Bally
THE PARTY ZONE

™

Featuring...

Captain B. Zarr

Operations Manual
Includes

Operations &
Adjustments

Testing & Problem
Diagnosis

Parts Information

Reference Diagrams &
Schematics

Jumper Charts

Display	W1	W2
1MEG, 2MEG, 4 MEG EPROM	In	Out
512K, 1 MEG EPROM	Out	In

Country	W14	W15	W16	W17	W18
America	In	In	In	In	In
European	In	In	Out	In	In
French	In	In	In	Out	In
German	In	In	In	In	Out

Solenoid/Flasher Table

Sol. No.	Function	Solenoid Type	Wire Color	Connection	Driver Trnstr	Solenoid Part Number Flashlamp Type
01	Back Ball Popper	High Power	Vio-Brn	J130-1	Q82	AE-26-1200
02	Right Ball Popper	High Power	Vio-Red	J130-2	Q80	AE-26-1200
03	D.J. Mouth	High Power	Vio-Orn	J130-4	Q78	AE-26-1500
04	D.J. Eject	High Power	Vio-Yel	J130-5	Q76	AE-26-1200
05	Dancin' Dummy	High Power	Vio-Grn	J130-6	Q64	AE-26-1200
06	Comic Mouth	High Power	Vio-Blu	J130-7	Q66	AE-30-2000
07	Knocker	High Power	Vio-Blk	J130-8	Q68	AE-23-800
08	Not Used					
09	Outhole	Low Power	Brn-Blk	J127-1	Q58	AE-27-1200
10	Ball Release	Low Power	Brn-Red	J127-3	Q56	AE-26-1200
11	Left Jet Bumper	Low Power	Brn-Org	J127-4	Q54	AE-26-1200
12	Right Jet Bumper	Low Power	Brn-Yel	J127-5	Q52	AE-26-1200
13	Bottom Jet Bumper	Low Power	Brn-Grn	J127-6	Q50	AE-26-1200
14	Not Used					
15	Left Sling	Low Power	Brn-Vio	J127-8	Q46	AE-26-1500
16	Right Sling	Low Power	Brn-Gry	J127-9	Q44	AE-26-1500
17	Cottage Flasher	Flasher	Blk-Brn	J125-1, J126-1	Q42	#906
18	Rocket Flashers	Flasher	Blk-Red	J125-2, J126-2	Q40	#906
19	Out Of Control	Flasher	Blk-Org	J125-3, J126-3	Q38	#89
20	Comic Flasher	Flasher	Blk-Yel	J125-5, J126-4	Q36	#906
21	Ozone Flashers	Flasher	Blu-Grn	J125-6, J126-5	Q28	#906
22	Right Side Flashers	Flasher	Blu-Blk	J125-7, J126-6	Q30	#89, #906
23	Head On/Off	Low Power	Blu-Vio	J126-7	Q34	AE-26-1500
24	Head Direction	Low Power	Blu-Gry	J126-8	Q32	14-7968 12V
25	Boppers Flasher	Flasher	Blu-Brn	J122-1	Q26	#89
26	Left Side Flashers	Flasher	Blu-Red	J122-2, J123-3	Q24	#89, #906
27	Top Left Flashers	Flasher	Blu-Org	J122-3, J123-4	Q22	#89, #906
28	D.J. Flasher	Flasher	Blu-Yel	J122-4, J123-5	Q20	#906
	General Illumination Circuits					
01	Illumination String 1	G.I.	Brown	J120-1	Q18	#44
02	Illumination String 2	G.I.	Orange	J120-2	Q10	#44
03	Illumination String 3	G.I.	Yellow	J120-3	Q14	#44
04	Illumination String 4	G.I.	Green	J121-5	Q16	#555
05	Illumination String 5	G.I.	Violet	J121-6	Q12	#555
	Lower Right Flipper		Blu-Yel	J109-7		FL-11630
	Lower Left Flipper		Gry-Yel	J109-5		FL-11630

Table of Contents

Party Zone

PLAYFIELD SHOT MAPS
&
RULES

PARTY ZONE

RULES

OBJECT   The 3 party groups (Party Animals, Party Monsters and Party Dudes) meet at the Cosmic Cottage for Happy Hour (Multiball). During Multiball, collect 'Rock-It-Fuel' to advance the 'Rock-It-Meter', 1 to 7 Million points. Each 'Rock-It' shot scores the lit value of the 'Rock-It-Meter'. When BIG BANG is lit, shoot 2 balls up the Rocket Ramp for Super Jackpot.

HAPPY HOUR (MULTIBALL)   1st Multiball - Shoot 3 balls into the Cosmic Cottage. 2nd Multiball - Make Request Time sequence before shooting the 3 balls into the Cosmic Cottage. 3rd Multiball - Make Request Time sequence before each ball is shot into the Cosmic Cottage. During Multiball, advance Rock-it Meter by collecting Rock-it Fuel. Each Rock-it shot awards the current Rock-it Meter value.

BIG BANG   BIG BANG lights when Rock-it Meter is full. Make Rock-it Ramp shot to lock 1 ball. All scoring by the 2nd ball is added to the BIG BANG BONUS. Lock the 2nd ball to award Bonus. Both balls are kicked out and all switches score 250,000 points.

REQUEST TIME   Hit the REQUEST and TIME stand-up targets to light the REQUEST TIME center eject. Making the eject shot awards 250,000 points and allows the player to choose 1 of 4 songs by using the flipper buttons. PARTY SAVER BONUS is awarded by making the center eject while Capt. B. Zarre is playing one of his favorite songs.

WAY OUT OF CONTROL   Completing the 4 WAY OUT OF CONTROL targets lights the lane behind them for the following:
1st Time	5 Million Points
2nd Time	Boppers 1 Million Each
3rd Time	Playfield Values 10X
4th Time	Special

EAT, DRINK & BE MERRY   Complete the 5 Eat, Drink & Be Merry targets to light EAT. Make the EAT ramp shot to score 1 Million points and light DRINK. Make the DRINK ball popper shot to score 2 Million points and light BE MERRY. Make the BE MERRY eject shot to score 3 Million points.

SUPERSONIC ROBOTIC COMIC   Complete the 3 HA-HA-HA targets to light the COMIC. Make the COMIC shot to award random values such as Extra Ball, Score Increase, Bonus Booster, Laff Attack or Surprise Party.

LAFF ATTACK   All switches score 100,000 points for a timed period.

SURPRISE PARTY   Instant Multiball.

OZONE BONUS   Each shot up the Rocket Ramp advances the OZONE BONUS by 100,000 points and awards the current Ozone value.

END ZONE BONUS   The return lanes light the football player target. Hit the target to increase the END ZONE BONUS by 100,000 points. Outlanes will award the END ZONE BONUS.

DANCE CONTEST   Complete the 3 B-O-P lanes to light Dance Contest. Making DANCE CONTEST lights Boppers for 100,000 each for a timed period.

A
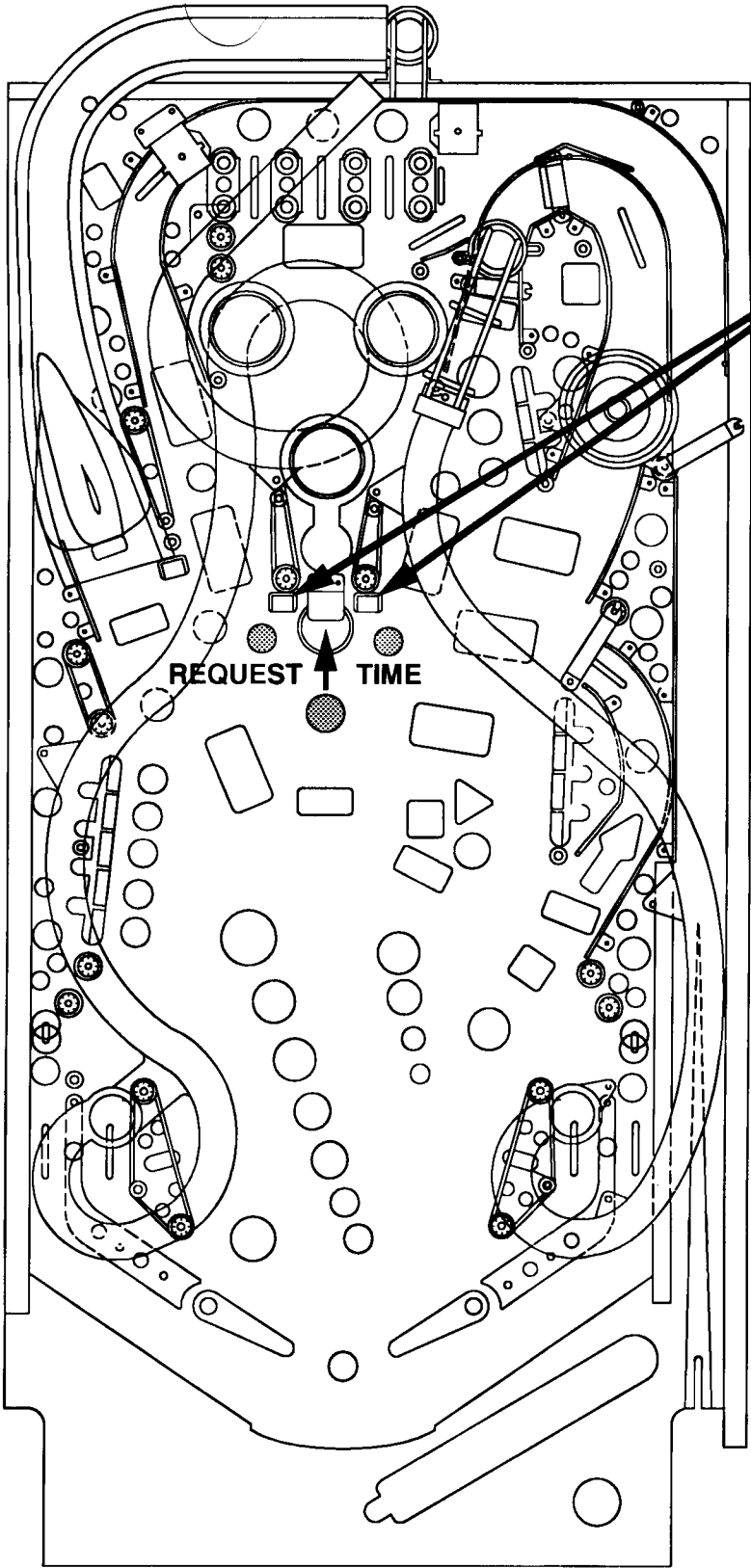
REQUEST TIME

Hit the 2 targets on either side of center eject hole and light "REQUEST TIME".

Making center eject hole puts "REQUEST TIME" message on Dot Matrix Display. Players can choose 1 of several songs by using the flippers.

Occasionally, the D.J. will play one of his favorites. Making a request during one of the D.J.'s songs will award the "PARTY SAVER BONUS" of 1 Million the first time, 2 Million the second, etc.

REQUEST ↑ TIME

MULTIBALL & BIG BANG

1st Multiball - Shoot 3 balls into the Cosmic Cottage.

2nd Multiball - Make "REQUEST TIME" first, then shoot 3 balls into the Cosmic Cottage.

3rd Multiball - Make "REQUEST TIME" before each ball is shot into the Cosmic Cottage.

During Multiball earn "Rock-it Fuel"by making the fuel shots indicated."Rock-it Fuel" advances "Rock-it Meter" (Jackpot). Making left ramp awards current "Rock-It Meter" value (1 to 7 Million Points). When "Rock-it Meter" is full, the next fuel shot lights "BIG BANG". Start "BIG BANG" feature by shooting 1 ball up left ramp. Remaining ball adds to Big Bang Bonus with every switch hit, which starts at 10 Million and builds from there to a maximum of 50 Million. Shoot the 2nd ball up the ramp to award "BIG BANG".

When one ball is lost, playfield scores are doubled for the next ball.

