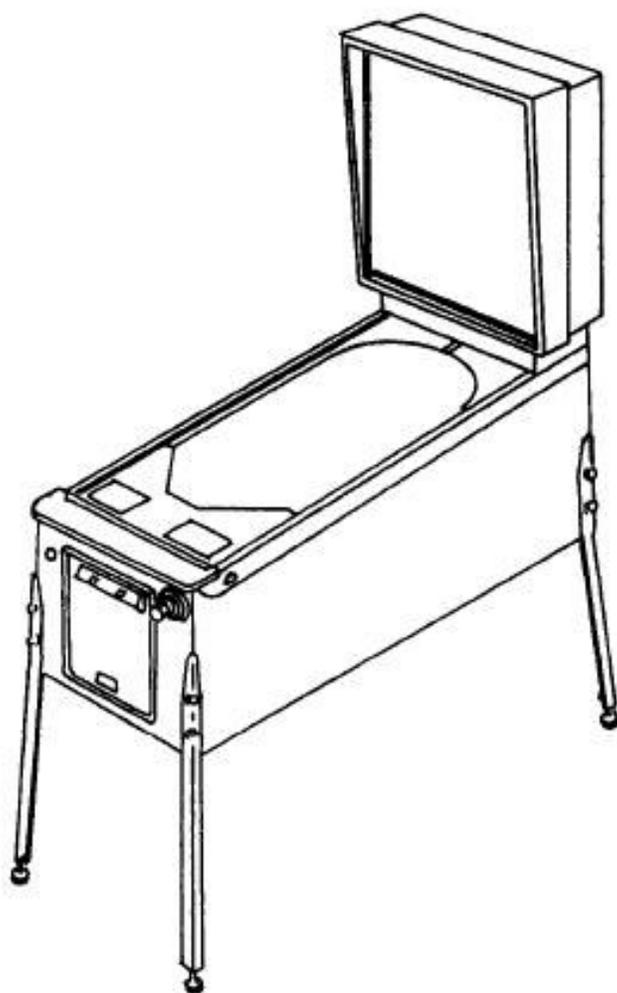


# **GamePlan**

## **PINBALL**

### **MODEL SPECIFICS**



# **Cyclopes**

## CREDITS/COIN ADJUSTMENT

S9 through S12 select the credits per coin chute 2. Switch setting and resultant per coin as follows:

S9	S10	S11	S12	CREDITS/COIN
<u>OFF</u>	<u>OFF</u>	<u>OFF</u>	<u>OFF</u>	<u>SAME AS COIN CHUTE #1 SETTING</u>
<u>ON</u>	<u>OFF</u>	<u>OFF</u>	<u>OFF</u>	<u>1/1 COIN</u>
<u>OFF</u>	<u>ON</u>	<u>OFF</u>	<u>OFF</u>	<u>2/1 COIN</u>
<u>ON</u>	<u>ON</u>	<u>OFF</u>	<u>OFF</u>	<u>3/1 COIN</u>
<u>OFF</u>	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	<u>4/1 COIN</u>
<u>ON</u>	<u>OFF</u>	<u>ON</u>	<u>OFF</u>	<u>5/1 COIN</u>
<u>OFF</u>	<u>ON</u>	<u>ON</u>	<u>OFF</u>	<u>6/1 COIN</u>
<u>ON</u>	<u>ON</u>	<u>ON</u>	<u>OFF</u>	<u>7/1 COIN</u>
<u>OFF</u>	<u>OFF</u>	<u>OFF</u>	<u>ON</u>	<u>8/1 COIN</u>
<u>ON</u>	<u>OFF</u>	<u>OFF</u>	<u>ON</u>	<u>9/1 COIN</u>
<u>OFF</u>	<u>ON</u>	<u>OFF</u>	<u>ON</u>	<u>10/1 COIN</u>
<u>ON</u>	<u>ON</u>	<u>OFF</u>	<u>ON</u>	<u>11/1 COIN</u>
<u>OFF</u>	<u>OFF</u>	<u>ON</u>	<u>ON</u>	<u>12/1 COIN</u>
<u>ON</u>	<u>OFF</u>	<u>ON</u>	<u>ON</u>	<u>13/1 COIN</u>
<u>OFF</u>	<u>ON</u>	<u>ON</u>	<u>ON</u>	<u>14/1 COIN</u>
<u>ON</u>	<u>ON</u>	<u>ON</u>	<u>ON</u>	<u>15/1 COIN</u>

S1 through S5 select the credits per coin for chute 1. S17 through S21 select the credits per coin for coin chute 3. Switch setting and resultant credits per coin are identical for coin chutes 1 and 3 are as follows:

