FUTURE QUEEN

INSTRUCTION MANUAL

NUOVA
Bell Games
s.r.l.

INITIALIZATION, GAME OPERATION

Turn, game on,
led in cpu start to flash, for seven times and test pinball

A. GAME START

Two balls must be in the ball return trough to start a game.

1. Insert coins into coin chute.
   a. Coin chute tune is played.
   b. Total credits are displayed
2. Press Credit Button to start game.
   a. Credit tune is played.
   b. Total credits displayed decrea_ se by one.
3. All playfield features reset.
4. The first player score display flashes two zeros.

B. FIRST PLAYER

1. First player's score display flashes two zeros.
2. The other player's displays are now blank.
3. The ball-in-play is displayed in the center display.

C. ADDITIONAL PLAYERS

1. Additional players are indicated by two zeros in each corresponding player's display.
2. After the maximum number of players are added, or no more credits remain, the Credit Button has no effect.
3. Additional players can be added anytime during the first ball in play.

D. EXTRA BALLS

1. When the SHOOT AGAIN lamp is lit, neither the player-up nor the ball-in-play changes when the ball enters the outhole.
2. Only one extra ball per ball-in-play is given.

E. TILT MODE

1. Tilting the game results in a loss of ball in play.
2. All accumulated bonus and bonus multipliers are lost.

F. GAME OVER

1. A random match number appears in the ball-in-play display. If this number matches the last two digits in any player's score, a replay (dependent on SWITCH // 28) is awarded.

BOOKKEEPING FUNCTIONS

The game is designed to help the operator perform certain accounting functions. The game can display the number of total plays and replays (free games). It can display the number of coins dropped down each coin chute. The bookkeeping functions are displayed on all player score displays simultaneously. An identification number, 05 to 15, appears on the Match/Ball in Play window as follows:

```
 05 -    00 to-   40=Current Credits
*06 - 10000 to-99999=Total Plays (Payed & Free Games)
*07 - 10000 to-99999=Total Replays (Free Games)
 08 -    00 to-99999=Game Percentage
 09 -    00 to-99999=Total times "High Score to Date" is beat
*10 - 10000 to-99999=Coins Dropped thru Coin Chute ## 1
*11 - 10000 to-99999=Coins Dropped thru Coin Chute ## 2**
*12 - 10000 to-99999=Coins Dropped thru Coin Chute ## 3**
*13 -    00 to-99999=Number of Specials awarded from Playfield Specials On
*14 -    00 to-99999=Number of minutes of Game Play (Total)
*15
```

The game displays the first bookkeeping entry if the Self-Test button (See Fig. III) on the inside of the front door is pressed ten times. Alternately push and release the Self-Test button at one second intervals. The number 05 appears in the "Match/Ball in Play" window. Current credits appear on the player score displays. Each additional press of the button causes the next entry to be displayed.

After the data in each bookkeeping register is recorded, it can be set to zero simply by pressing switch button RED located on front door or by pressing the Coin Chute ## 3 switch. Any or all registers can be cleared by alternating between the Self-Test button and the switch button front door or Coin Chute ## 3 switch. The operator is given this option as a possible convenience and can elect to use or not use it as his needs direct.

Pressing the button 5 more times causes the game to play the power-up tune and light the Game Over light.

Service credits are designed to allow the serviceman to test the game under actual play conditions without disturbing the bookkeeping records that reside at identification number 06, 07, 10, 11 and 12.

To obtain Service Credits, push and release the Self-Test switch until identification number 05 appears in the "Match/Ball in Play" window. Hold in the Credit button until the desired number of Service Credits (up to five) appears on the player score displays.

NOTE: If, upon accessing identification number 05, a number of credits greater than five is displayed, pressing the credit button has no effect.

C. FRONT DOOR GAME ADJUSTMENTS

High Score Feature Adjustments:

The game is designed to award an extra ball (option) of a free game at each of three score levels. The recommended levels are on the score card in the game.

Any level from 10.000 to 990.000 can be set, as desired. It is also possible to reset or turn off (00) any or all of the levels, if desired.

1. Push and release Self-Test button (See Figure III) at one second intervals approximately six times or until identification number 01 appears on the "Match/Ball in Play" display.

2. The number on the Player Score Displays is the score level* It can be increased, if desired, by holding the credit button in. To decrease the score level, hold the credit button in and depress and release the Self-Test button. Release the credit button when the desired number appears. Note that the level changes 10.000 points at a time. If the number "00" is left on the displays, the high score feature is eliminated for that level.

3. Repeat steps 1 and 2 for the second score levels. The identification numbers "02" for "03" see pag. 3 on the Match/Ball in Play display are for the second levels.

High Score to Date and 10.000.000 Feature:

The game is designed to award free games when "High Score to Date" is beat, or if the palyer exceeds 10.000.000 points.

It is recommended that the level, which will build with play, be periodically reset to the factory recommended level to encourage game play.