COSMIC COTTAGE

FUEL   FUEL

BIG BANG

ROCK-IT METER

2X
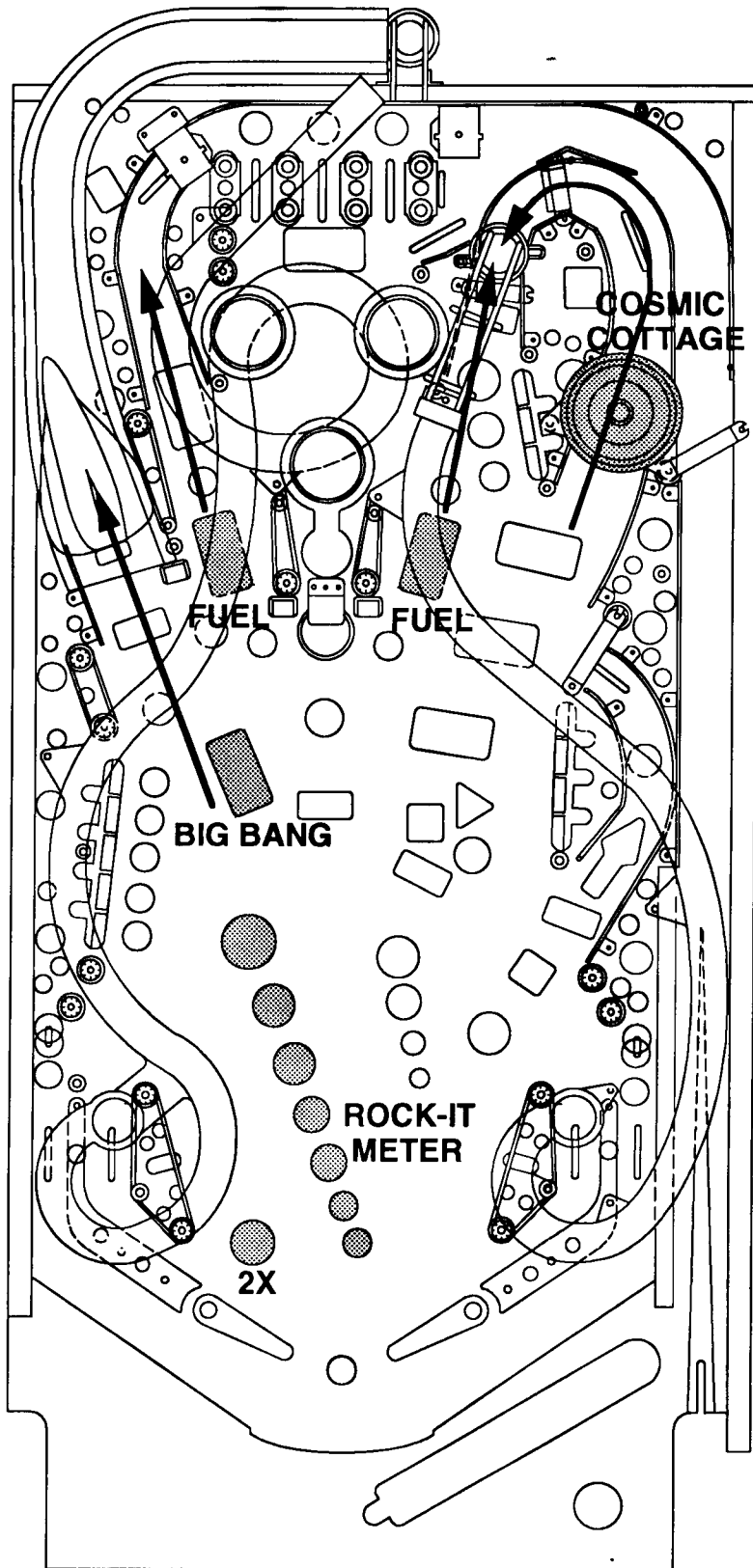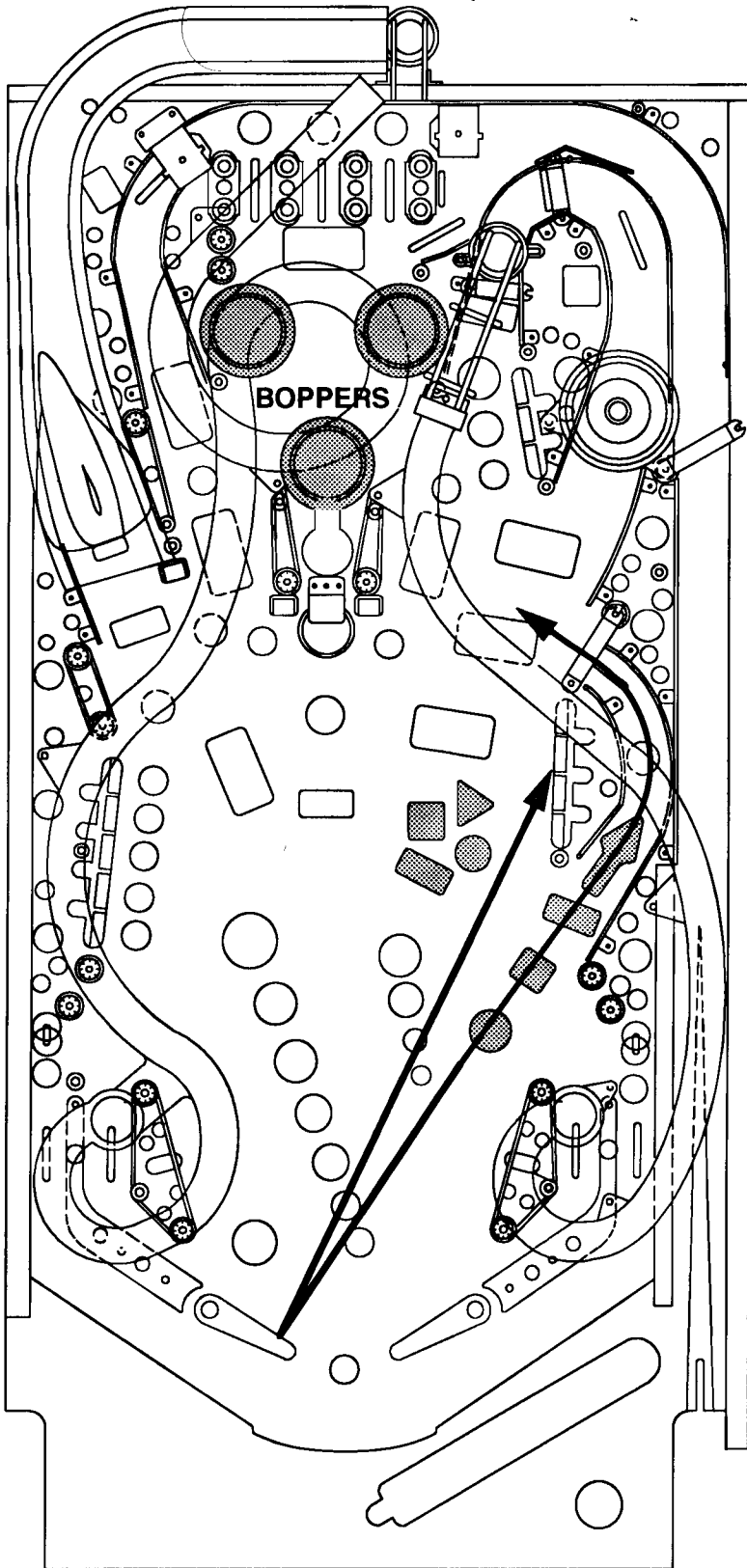
BOPPERS

WAY OUT OF CONTROL

Completing 4 right targets lights the "WAY OUT OF CONTROL" lane for the following:

1st Time - 5 Million Points

2nd Time - Boppers 1 Million Each.

3rd Time - 10X Playfield Values.

4th Time - Special

D

END ZONE BONUS

Return lanes light END ZONE Target.
Hitting target when lit advances
outlane value ("END ZONE BONUS").

E
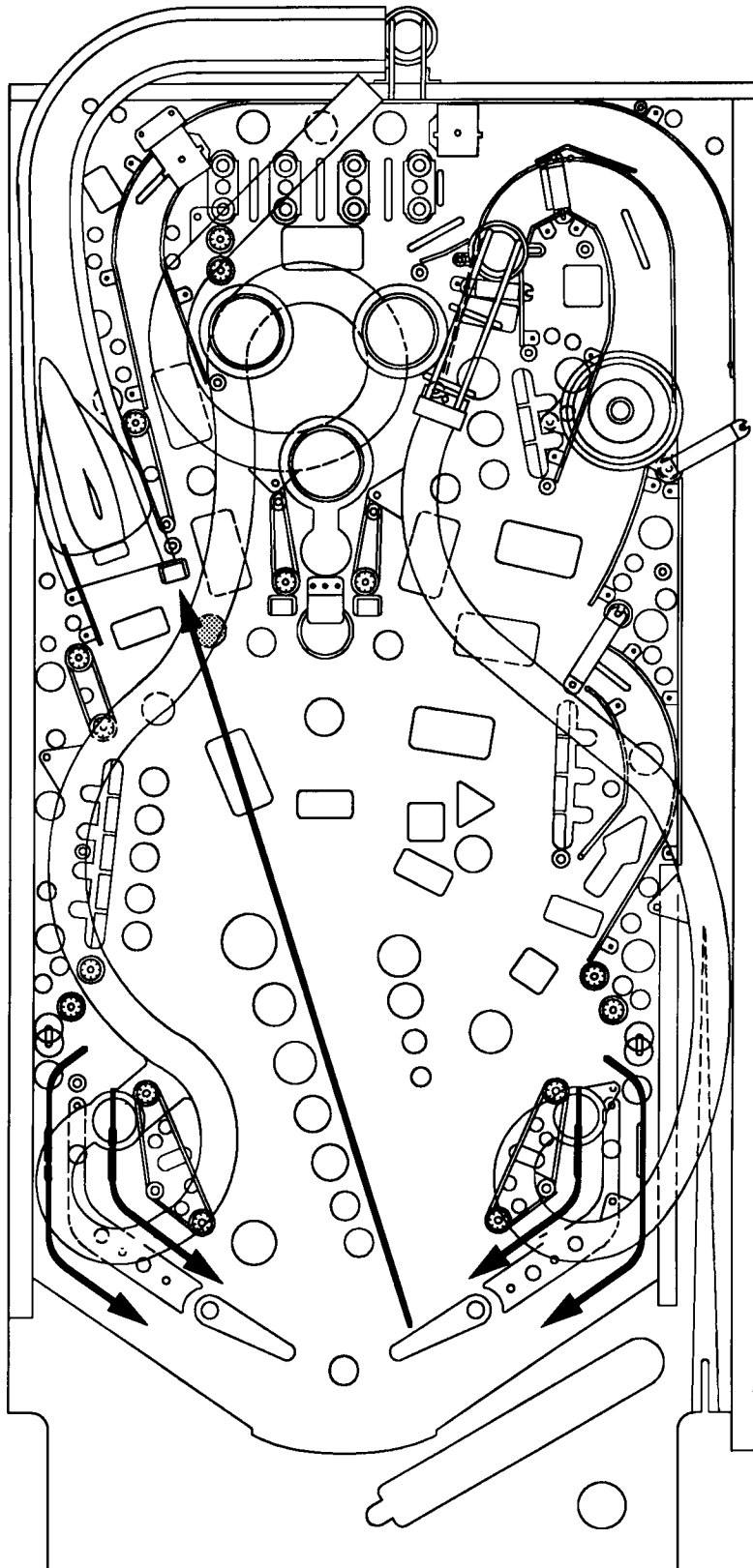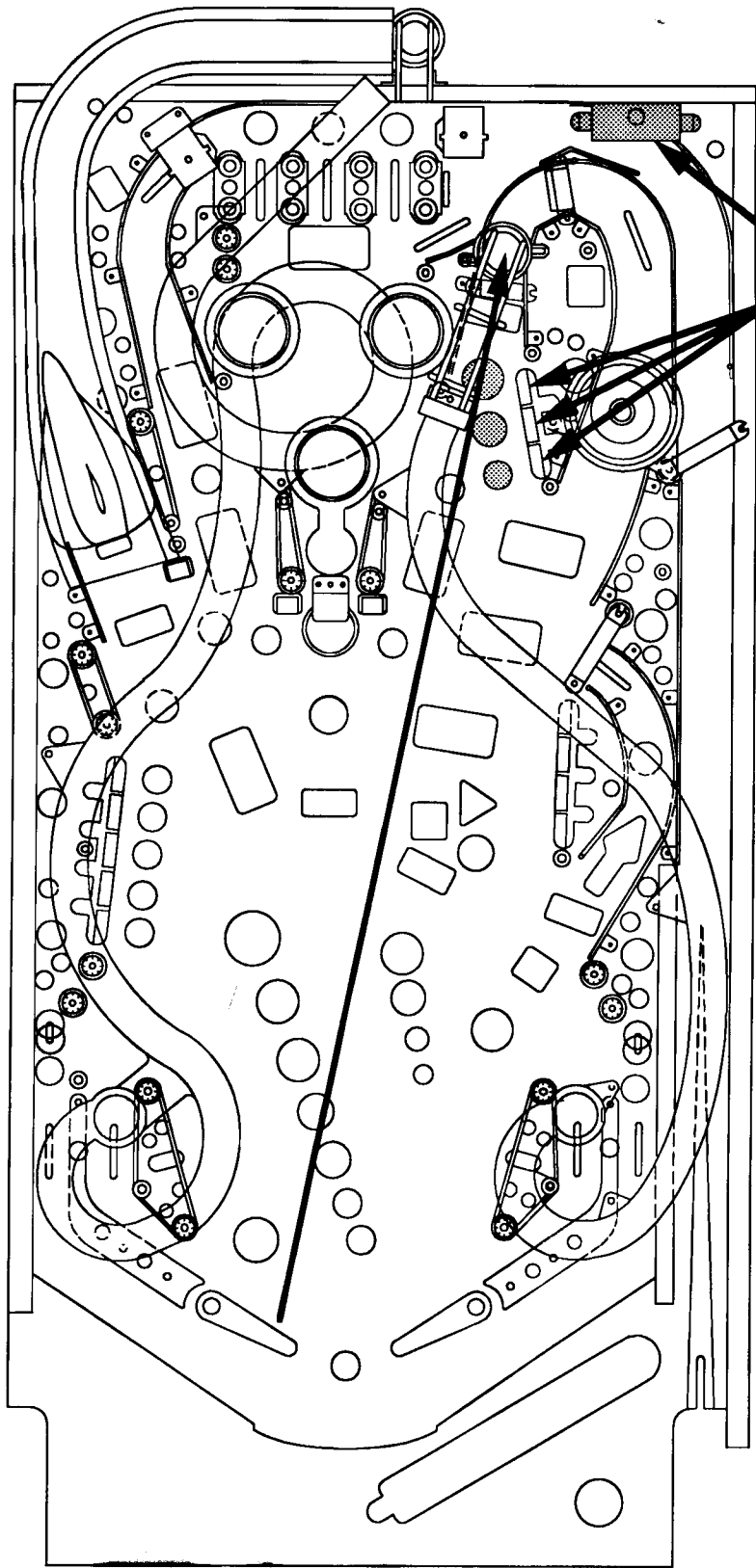
SUPERSONIC ROBOTIC COMIC

Light the "SUPERSONIC ROBOTIC COMIC" by hitting the three HA-HA-HA Targets.

Making the ball popper shot starts COMIC and randomly awards one of the following:

Surprise Party (Multiball)

Extra Ball

Score

Laff Attack

Bonus Multiplier

OZONE BONUS & EXTRA BALL

Each shot up the rocket ramp advances
the OZONE BONUS and awards the
current OZONE value.

A resettable number of rocket ramp
shots lights EXTRA BALL. Making the
rocket ramp shot when lit awards
EXTRA BALL.