CREDITS/COIN ADJUSTMENTS

COIN CHUTE	SWITCHES					CREDITS/COIN
#1 _____ 1	2	3	4	5		
#3 _____ 17	18	19	20	21		
OFF	OFF	OFF	OFF	OFF		<u>3/2 COINS</u>
ON	OFF	OFF	OFF	OFF		<u>3/2 COINS</u>
OFF	ON	OFF	OFF	OFF		<u>1/1 COIN</u>
ON	ON	OFF	OFF	OFF		<u>1/2 COINS</u>
OFF	OFF	ON	OFF	OFF		<u>2/1 COIN</u>
ON	OFF	ON	OFF	OFF		<u>2/2 COINS</u>
OFF	ON	ON	OFF	OFF		<u>3/1 COIN</u>
ON	ON	ON	OFF	OFF		<u>3/2 COINS</u>
OFF	OFF	OFF	ON	OFF		<u>4/1 COIN</u>
ON	OFF	OFF	OFF	OFF		<u>4/2 COINS</u>
OFF	ON	OFF	ON	OFF		<u>5/1 COIN</u>
ON	ON	OFF	ON	OFF		<u>5/2 COINS</u>
OFF	OFF	ON	ON	OFF		<u>6/1 COIN</u>
ON	OFF	ON	ON	OFF		<u>6/2 COINS</u>
OFF	ON	ON	ON	OFF		<u>7/1 COIN</u>
ON	ON	ON	ON	OFF		<u>7/2 COINS</u>
OFF	OFF	OFF	OFF	ON		<u>8/1 COIN</u>
ON	OFF	OFF	OFF	ON		<u>8/2 COINS</u>
OFF	ON	OFF	OFF	ON		<u>9/1 COIN</u>
ON	ON	OFF	OFF	ON		<u>9/2 COINS</u>
OFF	OFF	ON	OFF	ON		<u>10/1 COIN</u>
ON	OFF	ON	OFF	ON		<u>10/2 COIN</u>
OFF	ON	ON	OFF	ON		<u>11/1 COIN</u>
ON	ON	ON	OFF	ON		<u>11/2 COIN</u>
OFF	OFF	OFF	ON	ON		<u>12/1 COIN</u>
ON	OFF	OFF	ON	ON		<u>12/2 COIN</u>
OFF	ON	OFF	ON	ON		<u>13/1 COIN</u>
ON	ON	OFF	ON	ON		<u>13/2 COIN</u>
OFF	OFF	ON	ON	ON		<u>14/1 COIN</u>
ON	OFF	ON	ON	ON		<u>14/2 COIN</u>
OFF	ON	ON	ON	ON		<u>15/1 COIN</u>
ON	ON	ON	ON	ON		<u>15/2 COIN</u>

#### EYES TARGET OPTION

The game is designed to start with EYES value at 10K or 25K.

*LIB start with	25K	SW 6
CONS start with	10K	ON
		OFF

#### RECALL SPINNER VALUES

Switch #7 selects whether spinner values are held in memory.

*LIB YES	held in memory	SW 7
CONS NO	not held in memory	ON
		OFF

#### FREE PLAY OPTION

Switch #8 the game has provision for allowing free play.

YES FREE PLAY	SW 8
*NO	ON
	OFF

#### LIGHT AND SOUND ATTRACTION MODE

Switch #13 controls whether sound and light attract mode is on or off.

*YES attract mode	SW 13
NO no attract mode	ON
	OFF

#### EXTRA BALL

SWITCH #14 enables or disables the feature.

EXTRA BALL	SW 14
*YES	ON
NO	OFF

#### RECALL REGULAR BONUS

Switch #15 controls whether Bonus is held in memory or not.

*LIB held in memory	SW 15
*CONS not held in memory	ON
	OFF

#### LIGHT LOCK HOLE

Switch #16 controls whether lock light is lit with 1 or 2 banks complete.

*LIB 1 bank complete	SW 16
CONS 2 bank complete	ON
	OFF

### EYES EXTRA BALL

SW 22 controls whether extra ball flashes on eyes target at 75K or 100K.

SW 22

\*LIB flash at 75K  
CONS flash at 100K

ON  
OFF

### BALLS PER GAME

\*Balls per game

SWITCHES  
23 24

5  
\*3  
2  
1

ON ON  
OFF ON  
ON OFF  
OFF OFF

### WARNING TILT

Switch #25 controls whether you receive 2 warnings before tilting game.

SW 25

\*LIB 2 warnings before tilt  
CONS no warnings

ON  
OFF

### MAXIMUM CREDITS

The maximum number of credits that will be accepted by the game either through the coin switch or replay award are controlled by S26 and 27. Switch settings are as follows.

MAXIMUM  
CREDITS

SWITCHES  
27 26

\*10  
20  
30  
40

OFF OFF  
OFF ON  
ON OFF  
ON ON

### REPLAY OR FREE BALL AWARD

The game is designed to award either a replay, free ball, 50,000 points or no award at three selectable score levels or through specials gained during the play of the game.

AWARD

S29 S28

\*REPLAY  
EXTRA BALL  
50,000 PTS.  
NO AWARD

ON ON  
ON OFF  
OFF ON  
OFF OFF

## MATCH FEATURE

When the match feature is ON, a random number appears in the ball in play display at game over. A replay is awarded if the number matches the tens digit in a player's score.

MATCH	S30
*YES	ON
ON	OFF

## CREDITS FOR EXCEEDING HIGH SCORE

The game is designed to award replays for beating the previous high score to date. The winning score becomes the new high score to date.

CREDITS	S32	S31
0	OFF	OFF
1	OFF	ON
2	ON	OFF
*3	ON	ON

## VI. ROUTINE MAINTENANCE ON LOCATION

The game is equipped with two separate diagnostic programs to aid in routine maintenance. The first test occurs automatically at power build up. The MPU board goes into its self-test routine, and upon successful completion plays the game over time.