The adjustment procedure is the same as for the High Score Feature Adjustment, Steps 1 and 2. Continue pushing the Self-Test button until the identification number "04" appears on the "Match/Ball in Play" display and then do Step 2.

Any level from "00" to 9.990.000 can be set as described. It is to be noted that "00" does NOT turn off the feature, as it does on High Score feature. The feature is turned off by self test position 19 as discussed under "Back Box Game Adjustments".

SELF TEST SETUP FOR 16-19:

To set up positions 16-19 push and release self test button till 16 shows on match/ball in play. Now pulse replay button for recommended setup from "00" thru "03". Repeat for positions 17, or 19.

SOUND

In addition to game sounds, there in also a Master Volume Control located on the front door.

Please note that these module volume controls should be adjusted prior to setting the control on the front door.

HIGH SCORE FEATURE:

The game is designed to award an Extra Ball or Free Game at each of the two or three score levels.
See Front Door Game Adjustment.

AWARD	PLAYFIELD SELF TEST POSITION 16	HIGH SCORE SELF TEST POSITION 17
REPLAY	SET TO "03"	SET TO "03"
EXTRA BALL	SET TO "02"	SET TO "02"
NOVELTY	SET TO "01"	SET TO "01"
NO AWARD	SET TO "00"	SET TO "00"

HIGH SCORE TO DATE OR OVER 10.000.000 SCORE FEATURE:

The game is designed to award free games as an option if high score to date is beat or palyer exceeds 10.000.000 points. Each time this happens the winning score becomes the new high score to beat. This score is displayed on all 4 player score displays at the end of each game as an incentive to play.
Recommended setting is underlined.

HIGH SCORE TO DATE FEATURE	SELF TEST POSITION 19
NO AWARD	SET TO "00"
ONE CREDIT	SET TO "01"
TWO CREDITS	SET TO "02"
THREE CREDITS	SET TO "03"

State and local laws may regulate the use of the above features, and they have been designed to allow for appropriate adjustment in order to conform to such requirements.

MAXIMUM CREDITS:

The maximum credits accepted by the machine limits the number of games that can be accumulated by coining, by winning replays or both. The maximum number of credits is selectable by means of switches 25 and 26. Four credit limits are available. Switch settings are listed below.

MAXIMUM CREDITS	SWITCHES 26	25
10	OFF	OFF
15	OFF	ON
25	ON	OFF
40	ON	ON

BALLS PER GAME: //BALLS/GAMES	SWITCHES 32	31
5	OFF	ON
4	ON	OFF
3	OFF	OFF
2	ON	ON

MATCH FEATURE:

When the Match Feature in ON, a random number appears on the Match/Ball in Play window and the word Match is illuminated. If the number matches the tens digit in a player's score, a free game is awarded. The Match Feature creates an incentive to play.

MATCH	SWITCH 28
ON	ON
OFF	OFF

CREDIT DISPLAY: CREDITS DISPLAYED	SWITCH 27
YES	ON
NO	OFF

GAME OVER ATTRACT ADJUSTMENT	SW 16
SOUND AND LIGHT	
YES	ON
NO	OFF

NUMBER OF GAMES REPLAYS PER GAME ADJUSTMENT	SW 29
LIBERAL all replay earned will be collected	ON
CONSERVATIVE only 1 replay per player per game	OFF

GAME ADJUSTMENTS

A. Back Box Game Adjustments:
Each game has thirty-two switches located on A4, the MPU module, located in the back box, that allow play to be customized to the location. Credits per coin, credit display, and baser per game, are selectable by means of the switches. The switches are contained in four-sixteen lead packages numbered S1-8, S9-16, S17-24, and S25-32 for easy identification. The "ON" toggle position is marked on the assembly. **Turn off power before making adjustments.**

Credits/Coin Adjustments:
The credits per coin are selectable by means of S17-S20 for coin chute #2 (Center). The switch settings and resultant credits/coin are as follows:

S20	S19	S18	S17	Credits/Coin
OFF	OFF	OFF	OFF	Same as Coin Chute #1 Settings
OFF	OFF	OFF	ON	1/1 Coin
OFF	OFF	ON	OFF	2/1 Coin
OFF	OFF	ON	ON	3/1 Coin
OFF	ON	OFF	OFF	4/1 Coin
OFF	ON	OFF	ON	5/1 Coin
OFF	ON	ON	OFF	6/1 Coin
OFF	ON	ON	ON	7/1 Coin
ON	OFF	OFF	OFF	8/1 Coin
ON	OFF	OFF	ON	9/1 Coin
ON	OFF	ON	OFF	10/1 Coin
ON	OFF	ON	ON	11/1 Coin
ON	ON	OFF	OFF	12/1 Coin
ON	ON	OFF	ON	13/1 Coin
ON	ON	ON	OFF	14/1 Coin
ON	ON	ON	ON	15/1 Coin

The credits given are selectable by means of switches 1-5 incl., for coin chute #1 and switches 9-13 incl., for coin chute #3. Thirty-one different credit ratios are available for each coin chute. The switch settings and resultant credits/coin are listed below.