EXTRA BALL
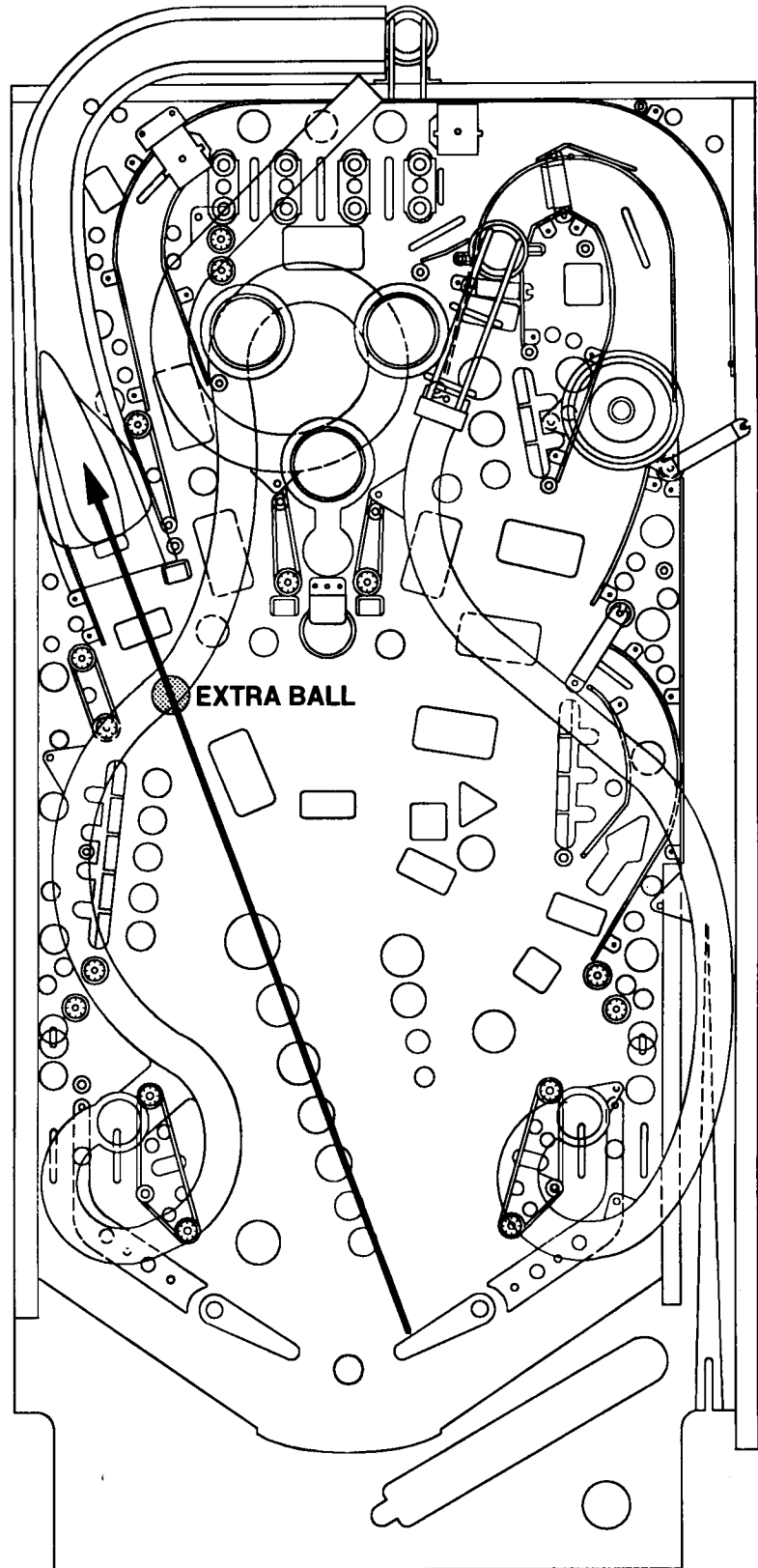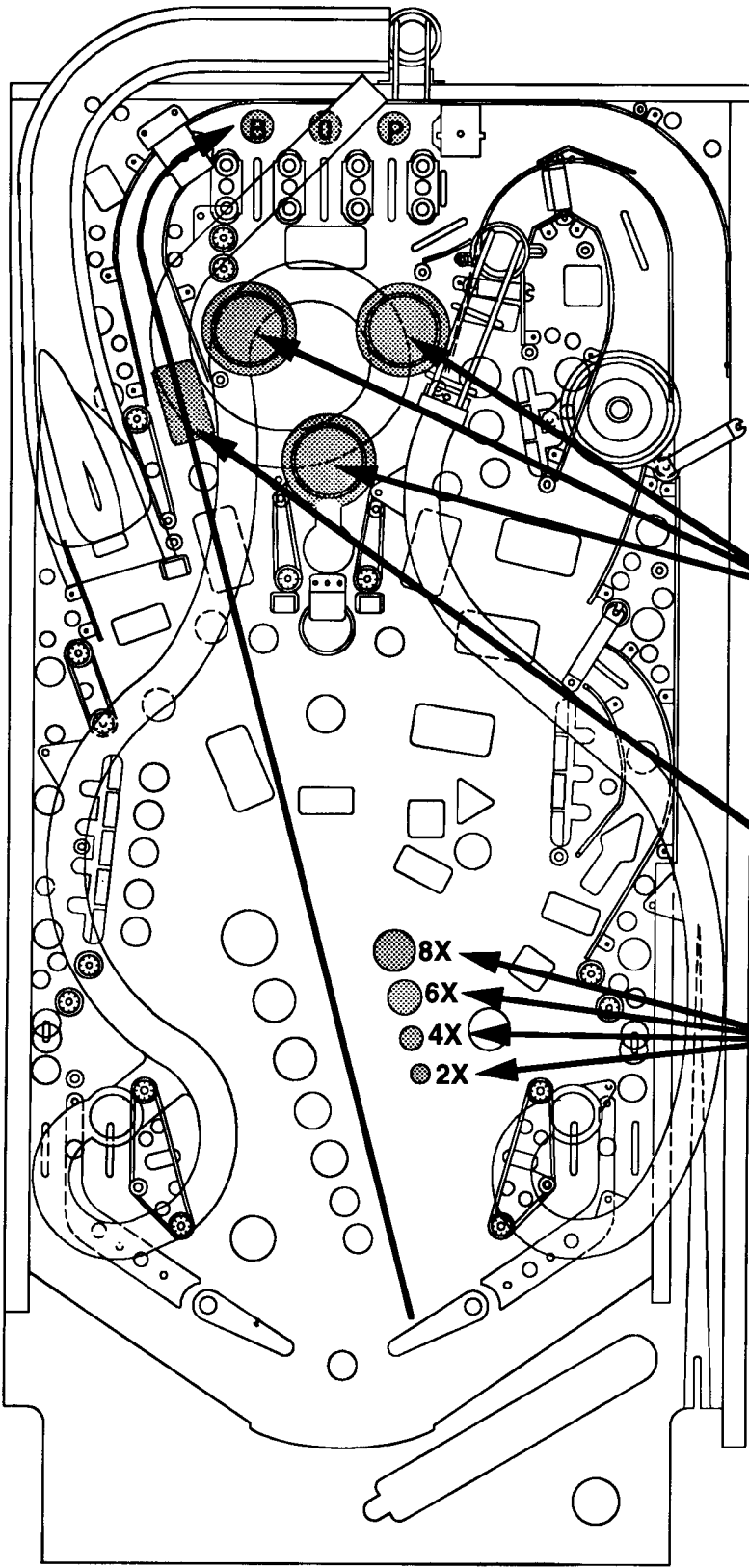
BONUS BOOSTER AND DANCE CONTEST

Completing the three B - O - P Lanes advances the BONUS BOOSTER 2X, 4X, 6X, 8X and lights "DANCE CONTEST". Making left lane shot to top starts Dance Contest. Boppers score 100,000 each and the Dancin' Dummy moves to the music for a timed period.

BOPPERS

DANCE CONTEST

8X
6X
4X
2X

BONUS BOOSTER

H

EAT, DRINK AND BE MERRY

Completing 5 targets on left, lights
"EAT".
Making the "EAT" ramp shot ,
lights "DRINK" and awards 1
Million Points.
Making the "DRINK" ball popper
shot, lights "BE MERRY" and
awards 2 Million Points.
Making the "BE MERRY" eject shot
awards 3 Million Points.

DRINK

EAT

BE
MERRY
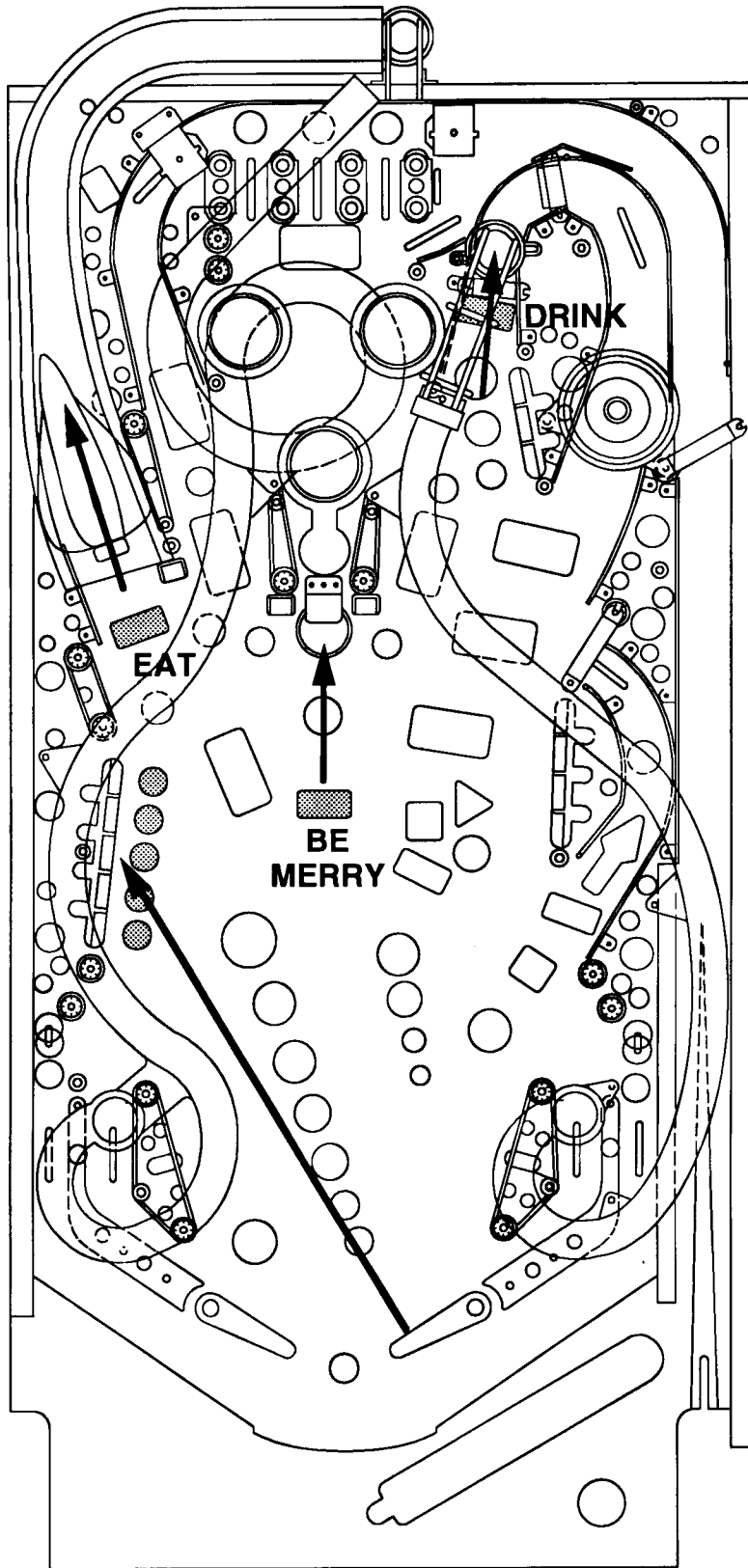
Section 1

Game Operation & Test Information

- **PARTY ZONE (System WPC) ROM Summary**
- **Pinball Game Assembly Instructions**
- **Game Play**
- **Menu System Operation**

Adjustments
Audits
Test/Diagnostic Procedures
Utilities

PARTY ZONE (System WPC) ROM Summary

IC	TYPE	LOCATION	BOARD	PART NUMBER
Game ROM 1	27020	U6	CPU	A-5343-20004-1
Music/Speech ROM 2	27010	U14	Audio	A-5343-20004-2
Music/Speech ROM 3	27010	U15	Audio	A-5343-20004-3
Music/Speech ROM 4	27010	U18	Audio	A-5343-20004-4

NOTICE

Order replacement ROMs from your authorized **MIDWAY MANUFACTURING CO.** distributor.
Specify: (1) part number (if available); (2) ROM label color; (3) ROM level (number) on the label; (4)
which game the ROM is used in.

PINBALL GAME ASSEMBLY INSTRUCTIONS

PARTY ZONE IS A 3 BALL GAME.

1. Remove all cartons and parts from the shipping container, and set them aside.

2. Place the cabinet on a support and attach rear legs using leg bolts. Leg levelers and leg bolts are provided among the parts in the cash box.

3. Attach the front legs (after installing leg levelers), using leg bolts. See diagram below..

Detail View - **Leg Leveler**

0 Degrees

Approx Playfield
Pitch Angle:
6 - 7 Degrees

C-10843-1
Leg

08-7377
Leg Leveler

Nut
4422-01117-00

See Detail View
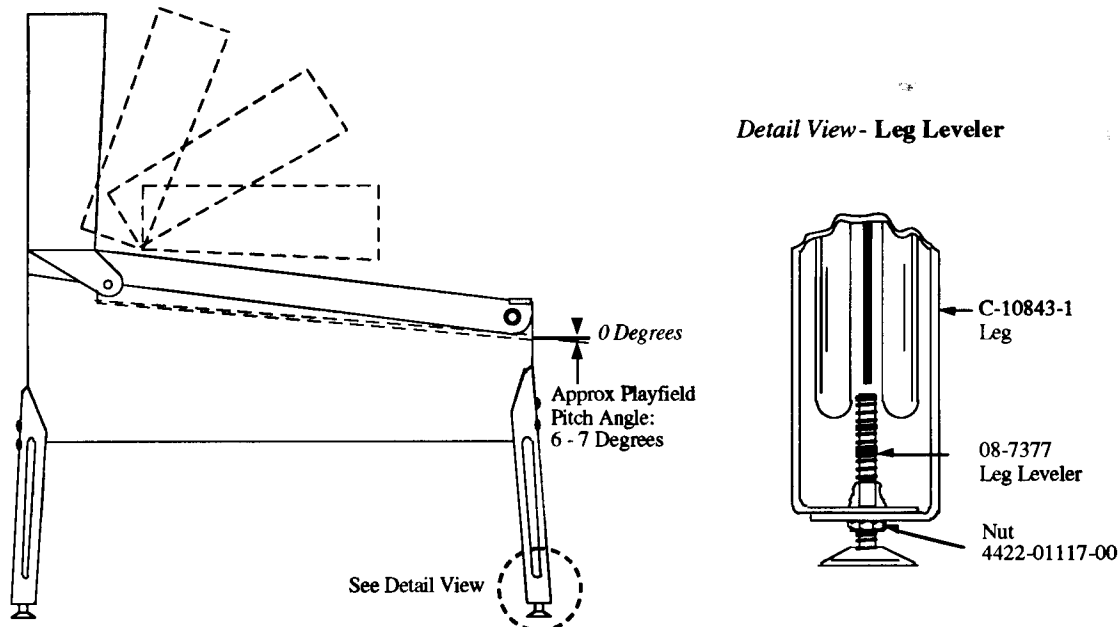
Pinball Assembly, Playfield Pitch Angle, and Leg Leveler Details.

4. Reach into the cabinet and backbox and ensure that the interconnecting cables are free to move (not kinked or pinched). Be careful to avoid damaging wires at any stage of the assembly process.

5. Raise the hinged backbox upright and latch it into position. Unlock the backbox, and remove the backglass, storing it carefully to avoid scratches. Remove the shipping block holding the Insert Board. Unlatch and open the Insert Board. This allows access to the bolt holes used for securing the backbox upright. Install the washer-head mounting bolts through the bottom holes of the backbox into the threaded fasteners in the cabinet to secure the backbox. Close the Insert Board and latch it in position. Reinstall the backglass, and lock the backbox.

⚠ CAUTION

FAILURE TO INSTALL the backbox mounting hardware properly can cause personal injury.
NEVER TRANSPORT a pinball game with the hinged backbox erect. Always lower the backbox forward onto the playfield cabinet on a layer of protective material to prevent marring or damage and possible personal injury.

6. Extend each leg leveler slightly below the leg bottom, so that all four foot pads are extended about the same distance. Remove the cabinet from its support and place it on the floor.

7. Unlock and open the coin door. Locate the Molding Latch Lever, and move the lever toward the left side of the game, to release the Front Molding. Lift the Front Molding off the playfield cover glass return the Latch Lever toward the right, and close the coin door. Carefully slide the glass downward, until it clears the grooves of the Left and Right Side Moldings. Lift the glass up and away from the game, storing it carefully to avoid breakage.

8. Place a level or an inclinometer on the playfield surface. Adjust the leg levelers for proper playfield level (side-to-side) and playfield pitch angle (incline) of approximately 6-7 degrees. NOTE: It is recommended that these measurements be made ON the playfield, not the cabinet nor the playfield cover glass. Tighten the nut on each leg leveler shaft to maintain this setting.

CAUTION

Playfield pitch angle adjustments can affect the operation of the plumb bob tilt, inside the cabinet. The plumb bob weight is among the parts in the cash box; the operator should install the weight and adjust this tilt mechanism for proper operation, after completion of the desired playfield pitch angle setting.

9. Move the game into the desired location; recheck the level and pitch angle of the playfield.

10. Verify that the *required number* of balls are installed in the game. **PARTY ZONE** uses 3 balls.

11. Install playfield mylars if desired.

   NOTE: The **Party Zone** Diamond Plate™ playfield does not require a protective mylar. However, playfield mylars can be purchased thru your local Bally Distributor. Specify part number 03-7960-20004-1 for full playfield mylar.

12. Clean and reinstall the playfield cover glass, reversing the procedure of step 7. Prepare the game for player operation.

GAME CONTROL LOCATIONS

Cabinet Switches

The On-Off switch is located on the bottom of the cabinet near the right front leg.
The Start Button is a pushbutton to the left of the coin door on the cabinet exterior. Press the Start button to begin a game, or during the diagnostic mode, to ask for HELP.