The second diagnostic program is accessed by depressing the test switch inside the front cabinet door.

Note: THE GAME MUST BE IN THE GAME OVER MODE.

1. Depress the test switch sixteen times to access the routine. The score display will extinguish and all feature lamps will flash. Check for burned out lamps at this time.
2. Depress the test switch again to start the score display checkout. All digits except the units digits will count through 1-9.
3. Depress the test switch again to begin the solenoid checkout. Each solenoid will actuate individually and show its number on the score displays. Refer to table 1 of repair section for solenoid numbers.
4. Depress the test switch again to start the switch checkout. A closed switch will show its number on the score display. Refer to table 2 of the repair section for switch numbers.

NOTE: THE BALL SHOULD NOT BE IN THE OUTHOLE DURING THIS TEST.

Depressing the test switch again puts the game back in the game over mode. The diagnostic routine should be exercised on a regular basis to ensure proper operation of the game.

## VI. SOLENOID AND SWITCH IDENTIFICATION

### A. TABLE 1.

#### SOLENOID IDENTIFICATION

The solenoid checkout section of the diagnostic routine 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 CONTROLLER.....	01
OUT HOLE.....	02
RIGHT SAUCER.....	03
MIDDLE SAUCER.....	04
RESET OPES.....	05
TOP BUMPER.....	06
MIDDLE DROP TARGET.....	07
DROP BANK.....	08
BOTTOM BUMPER.....	09
SLINGSHOT.....	10
KNOCKER.....	11
BRIGHT LIGHT 1.....	12
BRIGHT LIGHT 2.....	13
BRIGHT LIGHT 3.....	14
BELL.....	15
FLIPPERS.....	16
GENERAL ALUMINATION.....	17
FEATURE LAMPS.....	18

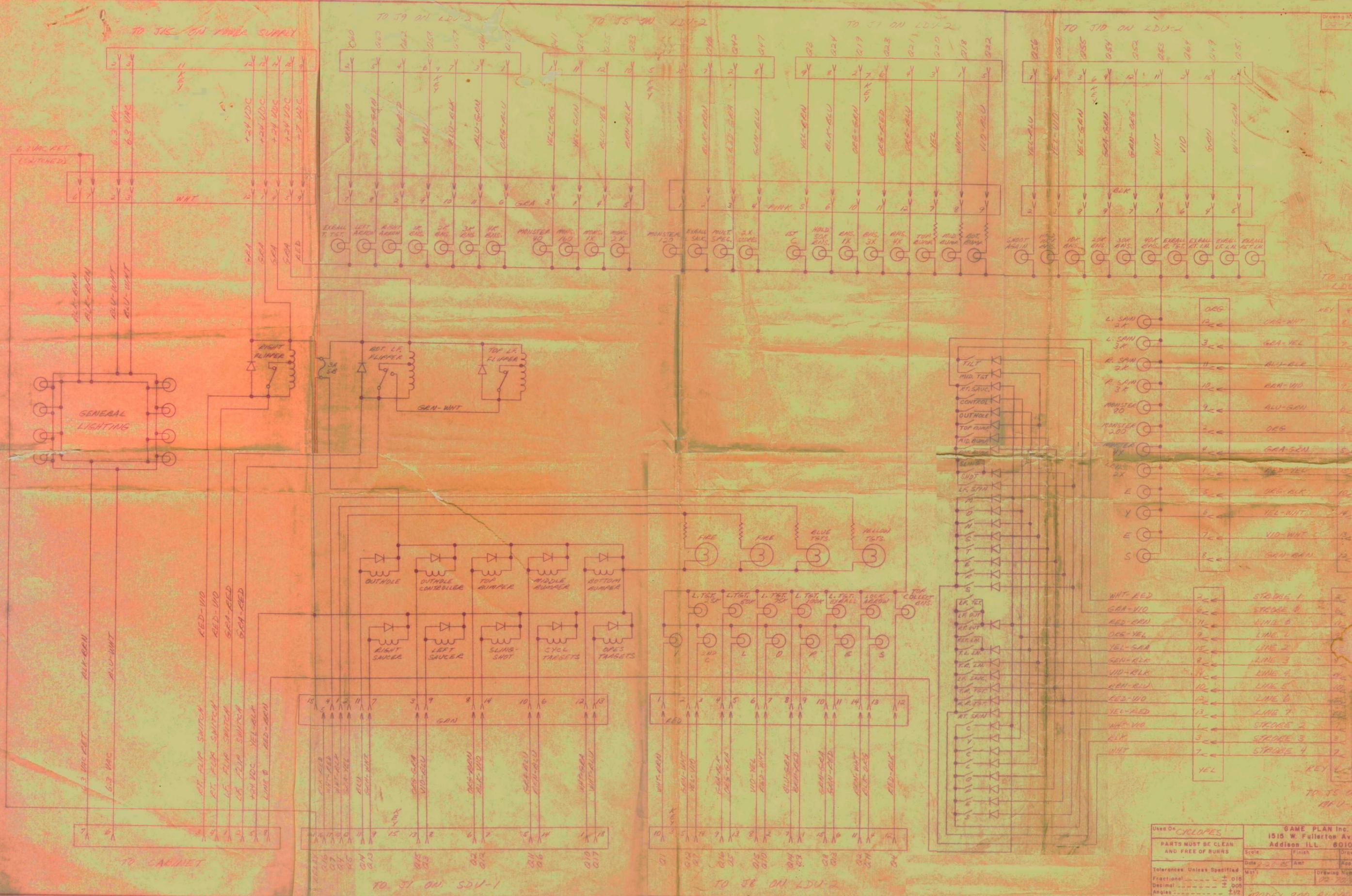
## SWITCH IDENTIFICATION

### B. TABLE 2

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.