CREDITS/COIN ADJUSTMENTS

COIN CHUTE	SWITCHES					CREDITS	CREDITS	CREDITS	CREDITS	CREDITS	TO CREDIT
#1 (HINGE SIDE)	5	4	3	2	1						
OR #3	13	12	11	10	9						
(RIGHT SIDE)	OFF	OFF	OFF	OFF	OFF	1/1 Coin					
	OFF	OFF	OFF	OFF	ON	2/1 Coin					
	OFF	OFF	OFF	ON	OFF	3/1 Coin					
	OFF	OFF	OFF	ON	ON	4/1 Coin					
	OFF	OFF	ON	OFF	OFF	5/1 Coin					
	OFF	OFF	ON	OFF	ON	6/1 Coin					
	OFF	OFF	ON	ON	OFF	7/1 Coin					
	OFF	OFF	ON	ON	ON	8/1 Coin					
	OFF	ON	OFF	OFF	OFF	9/1 Coin					
	OFF	ON	OFF	OFF	ON	12/1 Coin					
	OFF	ON	OFF	ON	OFF	14/1 Coin					
	OFF	ON	OFF	ON	ON	1/2 Coins*					
	OFF	ON	ON	OFF	OFF	2/2 Coins*					
	OFF	ON	ON	OFF	ON	3/2 Coins*					
	OFF	ON	ON	ON	OFF	4/2 Coins*					
	OFF	ON	ON	ON	ON	5/2 Coins*					
	ON	OFF	OFF	OFF	OFF	6/2 Coins*					
	ON	OFF	OFF	OFF	ON	7/2 Coins*					
	ON	OFF	OFF	ON	OFF	8/2 Coins*					
	ON	OFF	OFF	ON	ON	9/2 Coins*					
	ON	OFF	ON	OFF	OFF	12/2 Coins*					
	ON	OFF	ON	OFF	ON	14/2 Coins*					
	ON	OFF	ON	ON	OFF	1/1st Coin	2/2nd Coin				3/2
	ON	OFF	ON	ON	ON	0/1st Coin*	1/2nd Coin	1/3rd Coin	1/4th Coin		3/4
	ON	ON	OFF	OFF	OFF	0/1st Coin*	1/2nd Coin	0/3rd Coin**	2/4th Coin		3/4
	ON	ON	OFF	OFF	ON	1/1st Coin	1/2nd Coin	1/3rd Coin	2/4th Coin		5/4
	ON	ON	OFF	ON	OFF	1/1st Coin	2/2nd Coin	1/3rd Coin	3/4th Coin		7/4
	ON	ON	OFF	ON	ON	1/1st Coin	2/2nd Coin	2/3rd Coin	2/4th Coin		7/4
	ON	ON	ON	OFF	OFF	0/1st Coin***	0/2nd Coin***	1/3rd Coin			1/3
	ON	ON	ON	OFF	ON	0/1st Coin**	0/2nd Coin**	0/3rd Coin**	1/4th Coin		1/4
	ON	ON	ON	ON	OFF	0/1st Coin****	0/2nd Coin****	0/3rd Coin****	0/4th Coin****	1/5th Coin	1/5
	ON	ON	ON	ON	ON	0/1st Coin***	0/2nd Coin***	1/3rd Coin	0/4th Coin****	1/5th Coin	2/5

*No Credits until 2nd coin is dropped.
**No Credits until 4th coin is dropped.
***No Credits until 3rd coin is dropped.
****No Credits until 5th coin is dropped.

How to play

DIGITAL POWER ZONE (9 BOTTONS)

Complete the sequence advances the bonus

BONUS REGULATION:

SW 8	SW 7	
OFF	OFF	UNLIT
OFF	ON	100.000 POINTS LIT
ON	OFF	200.000 POINTS LIT

SW 6

OFF	SPECIAL LIT WITH 500.000 POINTS
ON	SPECIAL LIT AFTER 500.000 POINTS

SW 23

ON	THE LITS BOTTONS STAY IN MEMORY FOR THE NEXT BALL
OFF	DONT STAY IN MEMORY

KICK BACK TURBO LIGHT SPEED

SW 30

ON	COLLECT 25.000 POINTS + LIT ONE LETTER IN FUTURE TARGETS
OFF	ALTERNATE

FUTURE QUEEN TARGETS AND SPECIAL

SW 21

ON	THE LETTERS LITS REST IN MEMORY FOR NEXT BALL
OFF	DON'T REST IN MEMORY

SW 24

ON	BONUS LIT REST IN MEMORY FOR NEXT BALL
OFF	BONUS DON'T REST IN MEMORY FOR NEXT BALL

SW 15	SW 14	YOU CAN CHOOSE WHEN THE BONUS FUTURE QUEEN MUST LIT
OFF	OFF	LIT WITH 70.000 POINTS
OFF	ON	" " 105.000 POINTS
ON	OFF	LIT WITH 140.000 POINTS
ON	ON	" AFTER " "