Coin Door Switches

The operator controls all game adjustments, obtains bookkeeping information, and diagnoses problems, using only four pushbutton switches mounted on the inside of the coin door. The Coin Door Switches have two modes of operation Normal Function and Test Function.

Normal Function

The Service Credits switch puts credits on the game that are not included in the game audits.
The Volume Up switch raises the sound level of the game. Press and hold the button until the desired level is reached.
The Volume Down switch lowers the sound level of the game. Press and hold the button until the desired level is reached. See Adjustment A.1 28 to shut sound Off completely.
The Begin Test switch starts the Menu System Operation and changes the Coin Door Switches from Normal Function to Test Function.

Test Function

The Escape switch allows you to get out of a menu selection or return to the Attract Mode.
The Up switch allows you to cycle forward through the menu selections or adjustment choices.
The Down switch allows you to cycle backward through the menu selections or adjustment choices.
The Enter switch allows you to get into a menu selection or lock in an adjustment choice.

Coin Door Switches

NORMAL MODE FUNCTION		
SERVICE CREDITS	VOLUME ///\\\	BEGIN TEST
ESCAPE	━ +	ENTER
TEST MODE FUNCTION		
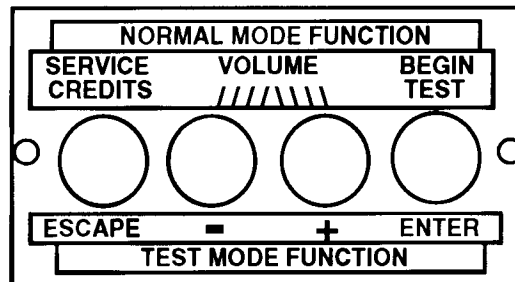
GAME OPERATION

⚠ CAUTION

After assembly and installation at the site location, this game must be plugged into a properly grounded outlet to prevent shock hazard, and to assure proper game operation. DO NOT use a 'cheater' plug to defeat the ground pin on the line cord. DO NOT cut off the ground pin.

POWERING UP. With the coin door closed, plug the game in and switch it On, using the On-Off Switch. In normal operation, Testing will show in the display as the game performs Start-Up Tests. Once the Start-Up Tests have been successfully completed the last score is displayed. Afterward, the game goes into the Attract Mode (playfield and backbox lamps flashing, sounds heard, etc., if the operator does not change the Factory Setting).

Note: After the game has been on location for a period of time, the Start-Up Tests may contain messages concerning game problems. The section entitled 'Problem Analysis Messages' contains more detail concerning messages displayed at each game turn-on.

Open the coin door and press the Begin Test Switch. The display shows the game name, game number and game software revision. The message changes. The display shows the sound software revision, revision level of the system software and date the game software was revised.

Example:

                PARTY ZONE   **Sound Rev. L-1**
            20004   **Rev. L-1**   **Sy.0.90**   **6/1/91**

Press the Enter button to enter the WPC Menu System (refer to the section entitled 'Menu System Operation' for more information). Perform the entire Test Menu routine to verify the game is operating satisfactorily. Successful completion of the tests in the Test Menu routine will show the game is ready to begin earning your investment return.

ATTRACT MODE*. After completing the Test Menu routine, press the Escape button three times to enter the Attract Mode. During the Attract Mode, playfield and backbox lamps blink. The display exhibits a series of messages informing the player concerning:

    A. Recent highest scores*
    B. A "custom message"
    C. The score to achieve to obtain a Replay award*

These (or similar) displays reappear occasionally, accompanied by sounds and music, until a player initiates game play by inserting a coin, or when credits are available, pressing the Start button.

CREDIT POSTING. Insert coin(s). A sound is heard for each coin. The display will show the number of credits purchased. So long as the number of maximum allowable credits* are NOT exceeded by coin purchase or high score, credits are posted correctly.

* - Operator-adjustable feature.

STARTING A GAME. Press the Start button once. A startup sound plays. The number of credits shown in the display decreases by one. The display flashes 00 (until the first playfield switch is actuated), and shows ball 1. Additional players may enter the game by pressing the Start button once for each player, before the end of play on the first ball.

TILTS. Actuating the Slam Tilt switch on the coin door inside the cabinet ends the current game and proceeds to the Game Over Mode. With the third closure* of the plumb bob tilt switch, the player loses the remaining play of that ball, but can complete the game.

END OF GAME. All earned scores and bonuses are awarded. If a player's final score exceeds the specified value, the player receives a designated award for achieving the current highest score. A random digit set* appears in the display. Credit* may be awarded when the last two digits of any player's score (1 through 4) match the random digits. Match, high score and game over sounds are made, as appropriate.

GAME OVER MODE. GAME OVER will show in the display. Afterward, the high scores will flash on the display. The game proceeds to the Attract Mode.

* - Operator-adjustable feature.

MENU SYSTEM OPERATION

PARTY ZONE operates on a Menu System. The Main Menu allows you to choose from several main categories, which in turn lead to other menus to choose from. To enter the Menu System, open the coin door and press the Begin Test button. The displays show the Game I.D. Mode. Press the Enter button and the Main Menu appears. To cycle through the Main Menu selections press either the Up or Down button. Activate any selection by pressing the Enter button when the desired selection appears in the displays. To return to the Attract Mode while viewing the Main Menu, or to return to a previous menu selection, press the Escape button. Press the Start button for HELP at any time.

Main Menu

A. Adjustments Menu

- A.1 Standard Adjustments
  - Etc., etc.
- A.2 Feature Adjustments
  - Etc., etc.
- A.3 Pricing Adjustments
  - Etc., etc.
- A.4 H.S.T.D. Adjustments
  - Etc., etc.
- A.5 Printer Adjustments

B. Bookkeeping Menu

- B.1 Main Audits
  - Etc., etc.
- B.2 Earnings Audits
  - Etc., etc.
- B.3 Standard Audits
  - Etc., etc.
- B.4 Feature Audits
  - Etc., etc.
- B.5 Histograms
  - Etc., etc.
- B.6 Time-Stamps
  - Etc., etc.

P. Printouts Menu

- P.1 Earnings Data
- P.2 Main Audits
- P.3 Standard Audits
- P.4 Feature Audits
- P.5 Score Histograms
- P.6 Game Time Histograms
- P.7 Time-Stamps
- P.8 All Data

T. Test Menu

- T.1 Switch Edges
- T.2 Switch Levels
- T.3 Single Switches
- T.4 Solenoid Test
- T.5 Flasher Test
- T.6 General Illumination
- T.7 Sound & Music Test
- T.8 Single Lamps
- T.9 All Lamps
- T.10 Lamp & Flasher Test
- T.11 Display Test
- T.12 Head Test

U. Utilities Menu

- U.1 Clear Audits
- U.2 Clear Coins
- U.3 Reset H.S.T.D.
- U.4 Set Time & Date
- U.5 Custom Message
- U.6 Set Game I.D.
- U.7 Factory Adjustments
- U.8 Factory Resets
- U.9 Presets
  - Etc., etc.
- U.10 Clear Credits
- U.11 Auto Burn-In

Use Escape and Enter to move into and out of the selected menu.
Press Escape to move out of a menu selection.
Press Enter to get into a menu selection.

Use Up or Down to cycle through the selections in a menu.
Press Up increases sequence:
(Ex. A.1, A.2, A.3, A.4).
Press Down decreases sequence:
(Ex. A.4, A.3, A.2, A.1).

MAIN MENU

A.   **Adjustments**
B.   **Bookkeeping**
P.   **Printouts** (optional board required)
T.   **Tests**
U.   **Utilities**

The game Adjustments are the first category available from the Main Menu. Press the Enter button to activate the Adjustments Menu. Press the Up or Down button to cycle through the Adjustment Menu selections. Press the Enter button to activate the desired Adjustment Group when that group appears in the displays.

A. ADJUSTMENTS MENU

A.1   **Standard Adjustments**
A.2   **Feature Adjustments**
A.3   **Pricing Adjustments**
A.4   **H.S.T.D Adjustments**
A.5   **Printer Adjustments** (optional board required)

Once you have entered the adjustment group desired, press the Up or Down button to cycle through the available adjustments in that group. When the desired adjustment appears press the Enter button to activate that adjustment. When an adjustment is activated, the setting value begins to flash. Use the Up or Down button to raise or lower the setting value. When the desired value is displayed press Enter to lock in the value. IF you realize you have made an error, press the Escape button while "Saving Adjustment Value" is displayed. The new value is ignored and the original value is retained.

A.1   Standard Adjustments

A.1   0 1   Balls Per Game
The operator defines a "game" by specifying the number of balls to be played. The range of this setting is 1 through 10.

A.1   0 2   Tilt Warnings
The operator specifies the number of total actuations of the plumb bob mechanism that can occur before the game is "tilted". The range of this setting is 1 through 10.

A.1   0 3   Maximum Bonus Balls
The operator chooses the number of Bonus Balls that a player may accumulate. The range of this setting is 1 through 10, or "No Bonus Ball" (Bonus Ball disabled).

A.1   0 4   Maximum Bonus Balls/Ball in Play
The operator chooses the number of Bonus Balls to be awarded per ball in play. The range of this setting is:

OFF   -   No maximum number of Bonus Ball per ball in play.
1-10   -   1 through 10 Bonus Balls per ball in play.

A.1   05   Replay System
The operator chooses the replay system to be used. The choices are:

Fixed - Replay value is set by the operator and does not change during game play.
Auto% - Replay starting value is set by the operator and changes every 50 games to comply with the percentage of replays desired.

A.1   06   Replay Percent*
The operator chooses the percentage of replays the players are able to earn when Auto Replay is used. The range of this setting is 5% to 50%.

A.1   07   Replay Start*
The operator chooses the replay starting value when Auto% Replay is used. The range of this setting is 1, 000, 000 to 20, 000, 000.

A.1   08   Replay Levels*
The operator chooses the number of replay levels used by the Auto% Replay mode. The range of this setting is 1 through 4. When the operator chooses two replay levels, the second replay level is automatically adjusted to twice the starting replay level value. When three of four replay levels are chosen, their values are automatically adjusted to three or four times the starting replay level value.

*For Auto % Replay.

A.1   09   Replay Level 1**
The operator chooses the value to be used for the first Fixed Replay. The range of this setting is 00 to 25, 000, 000.

A.1   10   Replay Level 2**
The operator chooses the value to be used for the second Fixed Replay. The range of this setting is 00 to 25, 000, 000.

A.1   11   Replay Level 3**
The operator chooses the value to be used for the third Fixed Replay. The range of this setting is 00 to 25, 000, 000.

A.1   12   Replay Level 4**
The operator chooses the value to be used for the fourth Fixed Replay. The range of this setting is 00 to 25, 000, 000.

** For Fixed Replay

A.1   13   Replay Boost
The operator chooses if the replay score can be temporarily boosted by the selected amount EACH time the player reaches or exceeds the replay score. This temporary boost is canceled when Credits=0, when the player inserts another coin, or when Begin Test is pressed. The choices are:
ON-Score is boosted between 500, 000 and 5, 000, 000 points.
OFF-The replay score is not boosted.

A.1 1 4   Replay Award
For either Auto% Replay or Fixed Replay the operator can choose the form of
the award automatically provided when the player exceeds any replay level. The
choices are:

Credit -   Reaching each Replay level awards credit.
Ticket -   Reaching each Replay level awards a ticket.
Ball   -   Reaching each Replay level awards a Bonus Ball.
Audit   -   Reaching each Replay level awards nothing to the player; it does
               increase the entry value of the Audit Item(s) maintaining a tally of
               these awards.

A.1 1 5   Special Award
The operator can choose the award automatically provided when the player
scores a special. The choices are:

Credit -   Scoring a Special awards a Credit.
Ticket -   Scoring a Special awards a Ticket.
Ball   -   Scoring a Special awards a Bonus Ball.
Points -   Scoring a Special awards 1 Million points.

A.1 1 6   Match Award
The operator can choose the award automatically provided when the players wins
a match. The choices are:

Credit -   Winning a Match awards a Credit.
Ticket -   Winning a Match awards a Ticket.

A.1 1 7   Bonus Ball Ticket
The operator can choose whether a Ticket is awarded when the player earns a
Bonus Ball. The choices are:

YES   -   The player is awarded a Ticket in addition to a Bonus Ball.
NO   -   The player is not awarded a Ticket.

A.1 1 8   Maximum Ticket/Player
The operator can choose the amount of Tickets each player can earn. The range
of this setting is 00 to 100.

A.1 1 9   Match Feature
The operator can choose the desired percentage for the Match Feature occurring
at the end of the game. The range of this setting is:

OFF   -   Match Feature is not available.
1 -50% -   1% is 'hard'; 50% is 'extremely easy'. During the Match Feature
the game selects a random two-digit number at the end of the game and
compares each players score for an identical two digits in the rightmost two
positions. A matching of these two digits results in an award of a Credit or a
Ticket.

A.1 20 Custom Message
The operator chooses if a message is displayed during the Attract Mode.
The choices are:

YES   -   A message is displayed
NO   -   A message is not displayed.

A.1 21 Language
The operator chooses what language the game uses. The choices are, English,
French, or German.

A.1 22 Clock Style
The operator chooses what style of clock the game uses. The choices are
A.M./P.M. or 24 Hours.

A.1 23 Date Style
The operator chooses what style of date the game uses. The choices are
Month/Date/Year, or Date/Month/Year.

A.1 24 Show Date and Time
The operator chooses whether the date and time show in the Attract Mode. The
choices are:

YES   -   Show the date, time in status report or in the Attract Mode.
NO   -   Do Not show date, time in status report or in the Attract Mode.

A.1 25 Allow Dim Illumination
The operator chooses whether to allow the game program to dim the General
Illumination for special effects and during the Attract Mode. The choices are:

YES   -   Dim the General Illumination during the Attract Mode.
NO   -   Do Not dim the General Illumination.

A.1 26 Tournament Play
The operator chooses whether to equalize Multi-ball and Jackpots during multi-
player games, (do not carry over to next player). The choices are:

YES   -   Keep Multi-ball and Jackpots equal.
NO   -   Do Not Keep Multi-ball and Jackpots equal.

A.1 27 Euro. Scr. Format
The operator chooses whether to have commas or dots between digits when
numbers are displayed. The choices are:

YES   -   Dots instead of commas, (example- 1.000.000).
NO   -   Commas instead of dots, (example- 1, 000, 000).

A.1   28   Minimum Volume Control
The operator chooses whether the volume can be turned Off. The choices are:

YES   -   Volume can be turned Off.
NO   -   Volume can be turned Down but not Off.

A.1   29   General Illumination Power Saver
This adjustment allows the general illumination and controlled lamps to be
dimmed following a time interval after a game is played. Power Saver Level (A.1
30) determines how dim the lamps will get. The use of this feature will
substantially increase the life of the lamps.

Settings: Off   2-60 Minutes

A.1   30   Power Saver Level
When General Illumination Power Saver (A.1 29) is set to On, this adjustment
controls the intensity of the G.I. and controlled lamps once the game has been
idle for a specified period of time.

Settings: 4-7

A.1   31   Ticket Expansion Board
When a Williams/Bally Ticket expansion board is connected to a game, full control
of the ticket dispenser is available, including a ticket low/error indication lamp,
resume on ticket jam, and manual ticket dispense. When the ticket board is
attached, this adjustment should be set to yes.

Press the Escape button to return to the Adjustments Menu. Press the Up button to advance to
the next desired Adjustments Group, (or press the Down button to return to a previous group).
Press the Enter button to activate. Use the Up or Down button to cycle through the available
adjustments.