#### SWITCH FUNCTION

NONE CLOSED.....	00
ACCOUNTING RESET.....	01
CREDIT BUTTON.....	02
SLAM SWITCH.....	03
CENTER TARGET.....	04
COIN CHUTE 2.....	05
COIN CHUTE 3.....	06
COIN CHUTE 1.....	07
TILT SWITCH.....	08
LOCK SAUCER.....	09
OUTHOLE CONTROLLER.....	10
OUTHOLE.....	11
BUMPER TOP.....	12
BUMPER MIDDLE.....	13
BUMPER BOTTOM.....	14
SLINGSHOT.....	15
LEFT SPINNER.....	16
C TARGET.....	17
Y TARGET.....	18
C TARGET.....	19
L TARGET.....	20
O TARGET.....	21
P TARGET.....	22
E TARGET.....	23
S TARGET.....	24
EYES TARGET & OUTLANES.....	25
DIAGNOSTICS & ACCOUNTING.....	26
TOP LEFT LANE & RETURN LANE.....	27
TOP RIGHT LANE.....	28
MIDDLE SAUCER.....	29
EXTRA BALL TARGET RIGHT TOP.....	30
EXTRAL BALL TARGET RIGHT BOTTOM.....	31
RIGHT SPINNER.....	32
M TARGET.....	33
O TARGET.....	34
N TARGET.....	35
S TARGET.....	36
T TARGET.....	37
E TARGET.....	38
R TARGET.....	39
S TARGET.....	40



L. SPIN 3K	13	←	GRN-WHT	1	226
L. SPIN 3K	3	←	GRN-YEL	2	225
R. SPIN 2K	11	←	BLU-BLK	11	227
R. SPIN 3K	10	←	GRN-WHT	10	227
MONSTER 90	9	←	BLU-GRN	9	210
MONSTER 200	2	←	DES	2	223
MONSTER 1K	4	←	GRN-GRN	5	229
MONSTER 2K	1	←	RED-YEL	2	217
E	5	←	DES-BLK	10	228
Y	6	←	YEL-WHT	4	232
E	7	←	VID-WHT	3	231
S	8	←	GRN-GRN	12	230
WHT-RED	2	←	STORAGE 1	2	
GRN-WHT	6	←	STORAGE 4	6	
RED-GRN	11	←	LINE 6	11	
DES-YEL	9	←	LINE 1	9	
YEL-GRN	15	←	LINE 2	15	
GRN-BLK	8	←	LINE 3	8	
VID-BLK	14	←	LINE 4	14	
GRN-BLU	10	←	LINE 5	10	
RED-WHT	12	←	LINE 6	12	
YEL-RED	13	←	LINE 7	13	
WHT-WHT	1	←	STORAGE 2	1	
BLK	3	←	STORAGE 3	3	
WHT	7	←	STORAGE 4	7	
YEL			KEY 1		

Use On **CYCLOPES**

PARTS MUST BE CLEAN AND FREE OF BURRS

Tolerances Unless Specified  
 Fractional --- ± 0.15  
 Decimal --- ± 0.05  
 Angles --- ± 1/2  
 Screw Threads --- Class 2

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

Scale: 2" = 1"  
 Date: 12-28-68  
 Finish: Amt  
 Drawn By: [Signature]  
 App. By: [Signature]