LUCKY FUTURE VALUE

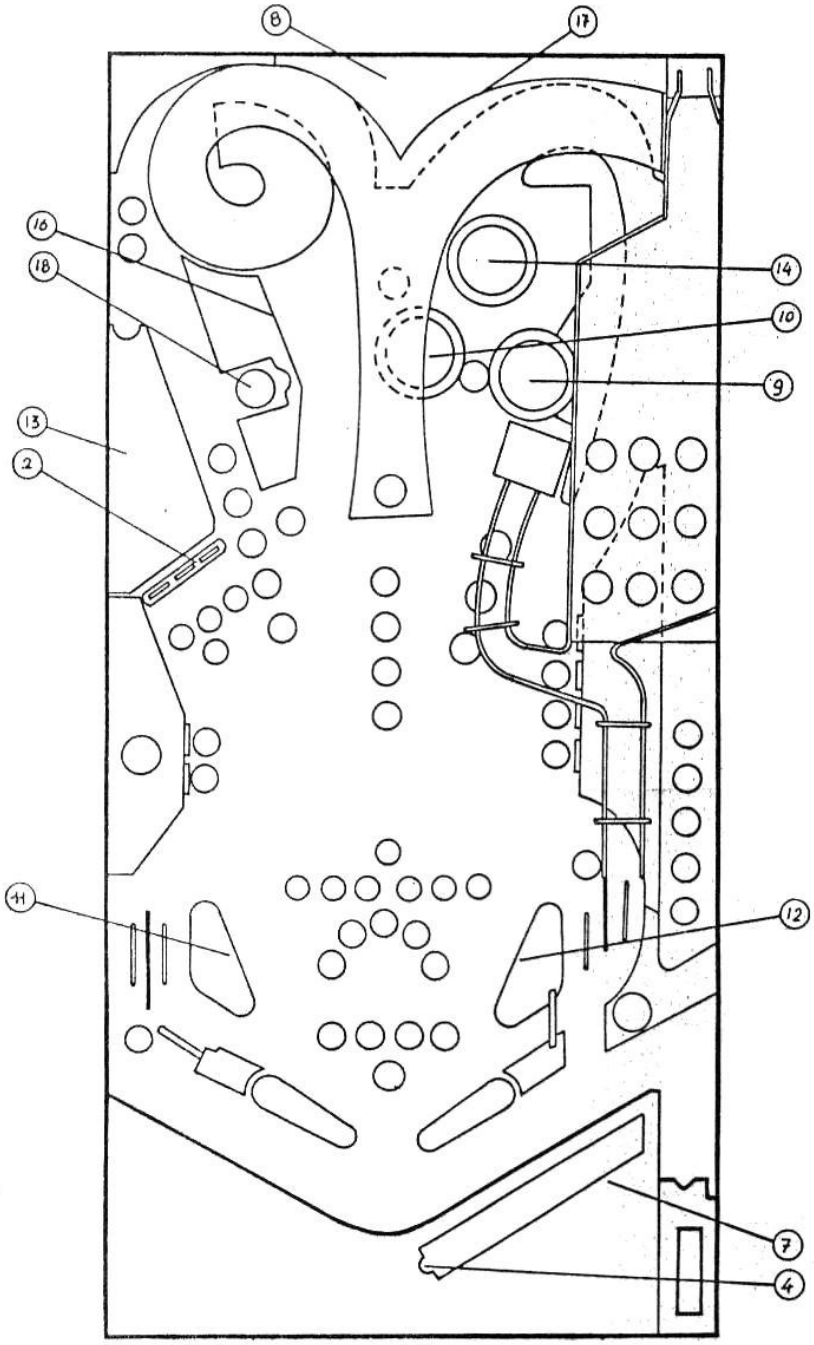
The player hitting the drop targets ability the lucky future target, is possible hitting the target earn 50.000, 100.000, 150.000, 200.000 or extra-ball.
The operator can choose which percentage award is earned for extra ball, self-test position 18

00	RANDOM
01	10%
02	15%
03	25%

CONSOLATION EXTRA BALL

The player, on his last ball have an total average points less than 200.000 he gest an extra ball.
This award is for less skilled players.