A.2　Feature Adjustments

A.2　01　Special
This adjustment allows the operator to set the percent of specials the game will attempt to award over a period of time. The range of this adjustment is 1 to 25%. This will only attempt to maintain the set percentage. If players are unable to make the shot which awards the special, actual percentage of specials awarded will be lower.

A.2　02　Multiball
This adjustment allows the operator to set the percent of multiballs the game will attempt to award over a period of time. To do this, the game will occasionally award a Surprise Party from the Supersonic Robotic Comic. The range of this adjustment is 10 to 90%.

A.2　03　Extra Ball
This adjustment allows the operator to set the percent of extra balls the game will attempt to award over a period of time. To do this, the game will occasionally award an Extra Ball from the Supersonic Robotic Comic. In locations where players are consistently able to earn Extra Balls, the percentage of Extra Balls awarded may be higher. The range of this adjustment is 5 to 50%.

A.2　04　Fuel Start Level
This adjustment allows the operator to control how easily players will be able to earn their first "Big Bang" award, by setting the starting fuel level higher or lower. The higher the start level is set, the easier it will be for the player to get the first "Big Bang". The range of this adjustment is 1 to 8.

A.2　05　Way Out of Control Difficulty
This adjustment allows the operator to adjust the difficulty of the "Way Out of Control" payoff shot.

Easy	Once lit, the shot will stay on until the player makes the shot.
Medium	The 1st time an award is lit, it will stay lit until the player makes the shot. Afterwards, the shot will be lit on a timer.
Hard	The shot will always be lit on a timer.

A.2　06　Way Out of Control Timer
This adjustment allows the operator to control the amount of time a player will have to make the Way Out of Control payoff shot. The range of this adjustment is 5 to 30 seconds.

A.2　07　Comic Difficulty
This adjustment allows the operator to control the difficulty of the "Supersonic Robotic Comic" feature.

Extra Easy	Always Lit.
Easy	Lit at the start of every ball until awarded. Then, on a timer for the remainder of ball play.
Medium	Lit at the start of game until awarded. Then, on a timer for the remainder of the game.
Hard	Always on a timer.

A.2　08　Comic Timer
This adjustment allows the operator to set the amount of time a player will have to make the Supersonic Robotic Comic shot. The range of this adjustment is 5 to 30 seconds.

A.2 0 9   Laff Attack Timer
This adjustment allows the operator to control the amount of time the "Laff Attack" feature will remain active once it is awarded. The range of this adjustment is 10 to 40 seconds.

A.2 1 0   Drink Timer
This adjustment allows the operator to control the amount of time a player will have to make the "Drink" shot. "Drink" is the second shot in the "Eat, Drink and B. Merry" sequence. The range of this setting is 5 to 30 seconds.

A.2 1 1   B. Merry Timer
This adjustment allows the operator to control the amount of time a player will have to make the "B. Merry" shot. "B. Merry" is the third shot in the "Eat, Drink and B. Merry" sequence. The range of this adjustment is 5 to 30 seconds.

A.2 1 2   10X Playfield Timer
This adjustment allows the operator to control the amount of time the "10X Playfield" feature will remain active when the player has earned it. The range of this adjustment is 5 to 30 seconds.

A.2 1 3   Light Extra Ball
This adjustment allows the operator to control the difficulty of lighting the Extra Ball via the Rock-It ramp. This is the number of ramp shots necessary to light the Extra Ball. The range of this adjustment is 4 to 15 shots.

A.2 1 4   Extra Ball Memory
This adjustment allows the operator to control whether a lit Extra Ball will be held over from ball to ball.

Yes   Keep extra ball lit.
No   Turn off extra ball light at start of every ball.

A.2 1 5   Attract Sound
This adjustment allows the operator to control whether the Attract Sound will be on when the game is not being played.

Yes   Keep attract sounds ON.
No   Turn attract sounds OFF.

A.2 1 6   Dancer
This adjustment allows the operator to control whether the Dancin' Dummy will dance during ball play.

Yes   Keep Dancin' Dummy ON.
No   Turn OFF Dancin' Dummy.

A.2 1 7   D.J. Head
This adjustment allows the operator to control whether the D.J. Head will turn during ball play.

Yes   Keep D.J. Head ON.
No   Turn OFF D.J. Head.

Press the Up button to advance to the next desired Adjustment Group, (or press the Down button to return to a previous Adjustment Group). Press the Enter button to activate that group. Press the Up or Down button to cycle through the available adjustments in that group.

Press the Up button to advance to the next desired Adjustment Group, (or press the Down button to return to a previous Adjustment Group). Press the Enter button to activate that group. Press the Up or Down button to cycle through the available adjustments in that group.

A. 3 Pricing Adjustments

A.3 01 Game Pricing (if set to custom, then 02 to 09 are available)
The operator chooses the cost for a game from a selection of Standard pricing or by installing Custom pricing.

A.3 02 Left Coin Units
The operator can specify the number of coin units purchased by a coin passing through the left coin chute.

A.3 03 Center Coin Units
The operator can specify the number of coin units purchased by a coin passing through the center coin chute.

A.3 04 Right Coin Units
The operator can specify the number of coin units purchased by a coin passing through the right coin chute.

A.3 05 4th Slot Units
The operator can specify the number of coin units purchased by a coin passing through the fourth coin chute.

A.3 06 Units/Credits
The operator defines the number of coin units required to obtain 1 credit. A coin unit counter in the game program totals the number of coin units purchased through all coin chutes prior to each game. If the total number of these coin units exceeds or matches the Unit per Credit value by a multiple (or more, coin units) of the specified Units per Credit value the Credits display shows the proper number of credits. The coin unit counter retains any remaining coin units, until the start of Ball 2; then the coin unit counter is cleared (its contents are zeroed).

A.3 07 Units/Bonus
The operator can specify that additional credits are to be indicated in the credits display, when a certain number of coin units are accumulated.

A.3 08 Bonus Credits
The operator specifies the number of credits that are awarded when the Units/Bonus level is achieved.

A.3 09 Minimum Units
The operator can specify that No credits are to be posted (indicated in the credit display), until the credits unit counter reaches a particular value, by setting this value to 02 (or more).

A.3   10   Coin Door Type (if set to custom, then 11 to 15 are available)
This adjustment is used to preset adjustments 11 to 15 based on standard coin doors (U.S.A., German, Etc.).

A.3   11   Collection Text
The operator chooses what coin system is used to display the Earning Audits.

A.3   12   Left Slot Value
The operator can specify the monetary value of the left coin chute.

A.3   13   Center Slot Value
The operator can specify the monetary value of the center coin chute.

A.3   14   Right Slot Value
The operator can specify the monetary value of the right coin chute.

A.3   15   4th Slot Value
The operator can specify the monetary value of the 4th coin chute.

A.3   16   Maximum Credits
The operator can specify the maximum number of credits the game can accumulate, either through game play awards or coin purchases. The range of this setting is 5 through 10. Reaching the specified setting prevents the award of any credits.

A.3   17   Free Play
The operator can specify whether a player can operate the game without a coin (free play) or with a coin. The choices are:

NO   -   A coin is necessary for game play.
YES   -   Game play is free; no coin required.

A.3   18   Hide Coin Audits
The operator chooses whether or not to show the coin audits. The choices are:

YES   -   The coin audits are not displayed.
NO   -   The coin audits are displayed.
HIDE NAMES -   The coin audit value is shown but not the audit name.

A.3   19   1 Coin Buy-in
If the game pricing is set to 1 for 50¢/2 for $1.00 the operator chooses whether the player is allowed to 'buy-in' a subsequent game for 1 coin. The number of games that may be purchased at this cost is determined by the number of players in the previous game; that is, if the previous game had three players, 3 Credits can be purchased at the rate of 1 coin per credit. The choices are:

YES   -   The player has 10 seconds to buy-in at 1 coin per game.
NO   -   The buy-in feature is disabled.

Pricing Table

Country	Coin Chute			4th Chute	Games/Coin	Display	Pricing Adjustments A.3
	Left	Center	Right				02 03 04 05 06 07 08 09
USA	25¢	*$1.00	25¢	-	1/25¢, 4/$1 [2] 1/50¢, 2/75¢, 3/$1 [1,2] 1/50¢, 2/$1 [2] 1/25¢, 3/$1 [2] 1/25¢, 3/50¢, 6/$1 1/25¢, 5/$1	U.S.A. 4/$1.00 50-75-1.00 U.S.A. 2/$1.00 U.S.A. 3/$1.00 CUSTOM CUSTOM	 01 04 01 00 01 02 01 00 01 00 01 00 01 04 01 00
Canada	25¢	-	$1.00	-	1/50¢, 2/75¢, 3/$1 [2] 1/50¢, 2/$1 [2]	CANADA 1 CANADA 2	
Austria	5 Sch 5 Sch	10 Sch -	10 Sch 10 Sch	- -	1/2x5 Sch, 3/2x10 Sch [2] 2/5 Sch, 5/10 Schilling	AUSTRIA CUSTOM	 02 00 05 00 01 00 01 00
Australia	20¢	$1	$1	$2	1$1, 3/$2 [2]	AUSTRALIA	
United Kingdom	1L	50 P	-	20 P	1/2x10 P, 3/50 P, 7/1£ [2]	U. KINGDOM	
Switzerland	1 Fr	2 Fr	5 Fr	-	1/1 Fr, 3/2 Fr, 7/5 Franc [2]	SWISS	
Belgium	5 Fr	20 Fr	50 Fr	-	1/4 x 5F, 1/20 F, 3/50 Franc [2]	BELGIUM	
West Germany	1DM	2DM	5DM	-	1/1 DM, 2/2 DM, 7/5 DMark [2] 1/1 DM, 2/2 DM, 6/5 DM [1,2] 1/1 DM, 3/2 DM, 9/5 DM 1/2x1 DM, 1/2 DM, 3/5 DM 2/1 DM, 5/2 DM, 14/5 DM	GER. 7/6 DM GER. 6/5 DM CUSTOM CUSTOM CUSTOM	 09 18 45 00 05 00 01 00 03 06 15 00 05 00 01 00 13 26 65 00 05 65 01 00
Netherlands	1HFl 25¢ 1G	2.5HFl - -	2.5HFl 1G 1G	- - -	1/1 HFl, 3/2.5 Holland Florin [2] 1/25¢, 5/1 Guilder 1/1 Guilder [2]	NETHERLAND CUSTOM HOLLAND	 01 00 05 00 01 00 01 00
Sweden	5 Kr	5 Kr	5 Kr	-	1/5 Krona [2]	SWEDEN	
France	1 Fr 1 Fr 1 Fr 1 Fr 1 Fr 1 Fr	5 Fr 5 Fr 5 Fr 5 Fr 5 Fr 5 Fr	10 Fr 10 Fr 10 Fr 10 Fr 10 Fr 10 Fr	- - - - - -	1/3x1 F, 2/5 F, 5/10 Franc [2,3] 1/2x1 F, 3/5 F, 7/10 Franc [2,3] 1/5 F, 3/10 F, 7/2x10 Franc [2,3] 2/5 F, 4/10 F, 9/2x10 Franc [1,2,3] 2/5 F, 5/10 F, 11/2x10 Franc [2,3] 1/5 F, 3/10 Franc [2,3]	TARIF 1 TARIF 2 TARIF 3 TARIF 4 TARIF 5 TARIF 6	
Italy	500L	500L	500L	-	1/500 Lire [2]	ITALY	
Spain	100 P 25 P 25 P 25 P 25 P	- - - - -	500 P 100 P 100 P 100 P 100 P	- - - - -	1/100 P, 6/500 Peseta [2] 1/25 P, 5/100 Peseta [2] 1/25 P, 4/100 Peseta 1/2x25 P, 2/100 Peseta 1/25x25 P, 3/100 Peseta	SPAIN CUSTOM CUSTOM CUSTOM CUSTOM	 05 00 20 00 04 00 01 00 01 00 04 00 01 00 01 00 01 00 04 00 02 00 01 00 03 00 12 00 04 00 01 06
Japan	100 ¥	-	100 ¥	-	1/100 Yen [2]	JAPAN	
Antilles, Nthrlnd	25¢	-	1G	-	1/25¢, 4/1 Guilder [2]	ANTILLES	
Chile	Token	-	Token	-	1/1 Token [2]	CHILE	
Denmark	1 Kr	5 Kr	10 Kr	-	1/2x1 Kr, 3/5 Kr, 7/10 Krone [2]	DENMARK	
Finland	1Mka	-	5 Mka	-	1/2x1 Mka, 3/5 Markka [2]	FINLAND	
New Zealand	20¢	-	20¢	-	1/3x20¢ [2]	NEW ZEALAND	
Norway	5 Kr	-	10 Kr	-	1/5 Kr, 2/10 Kr, 5/20 Krone [2]	NORWAY	
Argentina	10¢	10¢	10¢	-	1/1 Token [2]	ARGENTINA	
Greece	10 D	20 D	50 K	-	1/2x10D, 1/20D, 3/50 Drachma [2]	GREECE	
Hungary	10 F	-	20 F	-	1/1x20F, 1/2x10F, 3/2x20 Forint	HUNGARY	

NOTES: 1. Factory Default. 2. Standard Setting - Change by pressing Enter button. 3. Other functions are also affected.
* Only if center coin chute and dollar bill acceptor are available.

PARTY ZONE   1-17

Press the Escape button to return to the Adjustment Menu. Press the Up button to advance to the next desired Adjustment Group, (or press the Down button to return to a previous Adjustment Group). Press the Enter button to activate that group. Press the Up or Down button to cycle through the available adjustments in that group.

A.4   H.S.T.D.   Adjustments

A.4   0 1   Highest   Scores
The operator specifies whether the game is to maintain a record of the four highest scores achieved to date. The choices are:

OFF   -   No high scores are recorded, or displayed.
ON   -   The four highest scores are stored in memory and displayed in the Attract Mode.

A.4   0 2   H.S.T.D.   Award
The operator chooses the award given for achieving the High Score To Date, or the Champion H.S.T.D.. The choices are a Credit or a Ticket.

A.4   0 3   Champion   H.S.T.D.
The operator chooses whether the "Highest" High Score is displayed in the Attract Mode. This score is not cleared when "High Score Reset Every" occurs. The choices are:

ON   -   The "Highest" High Score is retained in memory and displayed.
OFF   -   The "Highest" High Score is not retained.

A.4   0 4   Champion   Credits
The operator chooses the number of credits or tickets awarded for a Grand Champion Score. The range of this setting is 00 through 10.

A.4   0 5   H.S.T.D.   1   Credits
The operator selects the number of credits or tickets to be awarded whenever a player exceeds the previous Highest Score. The range of this setting is 00 to 10.

A.4   0 6   H.S.T.D.   2   Credits
The operator selects the number of credits or tickets to be awarded whenever a player exceeds the second highest score. The range of this setting is 00 to 10.

A.4   0 7   H.S.T.D.   3   Credits
The operator selects the number of credits or tickets to be awarded whenever a player exceeds the third highest score. The range of this setting is 00 to 10.

A.4   0 8   H.S.T.D.   4   Credits
The operator selects the number of credits or tickets to be awarded whenever a player exceeds the fourth highest score. The range of this setting is 00 to 10.

A.4 09   **High Score Reset Every**

The operator can specify that the game will provide an automatic reset of the displayed "Highest scores", and the number of games to be played before the reset occurs. The values provided upon reset are those selected by the operator in the Back-up High Scores. The range of this setting is OFF (disabled) and 250 to 20, 000.

A.4 10   **Backup Champion**

The operator sets the Back-up Grand Champion Score. The range of this setting is 00 through 99, 900, 000.