Drawing Number  
 02-734112

MODEL 900 PLAYS

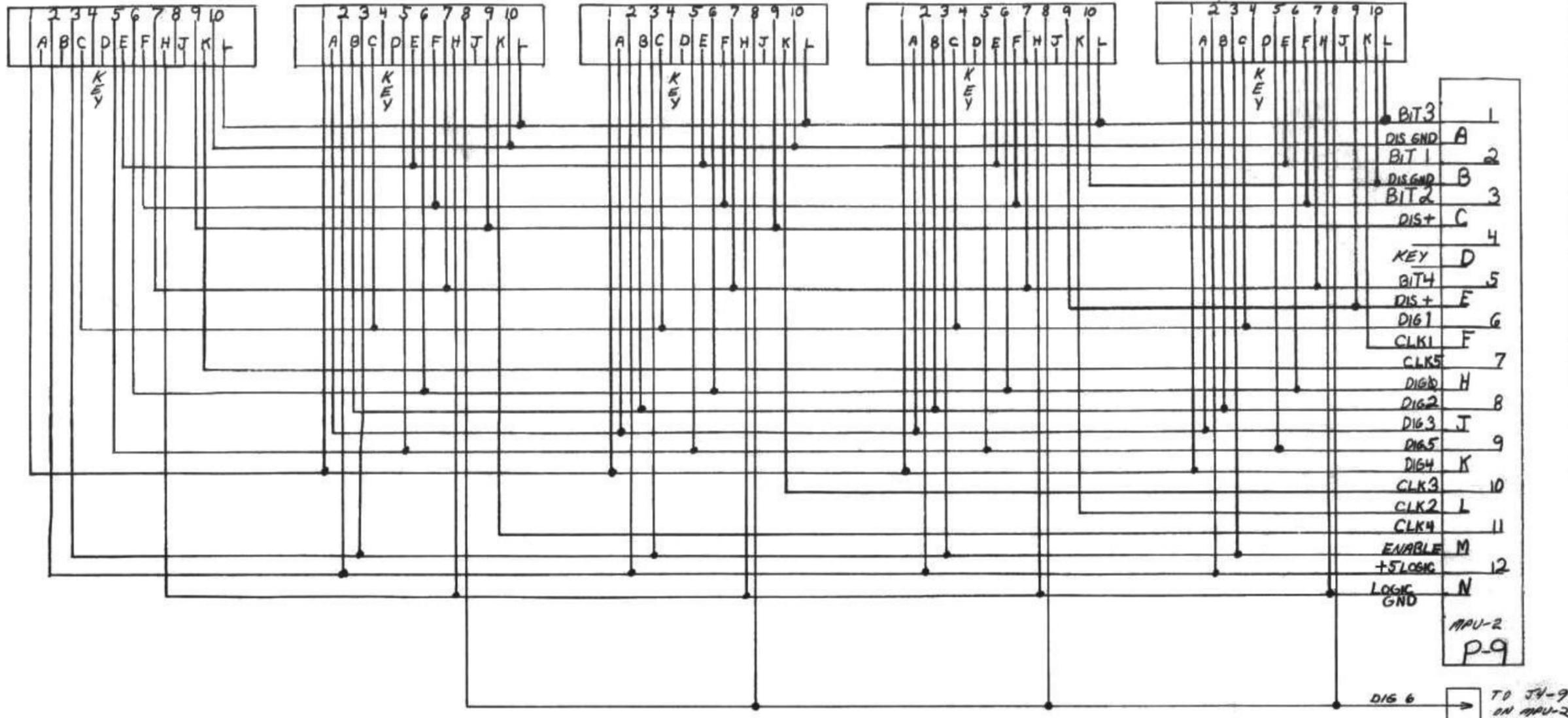
MATCH-BALL-CREDIT

PLAYER NO. 4

PLAYER NO. 3

PLAYER NO. 2

PLAYER NO. 1

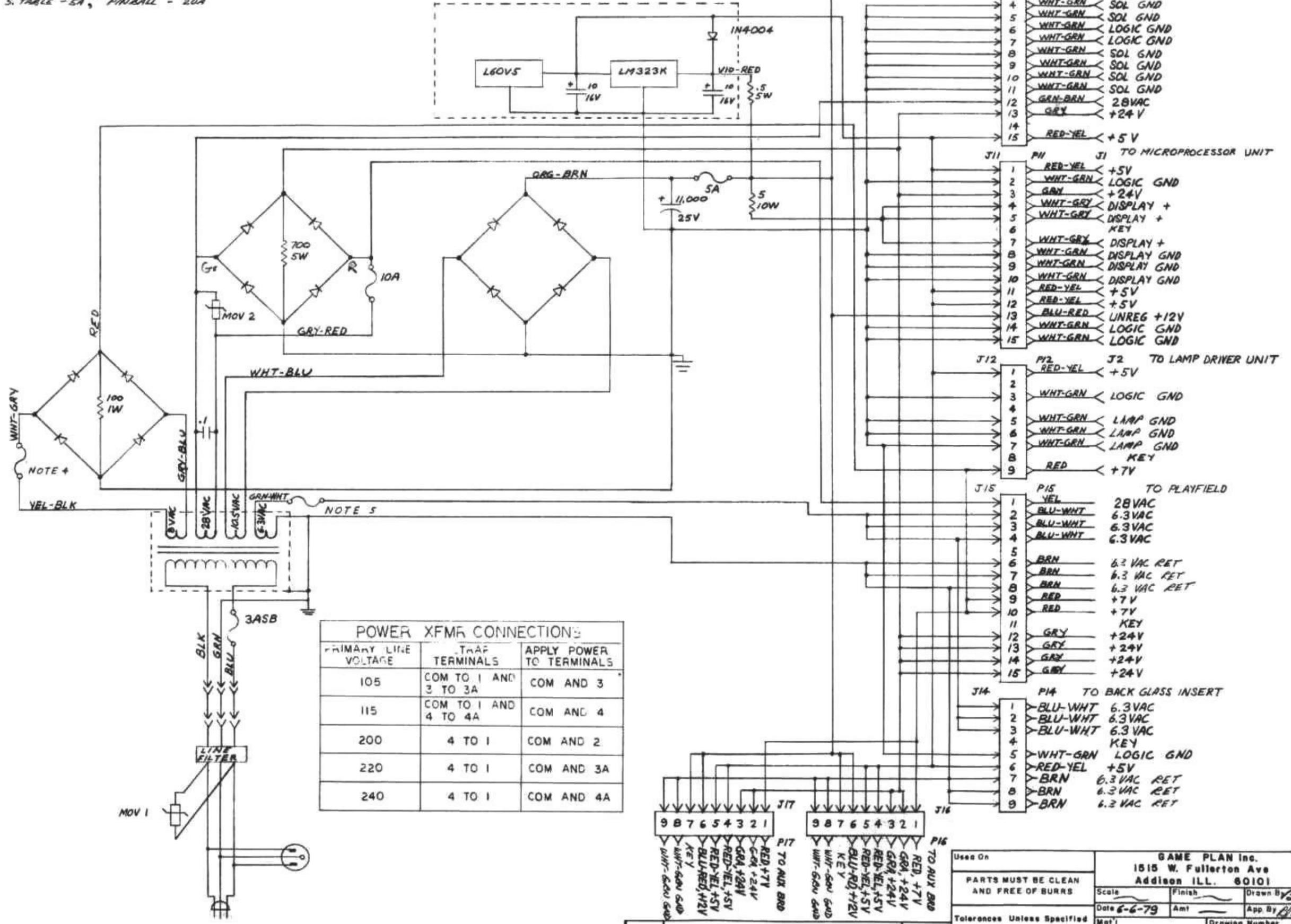


2	7TH DIGIT ADDED	9-5-80
ISSUE	CHANGE	DATE

Use On		GAME PLAN Inc. 1515 W. Fullerton Ave Addison ILL. 60101	
PARTS MUST BE CLEAN AND FREE OF BURRS		Scale	Finish
Date 4-18-77	Amt	Drawn By	
Tolerances Unless Specified		Drawing Number	
Fractional	± .018	02-70019C	
Decimal	± .008	PINBALL DISPLAY CABLE	
Angles	± 1/2		
Screw Threads	Class 2		



- NOTES:  
 1. RECTIFIER BRIDGES ARE 25 AMP AND 200 VOLT PIV.  
 2. MOV 1 IS A V130LA10A FOR 120 VAC AND A V250LA20A FOR 240 VAC LINE.  
 3. MOV 2 IS A V822A12.  
 4. TABLE - SA, FINBALL - 15A  
 5. TABLE - SA, FINBALL - 20A