Solenoids



[illegible] AND LEFT FLIPPERS
[illegible] COILS TYPE:

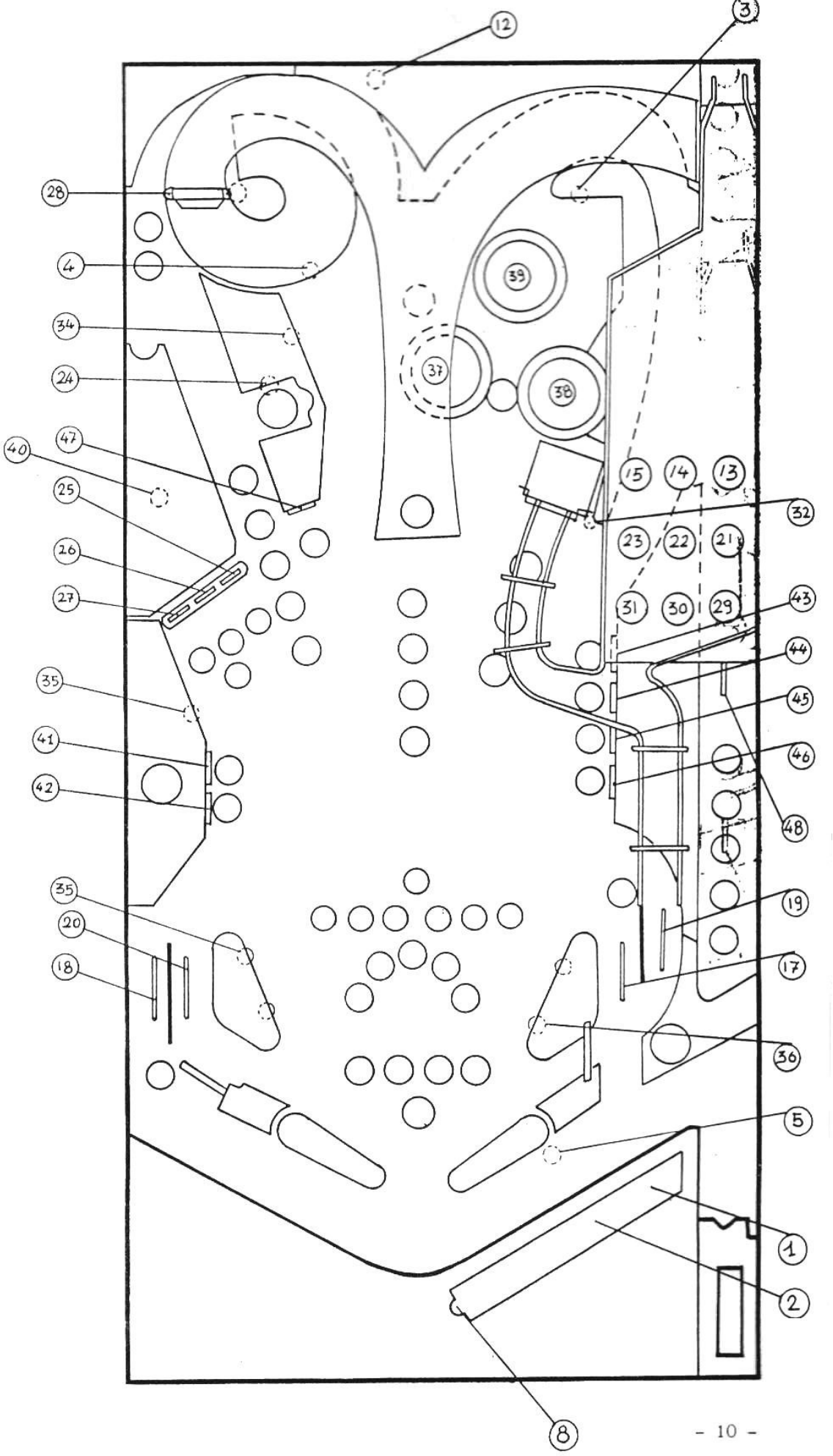
[illegible] S-600 LEFT FLIPPER
[illegible] S-5000 RIGHT FLIPPER

[illegible] RESISTOR

PART. NO.	DESCRIPTION
NO - 26 - 1900	DROP TARGET
BG - 26 - 1200	KNOCKER
BG - 26 - 1200	OUTHOLE KICKER
BG - 26 - 1200	BALL RELEASE
BG - 26 - 1200	KICKER CAPTURE
BG - 26 - 1200	RIGHT JET BUMPER
BG - 26 - 1200	LEFT JET BUMPER
BG - 26 - 1200	LEFT KICKER
BG - 26 - 1200	RIGHT KICKER
BG - 56 - 800	KICKBACK
BG - 26 - 1200	UPPER JET BUMPER
7 AMP. - 48 VOLTS	RELE'
BG - 26 - 1200	UP KICKER
BG - 25 - 500	GATE RELEASE
BG - 22 - 3600	SPINNER