A.4 11   **Backup H.S.T.D. 1**

The operator can set the Back-up High Score value. The game automatically restores this value when the High Score Reset Every value is reached. The range of this setting is 00 to 99,900,000.

A.4 12   **Backup H.S.T.D. 2**

The operator can set the second Back-up High Score value. The game automatically restores this value when the High Score Reset Every value is reached. The range of this setting is 00 to 99,900,000.

A.4 13   **Backup H.S.T.D. 3**

The operator can set the third Back-up High Score value. The game automatically restores this value when the High Score Reset Every value is reached. The range of this setting is 00 to 99,900,000.

A.4 14   **Backup H.S.T.D. 4**

The operator can set the fourth Back-up High Score value. The game automatically restores this value when the High Score Reset Every value is reached. The range of this setting is 00 to 99,900,000.

Press the Up button to advance to the next desired Adjustment Group, (or press the Down button to return to a previous Adjustment Group). Press the Enter button to activate that group. Press the Up or Down button to cycle through the available adjustments in that group.

A.5   Printer Adjustments (optional board required)

A.5   0 1   Column Width
The operator chooses the column width to be printed. The range of this setting is 22 through 80.

A.5   0 2   Lines Per Page
The operator chooses the amount of lines per page. The range of this setting is 20 through 80.

A.5   0 3   Pause Every Page
The operator chooses whether the printer pauses at the end of a page. The choices are:

YES   -   The printer does pause.
NO   -   The printer doesn't pause.

A.5   0 4   Printer Type
The operator selects which kind of printer to use. The choices are Parallel, Serial or ADP.

A.5   0 5   Serial Baud Rate
The operator selects which baud rate to use for Serial or ADP communications (bit rate). The choices are 300, 600, 1200, 2400, 4800. or 9600.

A.5   0 6   Serial D.T.R. (Data Terminal Ready)
When a Serial Printer is used, this line may be connected to a printer output line signaling that the printer is busy.

Normal   =   Normal D.T.R. signal goes low to indicate the printer is not ready.

Inverted =   Inverted D.T.R. (busy) signal goes high to indicate printer is not ready.

Ignore   =   D.T.R. signal is ignored.

Press the Escape button to return to the Adjustments Menu. Then, either press the Up or Down button to return to a previous Adjustment Menu Group, or press the Escape button again to return to the Main Menu. Once in the Main Menu, either press the Up button to advance to the next menu selection, the Bookkeeping Menu, or press the Down button to to return to a previous Main Menu selection.

Press the Enter button to activate the Bookkeeping Menu, once the menu name is shown under the Main Menu. Then, use the Up or Down button to cycle through the Bookkeeping Menu selections. Press the Enter button to activate the desired Bookkeeping Group when that group appears in the displays.

B. BOOKKEEPING MENU

B.1	Main Audits
B.2	Earning Audits
B.3	Standard Audits
B.4	Feature Audits
B.5	Histograms
B.6	Time-Stamps

Once you have entered the desired Bookkeeping Group, press the Up or Down button to cycle through the available audits in that group. Audits cannot be set, they can only be cleared by using U1 and U2 from the Utilities Menu.

One Button Audit System

Information from the Bookkeeping Menu is obtainable directly from the Attract Mode. Continually pressing the Enter button, while in the Attract Mode, will cycle through all of the game audits.

B.1   Main Audits

These audits (which also appear in other groups) are the most important, and are grouped here for easier access.

B.1	01	Total Earnings	00	
B.1	02	Recent Earnings	00	
B.1	03	Free Play Percent	00	
B.1	04	Average Ball Time	00	
B.1	05	Average Game Time	00	
B.1	06	Total Plays	00	
B.1	07	Replay Awards	00	
B.1	08	Percent Replays	00	
B.1	09	Bonus Balls	00	
B.1	10	Percent Bonus Ball	00	

Press the Escape button to return to the Bookkeeping Menu. Press the Up button to advance to the next desired Bookkeeping Group, (or press the Down button to return to a previous group). Press the Enter button to activate that group. Press the Up or Down button to cycle through the available audits in that group.

B.2 Earning Audits*

B.2	01	Recent Earnings	00
B.2	02	Recent Left Slot	00
B.2	03	Recent Center Slot	00
B.2	04	Recent Right Slot	00
B.2	05	Recent 4th Slot	00
B.2	06	Recent Paid Credits	00
B.2	07	Recent Service Credits	00
B.2	08	Total Earnings*	00
B.2	09	Total Left Slot*	00
B.2	10	Total Center Slot*	00
B.2	11	Total Right Slot*	00
B.2	12	Total 4th Slot*	00
B.2	13	Total Paid Credits*	00
B.2	14	Total Service Credits*	00

*NOTE: These audits are NOT resettable. They are a record of the earnings of the game since the "CLOCK 1ST SET" Time-Stamp.

Press the Escape button to return to the Bookkeeping Menu. Press the Up button to advance to the next desired Bookkeeping Group, (or the Down button to return to a previous Bookkeeping Group). Press the Enter button to activate that group. Press the Up or Down button to cycle through the available audits in that group.

B.3 Standard Audits

B.3	01	Games Started	00
B.3	02	Total Plays•	00
B.3	03	Total Free Play	00
B.3	04	Free Play Percent	00
B.3	05	Replay Awards	00
B.3	06	Percent Replays	00
B.3	07	Special Awards	00
B.3	08	Percent Special	00
B.3	09	Match Awards	00
B.3	10	Percent Match	00
B.3	11	H.S.T.D. Credits	00
B.3	12	Percent H.S.T.D	00
B.3	13	Bonus Ball	00
B.3	14	Percent Bonus Ball	00
B.3	15	Tickets Awarded	00
B.3	16	Percent Tickets	00
B.3	17	Left Drains	00
B.3	18	Right Drains	00
B.3	19	Average Ball Time	00
B.3	20	Average Game Time	00
B.3	21	Minutes of Play	00
B.3	22	Minutes On	00
B.3	23	Balls Played	00
B.3	24	Tilts	00
B.3	25	Replay 1 Awards	00
B.3	26	Replay 2 Awards	00

• As a new WPC feature, the "Total Plays" counter only counts completed games. A game is considered completed when the final ball begins. Audit information from an incomplete game is ignored. Therefore operation for test and service do not affect the Audits.

B.3	27	Replay 3 Awards	00
B.3	28	Replay 4 Awards	00
B.3	29	1 Player Games	00
B.3	30	2 Player Games	00
B.3	31	3 Player Games	00
B.3	32	4 Player Games	00
B.3	33	H.S.T.D. Reset Count	00
B.3	34	Burn-in Cycles	00
B.3	35	1st Replay Level	

Press the Escape button to return to the Bookkeeping Menu. Press the Up button to advance to the next desired Bookkeeping Group, (or press the Down button to return to a previous group). Press the Enter button to activate that group. Press the Up or Down button to cycle through the available audits in that group.

B.4   Feature Audits

B.4	01	Multiballs	00
B.4	02	Quick Multiballs	00
B.4	03	Multiball Percent	00
B.4	04	Way Out of Control 5 Million	00
B.4	05	Way Out of Control Boppers	00
B.4	06	Way Out of Control 10X Playfield	00
B.4	07	Way Out of Control Special	00
B.4	08	2X	00
B.4	09	4X	00
B.4	10	6X	00
B.4	11	8X	00
B.4	12	End Zone Bonus	00
B.4	13	Rock-It 1 Million	00
B.4	14	Rock-It 2 Million	00
B.4	15	Rock-It 3 Million	00
B.4	16	Rock-It 4 Million	00
B.4	17	Rock-It 5 Million	00
B.4	18	Rock-It 6 Million	00
B.4	19	Rock-It 7 Million	00
B.4	20	Rock-It 10 Million	00
B.4	21	Big Bang	00
B.4	22	Dance Contest	00
B.4	23	Party Saver	00
B.4	24	Laff Attack	00
B.4	25	Eat	00
B.4	26	Drink	00
B.4	27	B. Merry	00

Press the Escape button to return to the Bookkeeping Menu. Press the Up button to the advance to the next desired Bookkeeping Group, (or press the Down button to return to a previous Bookkeeping Group). Press the Enter button to activate that group. Press the Up or Down button to cycle through the available audits in that group.

B.5 Histograms

B.5	01	0.0-0.5 Million Scores	00%	00
B.5	02	0.5-0.9 Million Scores	00%	00
B.5	03	1.0-1.5 Million Scores	00%	00
B.5	04	1.5-1.9 Million Scores	00%	00
B.5	05	2.0-2.9 Million Scores	00%	00
B.5	06	3.0-3.9 Million Scores	00%	00
B.5	07	4.0-4.9 Million Scores	00%	00
B.5	08	5.0-5.9 Million Scores	00%	00
B.5	09	6.0-7.9 Million Scores	00%	00
B.5	10	8.0-9.9 Million Scores	00%	00
B.5	11	10-15 Million Scores	00%	00
B.5	12	15-20 Million Scores	00%	00
B.5	13	Over 20 Million	00%	00
B.5	14	Game Time 0.0-1.0 Mins	00%	00
B.5	15	Game Time 1.0-1.5 Mins	00%	00
B.5	16	Game Time 1.5-2.0 Mins	00%	00
B.5	17	Game Time 2.0-2.5 Mins	00%	00
B.5	18	Game Time 2.5-3.0 Mins	00%	00
B.5	19	Game Time 3.0-3.5 Mins	00%	00
B.5	20	Game Time 3.5-4.0 Mins	00%	00
B.5	21	Game Time 4-5 Mins	00%	00
B.5	22	Game Time 5-6 Mins	00%	00
B.5	23	Game Time 6-8 Mins	00%	00
B.5	24	Game Time 8-10 Mins	00%	00
B.5	25	Game Time 10-15 Mins	00%	00
B.5	26	Game Time Over 15 Mins	00%	00

Press the Escape button to return to the Bookkeeping Menu. Press the Up button to the advance to the next desired Bookkeeping Group, (or press the Down button to return to a previous Bookkeeping Group). Press the Enter button to activate that group. Press the Up or Down button to cycle through the available audits in that group.

B.6 Time-Stamps

The Time-Stamps Menu allows you to view dates and times that are important to game software.

B.6	01	Current Time
B.6	02	Clock 1st Set
B.6	03	Clock Last Set
B.6	04	Audits Cleared
B.6	05	Coins Cleared
B.6	06	Factory Setting
B.6	07	Last Game Start
B.6	08	Last Replay
B.6	09	Last H.S.T.D. Reset
B.6	10	Champion Reset
B.6	11	Last Printout
B.6	12	Last Service Credit

Press the Escape button to return to the Bookkeeping Menu. Then, either press the Up or Down button to return to a previous Bookkeeping Menu Group, or press the Escape button again to return to the Main Menu. Once in the Main Menu either press the Up button to advance to the next menu selection, the Printouts Menu, or press the Down button to return to a previous Main Menu selection.

Press the Enter button to activate the Printouts Menu, once the menu name is shown under the Main Menu. Then, use the Up or Down button to cycle through the Printouts Menu selections. Press the Enter button to activate the desired Printouts Group when that group appears in the displays.

P. PRINTOUTS MENU
(optional board required)

P.1	**Earnings Data**
P.2	**Main Audits**
P.3	**Standard Audits**
P.4	**Feature Audits**
P.5	**Score Histograms**
P.6	**Time Histograms**
P.7	**Time-Stamps**
P.8	**All Data**

The Printouts Menu is a combination of the other menus. This menu allows you to access and print information in the available menu selections.

If no Printer is attached the the message "Waiting for Printer" appears in the displays. Note: Set the print specification from the Adjustment Menu, A.5 Printer Adjustments.

Press the Escape button to return to the Printouts Menu. Then, either press the Up or Down button to return to a previous Printouts Menu Group, or press the Escape button again to return to the Main Menu. Once in the Main Menu press the Up button to advance to the next menu selection, the Test Menu, or press the Down button to return to a previous Main Menu selection.

Press the Enter button to activate the Test Menu, once the menu name is shown under the Main Menu. Then, use the Up or Down button to cycle through the Test Menu selections. Press the Enter button to activate the desired test when that test appears in the displays.

T. TEST MENU

T.1   Switch Edges
T.2   Switch Levels
T.3   Single Switch
T.4   Solenoid Test
T.5   Flasher Test
T.6   General Illumination
T.7   Sound & Music Test
T.8   Single Lamps
T.9   All Lamps
T.10 Lamp & Flasher Tests
T.11 Display Test
T.12 Motor Test

T.1   Switch Edges

For all switches, the number on the left indicates the column, the number on the right indicates the row. Example- Switch 23 means 2nd column, 3rd row.

To test the Left and Right Flippers, press the Left or Right Flipper buttons during switch test. The flipper name and switch number should show in the displays. Any other results indicate the system has detected a problem with the flipper circuit.

To activate the Switch Edges Test, from the Test Menu, press the Enter button. The name and number of each switch that is pressed is shown in the displays. If any other switch, or no switch at all is indicated, the system has detected a problem with the switch circuit.

Press Escape to return to the Test Menu. Press the Up button to display the next test, (or the Down button to return to a previous test). Press the Enter button to activate that test.

T.2   Switch Levels

Once the test name is shown under the Test Menu, press the Enter button. The name and number of each switch that is activated is shown in the displays. This test automatically cycles through all switches that are detected closed. Current switch is indicated by a filled square.

Press the Escape button to return to the Test Menu. Press the Up button to display the next test, (or the Down button to return to a previous test). Press the Enter button to activate that test.

T.3   Single Switches

Once the test name is shown under the Test Menu, press the Enter button. The Single Switch Test isolates a particular switch by blocking signals from all other switches. Use the Up or Down buttons to select the switch to be tested. During the Single Switch Test, a flashing cross indicates your location in the matrix, a square indicates a closed switch, and a dot indicates an open switch. Press the Start button to obtain wire color, connector, and fuse information of any switch when that switch is displayed.

Press the Escape button to return to the Test Menu. Press the Up button to display the next test, (or the Down button to return to a previous test). Press the Enter button to activate that test.