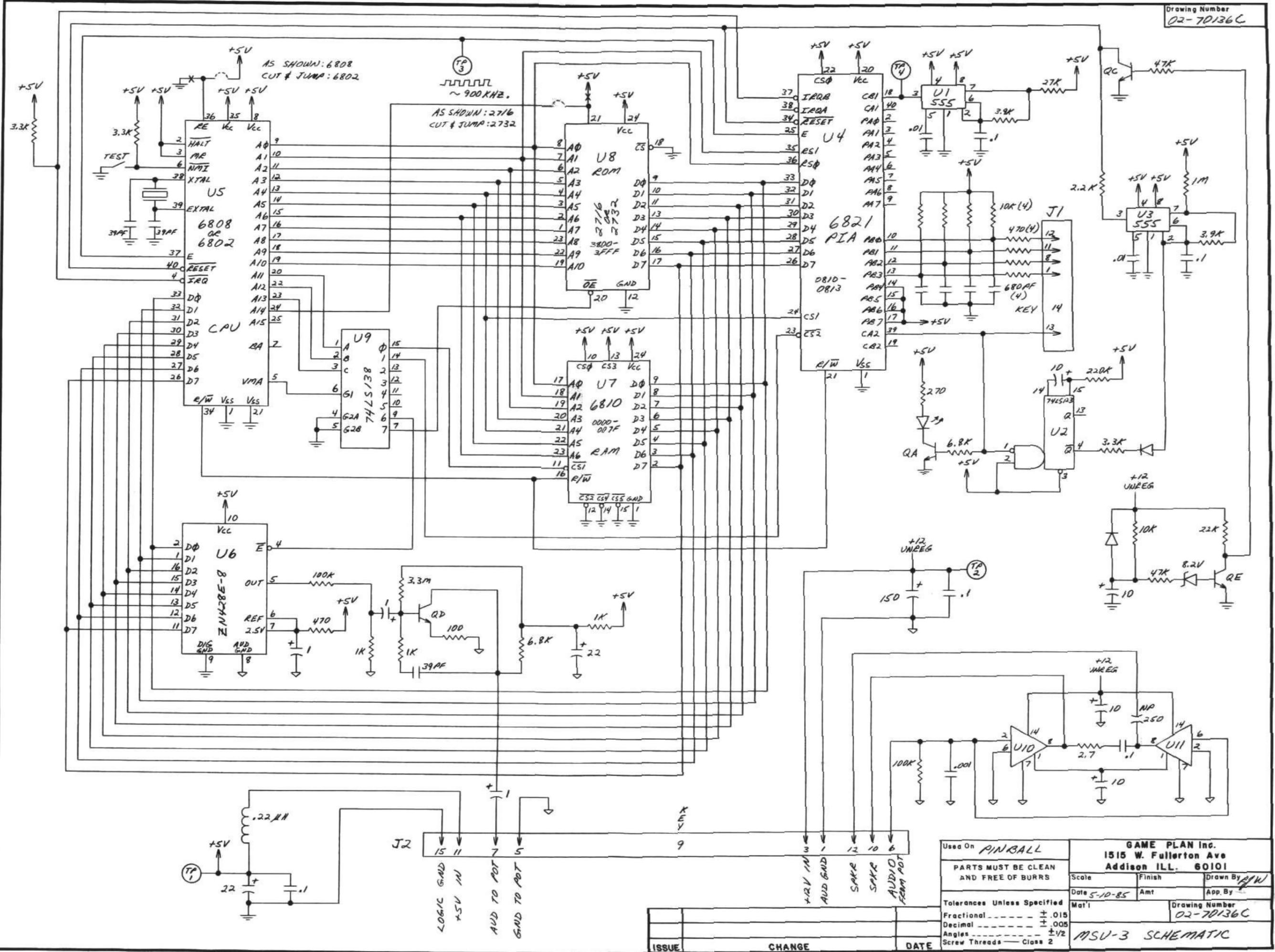


POWER XFMR CONNECTIONS		
PRIMARY LINE VOLTAGE	TAP TERMINALS	APPLY POWER TO TERMINALS
105	COM TO 1 AND 3 TO 3A	COM AND 3
115	COM TO 1 AND 4 TO 4A	COM AND 4
200	4 TO 1	COM AND 2
220	4 TO 1	COM AND 3A
240	4 TO 1	COM AND 4A

<p>Use On</p> <p>PARTS MUST BE CLEAN AND FREE OF BURRS</p> <p>Tolerances Unless Specified</p> <p>Fractional . . . . . ± .015</p> <p>Decimal . . . . . ± .008</p> <p>Angles . . . . . ± 1/2</p> <p>Screw Threads . . . . . Class 2</p>	<p>GAME PLAN Inc.</p> <p>1515 W. Fullerton Ave</p> <p>ADDISON ILL. 60101</p> <p>Scale _____ Finish _____</p> <p>Date 6-6-79 Amt _____</p> <p>App. By <i>RLW</i></p> <p>Mat'l _____</p> <p>Drawing Number 02-70018C</p> <p>PSU-1 POWER SUPPLY SCHEM.</p>
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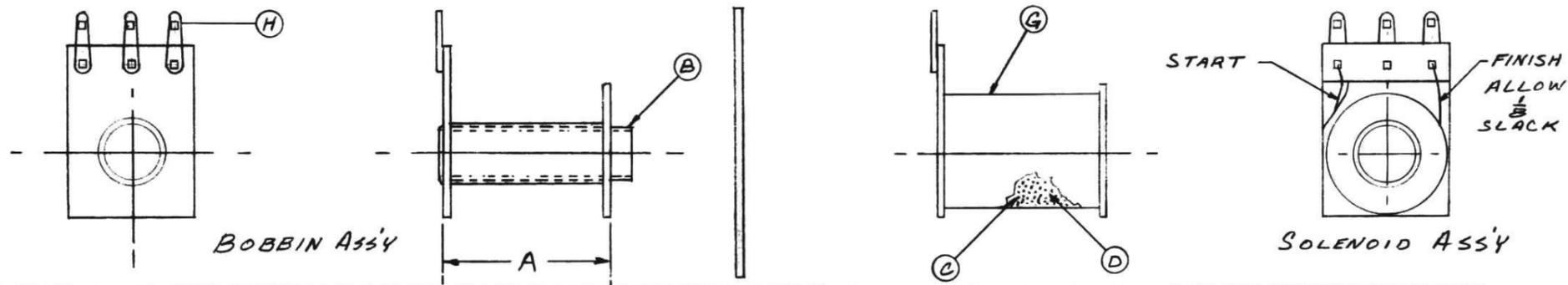
ISSUE	CHANGE	DATE





Use On	PINBALL		
PARTS MUST BE CLEAN AND FREE OF BURRS	Scale	Finish	Drawn By
Tolerances Unless Specified	Date 5-10-85	Amt	App. By
Fractional ----- ± .015	Mat'l		Drawing Number
Decimal ----- ± .005			02-70136C
Angles ----- ± 1/2	MSU-3 SCHEMATIC		
Screw Threads ----- Class 2			

ISSUE	CHANGE	DATE



	A	B	C	D	E	F	G	H
COIL NUMBER	BOBBIN	TUBE	WIRE GAGE-TYPE	NUMBER TURNS	RESISTANCE	DESIGN VOLTAGE	COIL WRAPPER	LUG NUMBER
21-50001B	03-40002N 1.562	03-40008N 1.686	No. 24 MAGNET	850	4.75Ω	24 V.D.C.		
21-50002B	03-40002N 1.562	03-40008N 1.686	No. 25 No. 27	400 1000	2.8Ω 13.4Ω	24 V.D.C.		
21-50003B	03-40002N 1.562	03-40008N 1.686	No. 25	1050	7.45Ω	24 V.D.C.		
21-50004B	03-40002N 1.562	03-40027N	No. 29	2000	33.8Ω	24 V.D.C.		
21-50005B	03-40002N 1.562	03-40008N 1.686	No. 27	1400	15.4Ω	24 V.D.C.		
21-50006B	"	"	No. 28	1800	25.8Ω	24 V.D.C.		
21-50007B	03-40037B	03-40038A	No. 24	1000	8Ω	24 V.D.C.		
21-50008B	03-40002N	04-20022	No. 22 No. 30	375 800	1.2Ω 21.5Ω	24 V.D.C. 24 V.D.C.		
21-50009B	03-40037B	03-40038A	No. 23	1100	6.2Ω	24 V.D.C.		
21-50010B	03-40037B	03-40038A	No. 25	1800	16.5Ω	24 V.D.C.	EXP.	