S W I T C H E S

TEST	PART NO.	DESCRIPTION
1		BALL TROUGH
2		BALL TROUGH
3		SOUND SWITCH
4		SOUND SWITCH
5		BOTTONS LANE CHANGE
6		START BUTTON
7		TILT
8		OUTHOLE
9		RIGHT COIN CHUTE
10		LEFT COIN CHUTE
11		CENTER COIN CHUTE
12		KICKBACK CAPTURE
13		TOP BOTTON RIGHT
14		TOP BOTTON CENTER
15		TOP BOTTON LEFT
16		SLAM
17		RIGHT OUTLANE
18		LEFT OUTLANE
19		RIGHT RETURN LANE
20		LEFT RETURN LANE
21		MID BOTTON RIGHT
22		MID BOTTON CENTER
23		MID BOTTON LEFT
24		SPINNER
25		DROP TARGET RIGHT
26		DROP TARGET CENTER
27		DROP TARGET LEFT
28		RAMP-GATE
29		LOWER BOTTON RIGHT
30		LOWER BOTTON CENTER
31		LOWER BOTTON LEFT
32		METAL RAMP
33		NOT USED
34		UP KICKER
35		LEFT KICKER
36		RIGHT KICKER
37		LEFT JET BUMPER
38		RIGHT JET BUMPER
39		UPPER JET BUMPER
40		KICKBACK
41		"F" TARGET
42		"U" TARGET
43		"T" TARGET
44		"U" TARGET
45		"R" TARGET
46		"E" TARGET
47		QUEEN TARGET
48		ROLLOVER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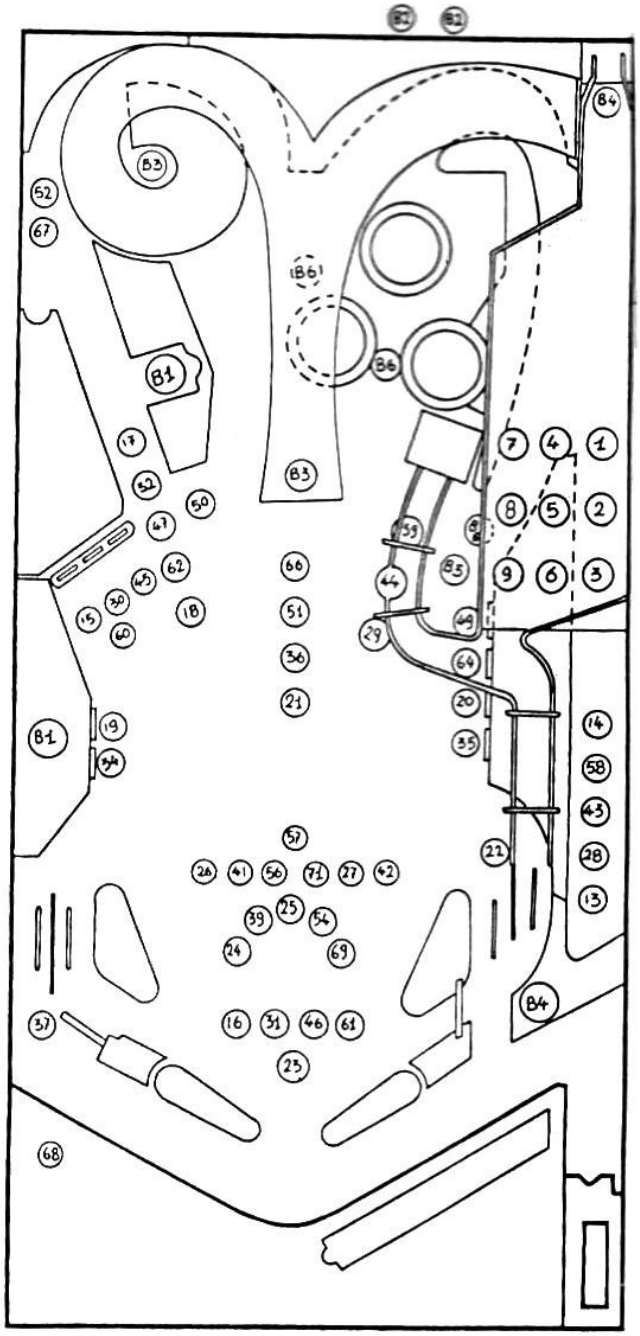
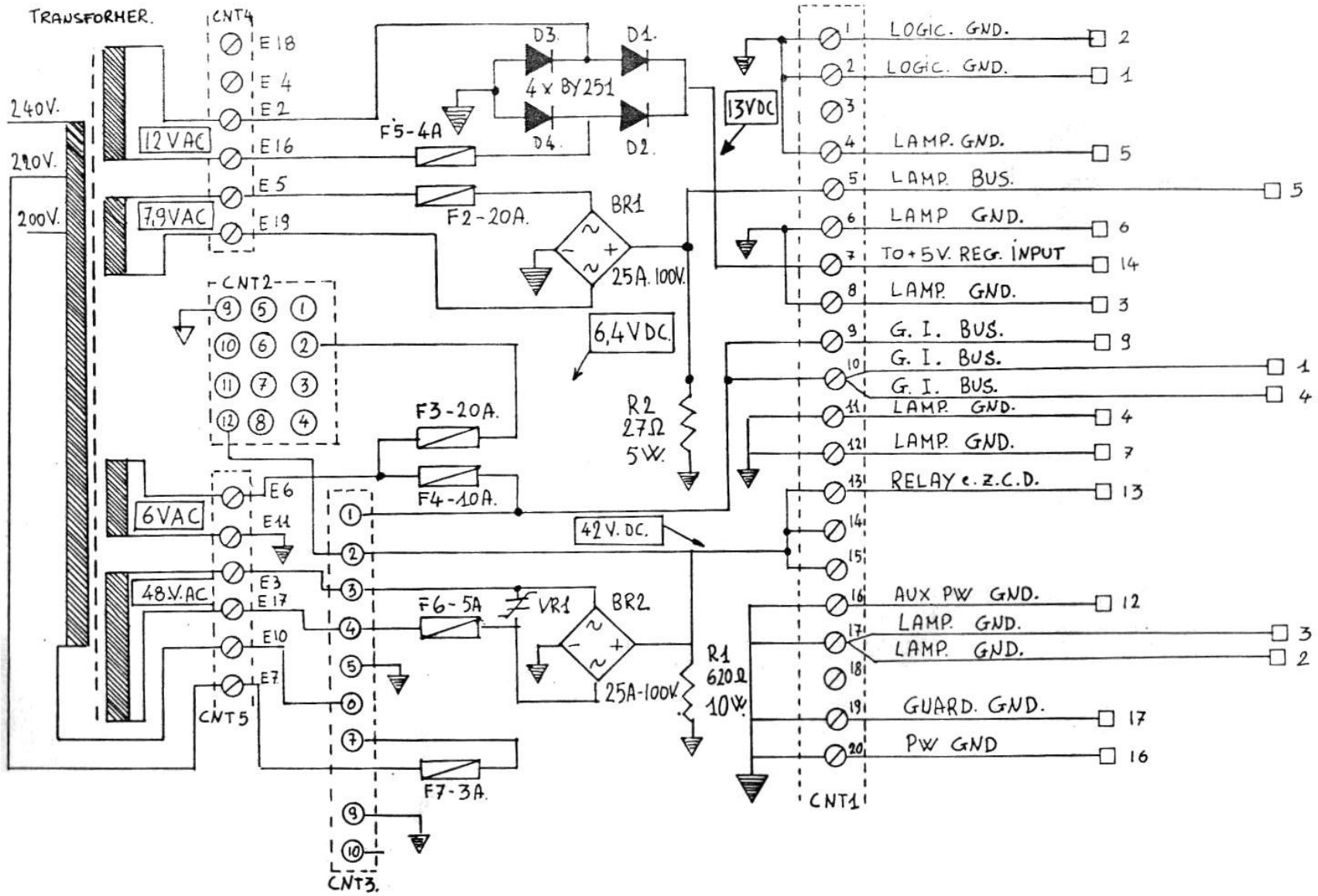
LAMPS