Switch Matrix

White ——▷|—— ⟋ ——Green

Dedicated Grounded Switches		Column / Row	1 Green-Brown J206-1 U20-18	2 Green-Red J206-2 U20-17	3 Green-Orange J206-3 U20-16	4 Green-Yellow J206-4 U20-15	5 Green-Black J206-5 U20-14	6 Green-Blue J206-6 U20-13	7 Green-Violet J206-7 U20-12	8 Green-Grey J206-9 U20-11
Orange-Brown (1) J205-1 U17-5 Left Coin Chute	D1	1 White-Brown J206-1 U18-11	Right Flipper 11	Slam Tilt 21	Back Ramp Switch 31	Back Ball Popper 41	Head Opto 1 51	Shooter Lane 61	Cottage Entrance 71	Way 81
Orange-Red (2) J205-2 U17-7 Center Coin Chute	D2	2 White-Red J206-2 U18-9	Left Flipper 12	Coin Door Closed 22	Not Used 32	Right Ball Popper 42	Head Opto 2 52	Lane To Top 62	Enter Left Ramp 72	Out 82
Orange-Black (3) J205-3 U17-11 Right Coin Chute	D3	3 White-Orange J206-3 U18-5	Start Button 13	Ticket Opto 23	Not Used 33	Left Jet Bumper 43	Head Opto 3 53	Out Of Control 63	Left Ozone 73	OI 83
Orange-Yellow (4) J205-4 U17-9 4th Coin Chute	D4	4 White-Yellow J206-4 U18-7	Plumb Bob Tilt 14	Always Closed 24	EDM Qual. 1 34	Right Jet Bumper 44	Left Return Lane 54	Top Rebound 64	Right Ozone 74	Control 84
Orange-Green (5) J205-6 U18-9 Normal Function / Test Function Service Credits / Escape	D5	5 White-Green J206-5 U19-11	Not Used 15	Not Used 25	EDM Qual. 2 35	Bottom Jet Bumper 45	Left Drain 55	Skill Shot 65	Outhole 75	2nd Cottage Switch 85
Orange-Blue (6) J205-7 U18-11 Normal Function / Test Function Volume Down / Down	D6	6 White-Blue J206-7 U19-9	HA 1 16	Bop B 26	EDM Qual. 3 36	Not Used 46	End Zone Target 56	Request 66	Trough 1 76	Not Used 86
Orange-Violet (7) J205-8 U18-7 Normal Function / Test Function Volume Up / Up	D7	7 White-Violet J206-8 U19-5	HA 2 17	Bop O 27	EDM Qual. 4 37	Not Used 47	Right Return Lane 57	D.J. Eject 67	Trough 2 77	Not Used 87
Orange-Grey (8) J205-9 U19-5 Normal Function / Test Function Begin / Enter Test	D8	8 White-Grey J206-9 U19-7	HA 3 18	Bop P 28	EDM Qual. 5 38	Not Used 48	Right Drain 58	Time 68	Trough 3 78	Not Used 88

Switch Matrix Circuit

COLUMN (example)   ROW (example)

Column	A	B	
Inactive	H	L	Off
Active	L	H	On

Switch	C	D	
Open	H	H	Off
Closed	L	L	On

Dedicated Switch Circuit

DEDICATED GROUND (example)   ROW (example)

Switch	A	B	C	
Open	H	H	L	Off
Closed	L	L	H	On

T.4   Solenoid Test

Once the test name is shown under the Test Menu, press the Enter button. The Solenoid Test has three modes, Repeat, Stop, and Running. Only one solenoid should turn On at a time. The system has detected a problem if, more then one solenoid turns On, a solenoid comes On and stays On, or no solenoid turns On during the Repeat or Running test modes. Press the Start button to see the wire color, driver number, connector and, fuse information of any coil, when that coil is displayed.

Repeat   -   This test allows you to stop and pulse a single coil or flashlamp. Once you have entered the Solenoid Test, coil 1 shows in the displays and the corresponding solenoid activates. Press the Up or Down button to cycle through the solenoids, one at a time, manually. The same solenoid pulses until you press the Up or Down button to move to the next one. Either press the Escape button to return to the Test Menu, or press the Enter button to move to the next test mode.

Stop   -   This test allows you to stop the Solenoid Test at any point. Press Enter during the Repeat test mode and the Solenoid Test stops. There should not be any solenoids activated while the test is stopped. Either press the Escape button to return to the Test Menu, or the Enter button to move to the next test mode.

Running   -   This test allows you to cycle through the solenoids automatically. Press the Enter button during the Stop test mode. The displays show you the name and number of the solenoid currently being pulsed.

Either press the Enter button to return to the Repeat test mode, or press the Escape button to return to the Test Menu. Once in the Test Menu press, the Up button to display the next test, (or the Down button to return to a previous test). Press the Enter button to activate that test.
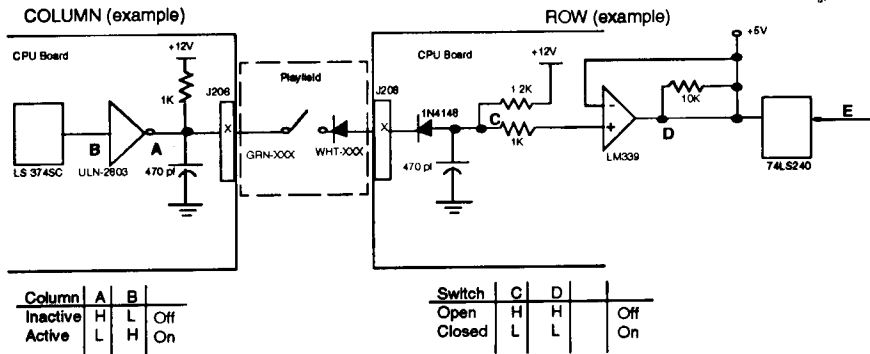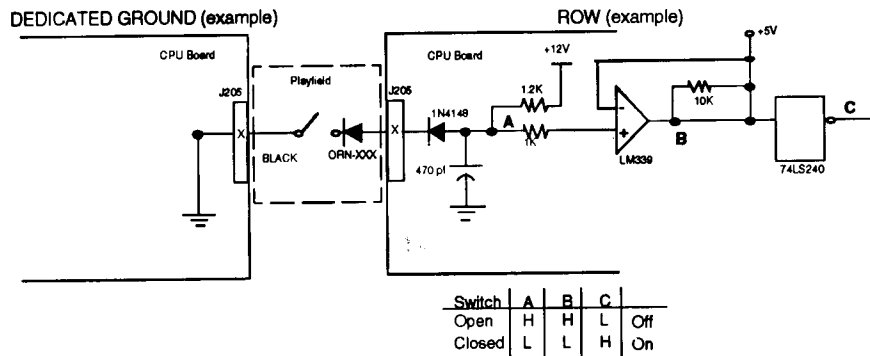

T.5   Flasher Test

Once the test name is shown under the Test Menu, press the Enter button. This test allows you to test the flashlamp part of the solenoid circuit exclusively. This test, like the Solenoid Test, has three test modes Repeat, Stop, and Running. During this test, only one flashlamp circuit should turn On at a time. If, more then one flashlamp circuit turns On, or stays On, or no flashlamp circuit turns On at all during the Repeat or Running test modes the system has detected a problem. Press the Start button to see the wire color, driver number, connector, and fuse information of any flashlamp circuit when that circuit appears in the displays.

Repeat   -   This test allows you to stop and pulse a single flashlamp. Once you have entered the Flasher Test the name and number of the first flashlamp circuit shows in the displays and the corresponding bulb(s) flashes. Press the Up or Down button to cycle through all of the flashlamps circuits one at a time, manually. The same flashlamp circuit pulses until you press the Up or Down button to move to the next one. Either, press the Escape button to return to the Test Menu, or press the Enter button to advance to the next test mode.

Stop   -   This test allow you to stop the Flasher Test at any time. Press the Enter button during the Repeat test mode. The Flasher Test stops. There should not be any flashlamp circuit turned On during this test mode. Either press the Escape button to return to the Test Menu, or press the Enter button to advance to the next test mode.

Running   -   This test allows you to cycle through the flashlamps automatically. Press the Enter button during the Stop test mode. The displays show you the name and number of the flashlamp currently being pulsed, and the corresponding bulb(s) flashes.

Either press the Enter button to return to the Repeat test mode or, press the Escape button to return to the Test Menu. Once in the Test Menu, press the Up button to display the next test, (or the Down button to return to a previous test). Press the Enter button to activate that test.

Solenoid/Flasher Table

Sol. No.	Function	Solenoid Type	Wire Color	Connection	Driver Trnstr	Solenoid Part Number Flashlamp Type
01	Back Ball Popper	High Power	Vio-Brn	J130-1	Q82	AE-26-1200
02	Right Ball Popper	High Power	Vio-Red	J130-2	Q80	AE-26-1200
03	D.J. Mouth	High Power	Vio-Orn	J130-4	Q78	AE-26-1500
04	D.J. Eject	High Power	Vio-Yel	J130-5	Q76	AE-26-1200
05	Dancin' Dummy	High Power	Vio-Grn	J130-6	Q64	AE-26-1200
06	Comic Mouth	High Power	Vio-Blu	J130-7	Q66	AE-30-2000
07	Knocker	High Power	Vio-Blk	J130-8	Q68	AE-23-800
08	Not Used					
09	Outhole	Low Power	Brn-Blk	J127-1	Q58	AE-27-1200
10	Ball Release	Low Power	Brn-Red	J127-3	Q56	AE-26-1200
11	Left Jet Bumper	Low Power	Brn-Org	J127-4	Q54	AE-26-1200
12	Right Jet Bumper	Low Power	Brn-Yel	J127-5	Q52	AE-26-1200
13	Bottom Jet Bumper	Low Power	Brn-Grn	J127-6	Q50	AE-26-1200
14	Not Used					
15	Left Sling	Low Power	Brn-Vio	J127-8	Q46	AE-26-1500
16	Right Sling	Low Power	Brn-Gry	J127-9	Q44	AE-26-1500
17	Cottage Flasher	Flasher	Blk-Brn	J125-1, J126-1	Q42	#906
18	Rocket Flashers	Flasher	Blk-Red	J125-2, J126-2	Q40	#906
19	Out Of Control	Flasher	Blk-Org	J125-3, J126-3	Q38	#89
20	Comic Flasher	Flasher	Blk-Yel	J125-5, J126-4	Q36	#906
21	Ozone Flashers	Flasher	Blu-Grn	J125-6, J126-5	Q28	#906
22	Right Side Flashers	Flasher	Blu-Blk	J125-7, J126-6	Q30	#89, #906
23	Head On/Off	Low Power	Blu-Vio	J126-7	Q34	AE-26-1500
24	Head Direction	Low Power	Blu-Gry	J126-8	Q32	14-7968 12V
25	Boppers Flasher	Flasher	Blu-Brn	J122-1	Q26	#89
26	Left Side Flashers	Flasher	Blu-Red	J122-2, J123-3	Q24	#89, #906
27	Top Left Flashers	Flasher	Blu-Org	J122-3, J123-4	Q22	#89, #906
28	D.J. Flasher	Flasher	Blu-Yel	J122-4, J123-5	Q20	#906
	General Illumination Circuits					
01	Illumination String 1	G.I.	Brown	J120-1	Q18	#44
02	Illumination String 2	G.I.	Orange	J120-2	Q10	#44
03	Illumination String 3	G.I.	Yellow	J120-3	Q14	#44
04	Illumination String 4	G.I.	Green	J121-5	Q16	#555
05	Illumination String 5	G.I.	Violet	J121-6	Q12	#555
	Lower Right Flipper		Blu-Yel	J109-7		FL-11630
	Lower Left Flipper		Gry-Yel	J109-5		FL-11630

High Power Solenoid Circuit

DRIVE   POWER
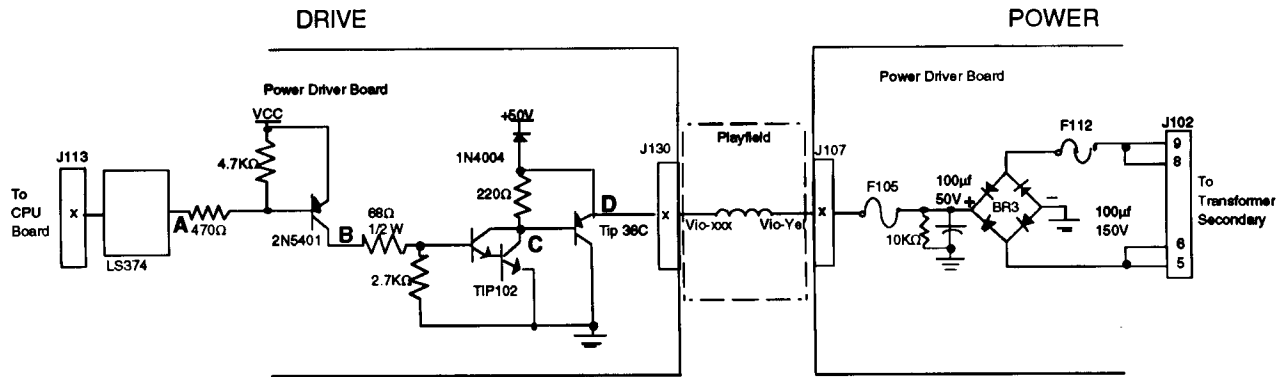
The microprocessor toggles the output of the 74LS374. When point "A" drops low, point "B" the collector of the 2N5401 transistor is high. A high at point "B" causes point "C" the collector of the TIP102 transistor, and point "D" the emitter of the   transistor to drop low. When point "D" is low the coil is grounded through the transistor and turns On. The coil shuts Off when point "A" toggles high.

Low Power Solenoid Circuit
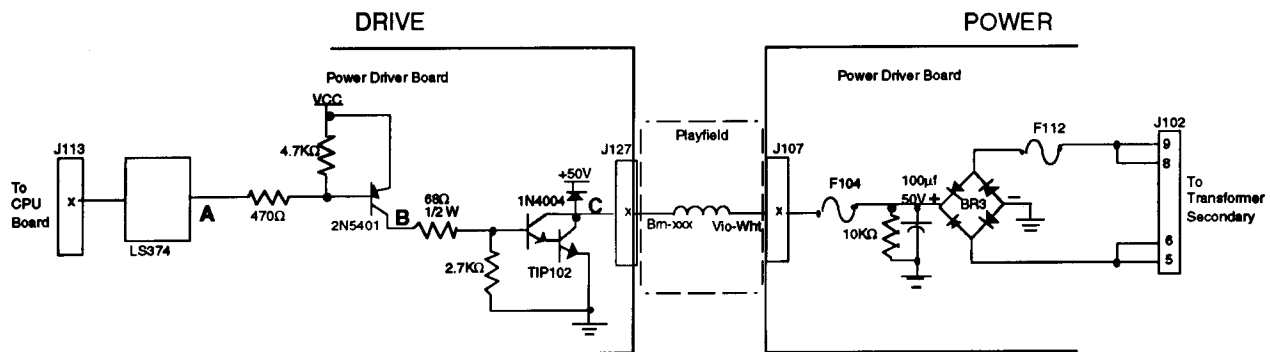
DRIVE   POWER

The microprocessor toggles the output of the 74LS374. When point "A" is low, point "B" the collector of the 2N5401 transistor is driver high. A high at point "B" turns On the TIP102 transistor and causes point "C" to drop low. When point "C" is low the coil is grounded through the transistor and turns On. The coil shuts Off when point "A" toggles high.

Special (General Purpose) Solenoid Circuit

DRIVE

Power Driver Board

VCC

4.7KΩ

J122

2N5401

68 Ω
1/2 W

1N4004

2.7K Ω

TIP102

J113

To
CPU
Board

LS374

A

470Ω

B

C

Playfield

Blu-xxx   Vio-Grn

POWER

Power Driver Board

J107

F103

F112

100µf
50V

10KΩ

BR3

J102

9
8
6
5

To
Transformer
Secondary

**Playfield Circuit When used for coil driver only (either +50V or +20V). If used for flashlamp
driver see playfield circuit below. Tieback Diode is not used for flashlamp circuit.

The microprocessor toggles the output of the 74LS374. When point "A" drops low, point "B" is high. A high at point "B" causes a low at point "C". When point "C" is low the coil/flashlamp is grounded through the transistor and turns On. When point "A" toggles high the coil/flashlamp turns Off.