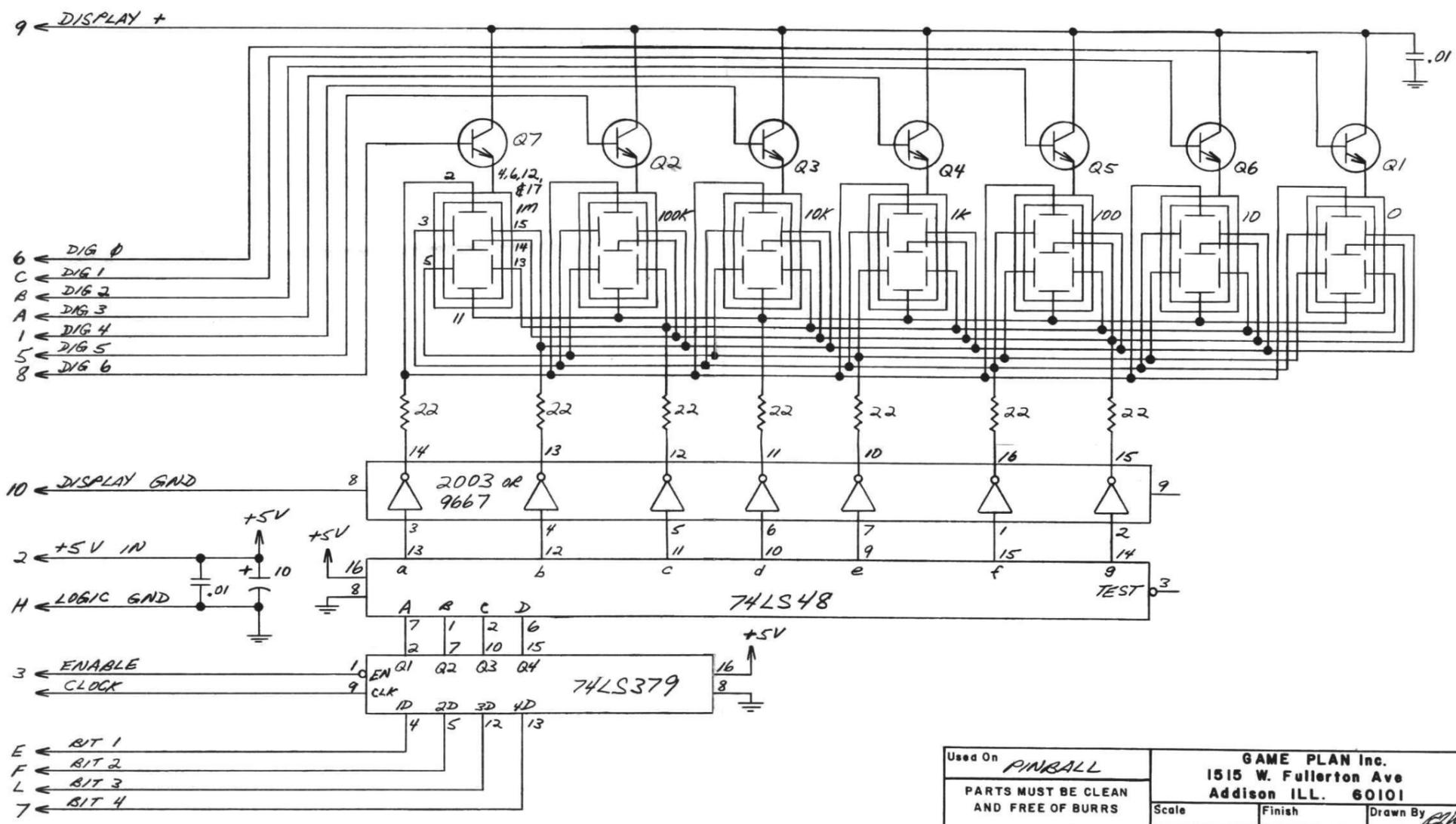
Ⓐ

GAME PLAN INCORPORATED  
140 LIVELY BOULEVARD  
ELK GROVE VILLAGE, IL 60007

SCALE: _____	APPROVED BY: DATE 11-3-77	REV:1	DRAWN BY ED-C
DATE: 11-3-77			REVISED 4-25-78
MAT'L- AS NOTED	FINISH _____	AMT- AS REQ'D	USED ON GENERAL
SOLENOIDS			DRAWING NUMBER 21-50001B THRU →

Ⓐ	04-20022 WAS 03-40008N	
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>EW</i>
Fractional ----- ± .015	Date 4-7-81	Amt	App. By
Decimal ----- ± .005	Mat'l		Drawing Number
Angles ----- ± 1/2			02-70089B
Screw Threads --- Class 2	BDU-2 DISPLAY UNIT		

ISSUE	CHANGE	DATE