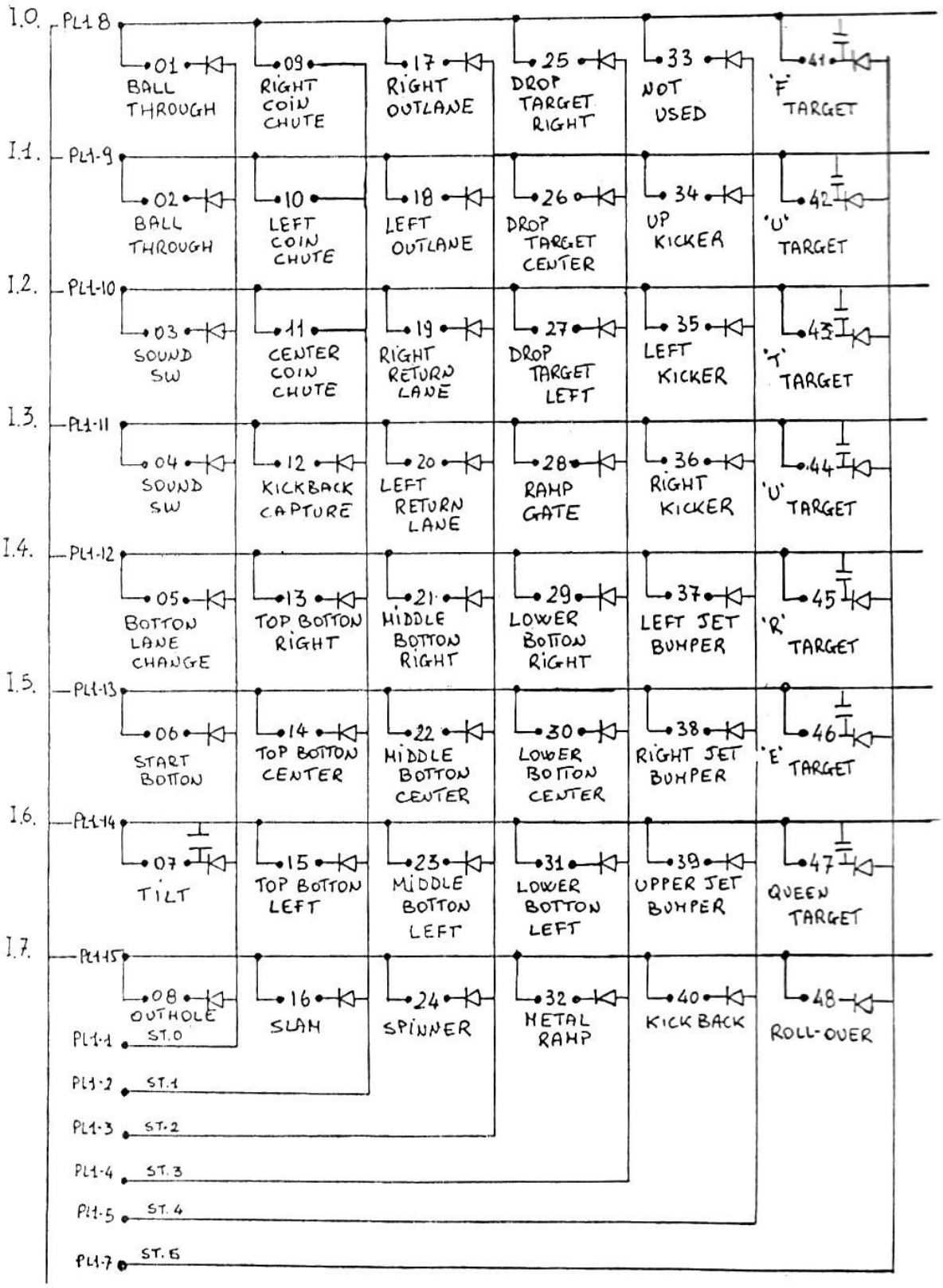
SCR	DESCRIPTION
1	TOP RIGHT LED
2	MID " "
3	LOWER RIGHT LED
4	TOP CENTER LED
5	MID " "
6	LOWER CENTER LED
7	TOP LEFT LED
8	MID " "
9	LOWER LEFT LED
10	B1 12V. 10W
11	GENERAL ILL BOARD
12	B5 24V. 10W
13	DIGITAL POWER ZONE 100K
14	" " " SPECIAL
15	2X DROP TARGET
16	2X PLAYFIELD
17	LUCKY FUTURE 50K
18	" " EXTRA BALL
19	"F" TARGET
20	R TARGET
21	1 LAMP GRAVITY ZERO
22	RIGHT OUTLANE SPECIAL
23	SHOOT AGAIN PLAYFIELD
24	FUTURE BONUS 35K
25	FUTURE SPECIAL
26	FUTURE "F"
27	FUTURE "R"
28	DIGITAL POWER ZONE 200K
29	25K METAL RAMP
30	3X DROP TARGET
31	3X PLAYFIELD
32	LUCKY FUTURE 100K
33	B3 12V. 10W
34	"U" TARGET
35	"E" TARGET
36	2 LAMP GRAVITY ZERO
37	LEFT OUTLANE SPECIAL
38	TOP LIGHT BACKBOX 1
39	FUTURE BONUS 70K
40	TOP LIGHT BACKBOX 2
41	FUTURE "U"
42	FUTURE "E"
43	DIGITAL POWER ZONE 500K
44	50K METAL RAMP
45	4X DROP TARGET
46	4X PLAYFIELD
47	LUCKY FUTURE 150K
48	NOT USED
49	"T" TARGET
50	QUEEN TARGET
51	3 LAMP GRAVITY ZERO



52	KICKBACK W/L	68 CREDIT
53	B2 12V. 10W	69 FUTURE BONUS 140K
54	FUTURE BONUS 105K	70 TILT
55	GAME OVER	71 "U" FUTURE
56	FUTURE "T"	72 B4 12V. 10W
57	QUEEN	
58	DIG. POWER ZONE EXTRA B.	
59	RELEASE	
60	5X DROP TARGET	
61	5X PLAYFIELD	
62	LUCKY FUTURE 200K	
63		
64	"U" TARGET	
65	B6 24V. 10W	
66	1 LAMP GRAVITY ZERO	
67	KICKBACK 25K	

POWER SUPPLY PM 148.2



WIRES COLOR & DIAGRAM PLAYFIELD

PL1 - 1 - WHITE/RED - PL1 - 2 - ORANGE - PL1 - 3 - GRAY/YELLOW - PL1 - 4 - WHITE/YELLOW
PL1 - 5 - RED/YELLOW - PL1 - 7 - WHITE/BLUE - PL1 - 8 - PINK/ORANGE - PL1 - 9 - YELLOW/BROWN
PL1 - 10- GRAY/BLACK - PL1 - 11- ORANGE/BLACK - PL1 -12 - BROWN - PL1 -13 - BROWN/RED
PL1 - 14- GRAY/RED - PL1 - 15- WHITE/BROWN -