Flashlamp Circuit

DRIVE

Power Driver Board

VCC

4.7KΩ

J125

2N5401

68Ω
1/2 W

2.7K Ω

TIP102

J113

To
CPU
Board

LS374

A

470Ω

B

C

Playfield

Blk-xxx   Red-Orn

POWER

Power Driver Board

J107

F111

15, 000 µf

1.5KΩ

BR4

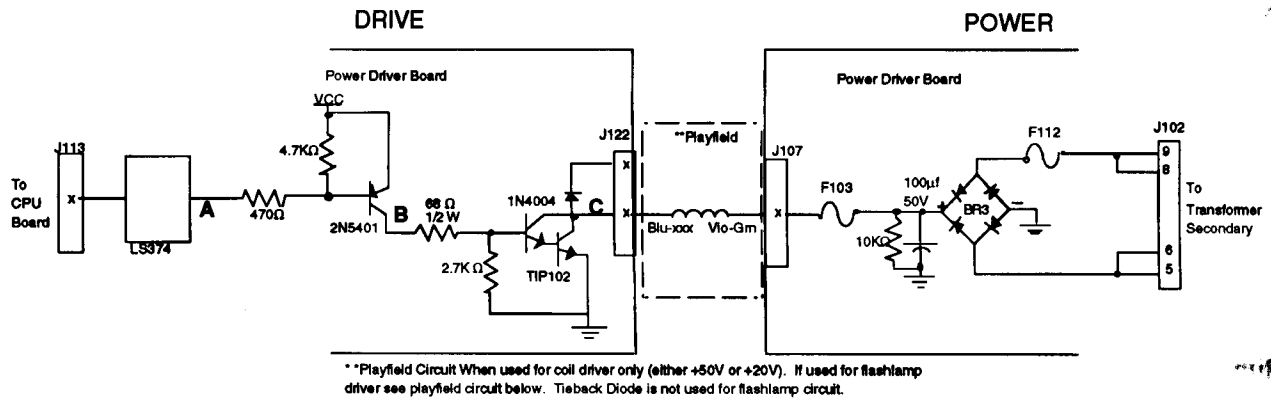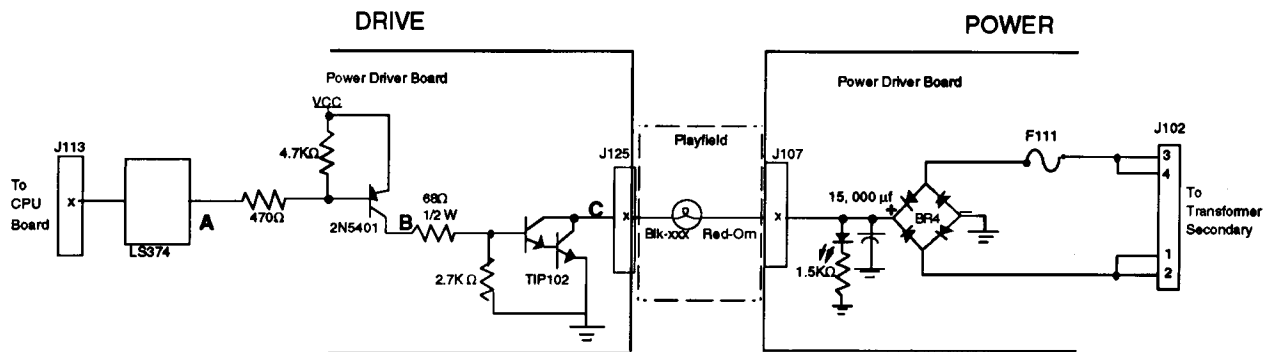J102

3
4
1
2

To
Transformer
Secondary

The microprocessor toggles the output of the 74LS374. When point "A" is low, point "B" the collector of the 2N5401 transistor is high. Once point "B" is high, point "C" the collector of the TIP102 transistor is low. When point "C" is low the flashlamp is grounded through the transistor and turns On. When point "A" toggles to a high the circuit shuts Off.

T.6   General Illumination

Once the test name is shown under the Test Menu, press the Enter button. This test allows you to check all of the General Illumination circuits. There are two modes of operation, Stop and Run. To obtain wire color, driver number, connector, and fuse information, press the Start button when the desired General Illumination circuit appears in the displays.

Stop - Press the Up or Down buttons to cycle through the General Illumination Test manually. All illumination is tested first, followed by an individual circuit test. The circuit name and number shows in the displays while the corresponding lamps lights. If any other results occur the system has detected an error.

Run - Press the Enter button any time during Stop test mode and the General Illumination Test cycles through automatically. For each circuit shown in the displays the corresponding bulbs should light. If any other results occurs the system has detected a problem.

Either press the Enter button to return to Stop test mode, or the Escape button to return to the Test Menu. Once in the Test Menu press the Up button to advance to the next test, (or the Down button to return to a previous test). Press the Enter button to activate that test.

T.7   Sound and Music Test

Once the test name is shown under the Test Menu, press the Enter button. The Sound and Music Test allows you to check the audio circuits. This test has three modes for testing the sound and music circuits, Running, Repeat and Stop.

Running - This test steps through a sequence of sounds and music. Pressing the Up or Down button during this portion of the Sound and Music test allows you to advance to a particular sound or tune without having to wait for the program to play all the sounds available in the test. For each name and number that appears in the displays a sound or tune should be heard. Any other results indicates the system has detected a problem.

Repeat - Press the Enter button at any time during the Running test mode to cause the program to stop and repeat a particular sound or tune. The same sound should repeat continuously until the Up or Down button is pressed. Any other results indicates the system has detected a problem.

Stop - Press the Enter button at any time during the Repeat test mode to stop this test altogether. Nothing should be heard. Any other results indicates the system has detected a problem.

Use the Enter button to return to the Running test mode, or the Escape button to return to the Test Menu. Once in the Test Menu press the Up button to display the next test, (or the Down button to return to a previous test) . Press the Enter button to activate that test.

T.8   Single Lamp Test

For all lamps, the number on the left indicates the column, the number on the right indicates the row.   Example- Lamp 23 means 2nd column, 3rd row.

Once the test name is shown under the Test Menu, press the Enter button. This test allows you to test each lamp circuit individually. Press the Up or Down button to cycle through this test. For each name and number that is shown in the displays the corresponding lamp should light. Any other results indicates the system has detected a problem. Press the Start button to obtain wire color, connector, and fuse information when the desired lamp is lit.

Press the Escape button to return to the Test Menu. Press the Up button to display the next test, (or the Down button to return to a previous test). Press the Enter button to activate that test.

T.9   All Lamps Test

Once the test name is shown under the Test Menu, press the Enter button. This test causes all the controlled lamps to flash at the same time. Every controlled lamp should flash. Any other results indicates the system has detected a problem.

Press the Escape button to return to the Test Menu. Press the Up button to display the next test, (or the Down button to return to a previous test). Press the Enter button to activate that test.

T.10 Lamp and Flasher Test

Once the test name is shown under the Test Menu, press the Enter button.   This test causes all the flashlamps and the controlled lamps to flash at the same time. The controlled lamps blink, while the flashlamps cycle from highest to lowest. Any other results indicates the system has detected a problem.

Press the Escape button to return to the Test Menu. Press the Up button to display the next test, (or the Down button to return to a previous test). Press the Enter button to activate that test.

Lamp Matrix

Column / Row	1 Yellow-Brown J138-1 Q98	2 Yellow-Red J138-2 Q97	3 Yellow-Orange J138-3 Q96	4 Yellow-Black J138-4 Q95	5 Yellow-Green J138-5 Q94	6 Yellow-Blue J138-6 Q93	7 Yellow-Violet J138-7 Q92	8 Yellow-Gray J138-9 Q91
1 Red-Brown J133-1 Q90	End Zone 11	5 Million 21	Party Animals 31	Big Bang 41	Dance Contest 51	Request 61	Right Fuel 1 71	Left End Zone 81
2 Red-Black J133-2 Q89	Extra Ball 12	Boppers 1 Million 22	Party Monster 32	Fuel 1 42	Left Fuel 1 52	Time 62	Right Fuel 2 72	Right End Zone 82
3 Red-Orange J133-4 Q88	Shoot Again 13	10X Playfield 23	Party Dudes 33	Fuel 2 43	Left Fuel 2 53	Make A Request 63	Right Fuel 3 73	Comic 1 83
4 Red-Yellow J133-5 Q87	Ramp Eat 14	Special 24	EDM Qual. 1 34	Fuel 3 44	Left Fuel 3 54	Be Merry 64	Drink 74	Comic 2 84
5 Red-Green J133-6 Q86	2X Playfield 15	Jet Equal Million 25	EDM Qual. 2 35	Fuel 4 45	Way 55	Bonus 5X 65	Left Bopper 75	Comic 3 85
6 Red-Blue J133-7 Q85	HA 1 16	Bop B 26	EDM Qual. 3 36	Fuel 5 46	Out 56	Bonus 10X 66	Right Bopper 76	D.J. Eject 86
7 Red-Violet J133-8 Q84	HA 2 17	Bop O 27	EDM Qual. 4 37	Fuel 6 47	Of 57	Bonus 15X 67	Bottom Bopper 77	Not Used 87
8 Red-Gray J133-9 Q83	HA 3 18	Bop P 28	EDM Qual. 5 38	Fuel 7 48	Control 58	Bonus 20X 68	Credit Button 78	Not Used 88

Lamp Circuit

COLUMN (example)   ROW (example)

Power Driver Board

J113 To CPU Board — LS240 — LS 374 — ULN-2803 — A — 560Ω — +18V — 1.2kΩ — TIP 107 — B — J137

Playfield — Yel-xxx Red-xxx

J133 — VCC — 10KΩ — 1.4Vref — E — TIP102 — Q — G — J113 To CPU Board

LM339 — C — D — 1KΩ — .2Ω — .22µf — 74LS74 — F — Q̄ — Clk — VCC

Column	A	B	
	H	L	Off
	L	H	On

Row (normal operation)	C	D	E	F	G	
	H	L	H	L	H	Off
	H	L	L	H	L	On

PARTY ZONE   1-34
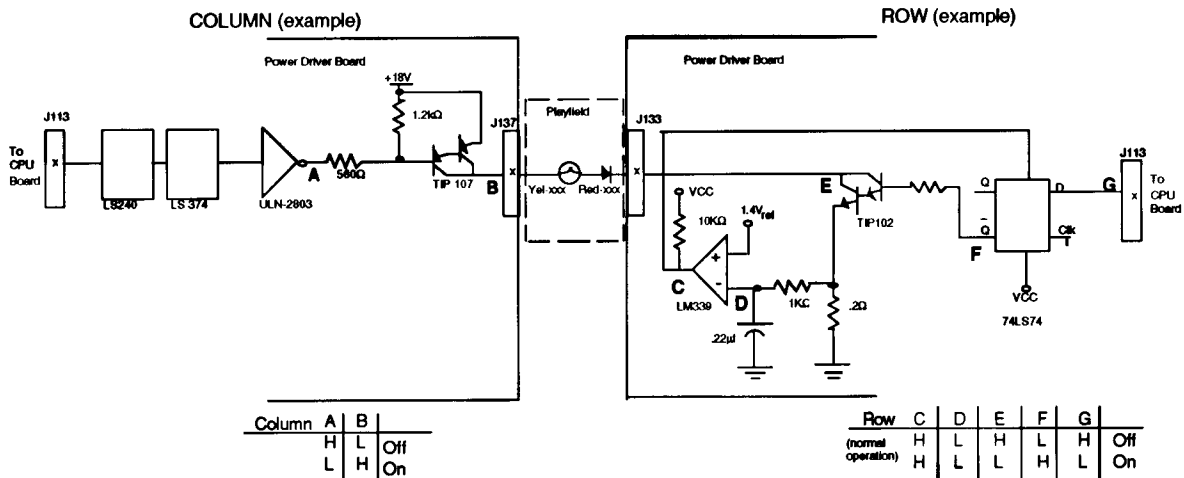
T.11 Display Test

Once the test name is shown under the Test Menu, press the Enter button. This Test automatically turns On and Off every dot in the Dot Matrix Display. A series of patterns appear in sequence. It starts with one line, turned On, moving across the screen vertically, then horizontally. The screen inverses and one line, turned Off, moves across the screen vertically, then horizontally. The second pattern is a series of lines, turned On, moving across the screen diagonally. The screen inverses and there is a series of lines, turned Off, moving across the screen diagonally. The third pattern is gridlines turned On, then turned Off. The last pattern is a box forming an outline of dots around the matrix that are turned On. After the box outline the test repeats itself.

Press the Escape button to return to the Test Menu. Then, either press the Up or Down button to return to a previous Test, or press the Escape button again to return to the Main Menu. Once in the Main Menu, press the Up button to move to the next menu selection, the Utilities Menu, or press the Down button to return to a previous Main Menu selection.

T.12 Head Test

Once the test name is shown under the Test Menu, press the Enter button. This test allows you to cycle through the motor operation. Press the Enter button to select single step or continuous mode.

Continuous- During the Continuous mode the test cycles through each phase of the test automatically. The head will turn from left to right and show the head position number with the closed and open opto switches. It is important to check the top and bottom row numbers of the opto section. These numbers should be the same. The top row indicates what the test should read. The bottom row indicates what the test is actually reading. If numbers are not the same, the test is indicating an error and the corresponding opto switch is in question, and should be checked.
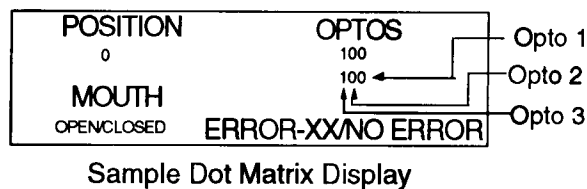
Head Position Movement

Sample Dot Matrix Display

Front
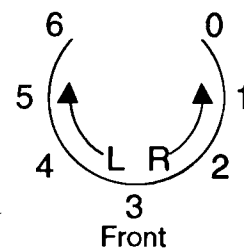
Single Step- Press the Enter button at any time during the Continuous test mode and the test enters the single step mode. Use the Up or Down buttons to cycle through each phase of the test manually. Press the Enter button again to resume the Continuous test mode.

Press the Escape button to return to the Test Menu. Then, either press the Up or Down button to return to a previous Test, or press the Escape button again to return to the Main Menu. Once in the Main Menu, press the Up button to move to the next menu selection, the Utilities Menu, or press the Down button to return to a previous Main Menu selection

Press the Enter button to activate the Utilities Menu, once the menu name is shown under the Main Menu. Then, use the Up or Down button to cycle through the Utility Menu selections. Press the Enter button to activate the desired Utility or Utility Group when it appears in the displays. If you change a utility setting and realize you have made a mistake, press the Escape button while "Saving Adjustment Value" is still in the displays. The original setting is retained and the new setting is ignored.

U. UTILITIES MENU

|	
U.1	Clear Audits
U.2	Clear Coins
U.3	Reset H.S.T.D.
U.4	Set Time & Date
U.5	Custom Message
U.6	Set Game I.D.
U.7	Factory Adjustments
U.8	Factory Resets
U.9	Presets
U.10	Clear Credits
U.11	Auto Burn-in

U.1 Clear Audits
Press the Enter button to clear the Standard Audits, Feature Audits, and Histograms. Press the Up button to display the next utility.

U.2 Clear Coins
Press the Enter button to clear the Earnings Audits. Press the Up button to display the next utility.

U.3 Reset H.S.T.D.
Press the Enter button to clear the High Score to Date Table and the Grand Champion. Press the Up button to display the next utility.

U.4 Set Time and Date
Press the Enter button to activate the time and date. Use the Up or Down button to change the value, then press the Enter button to lock in that value. If you make a mistake press the Escape button while "Saving Adjustment Value" is displayed. Press the Up button to move to the next utility.

U.5 Custom Message
This utility allows the operator to install a message that appears in the displays during the Attract Mode. Press the Enter button to activate the Custom Message. Use the Up or Down button to rotate letters. Use the Start button to rotate punctuation marks, (if desired). Press the Enter button to lock in the desired letter and punctuation. Note: Set Adjustment A.1 20 to YES before trying to write a Custom Message.

U.6 Set Game I.D.
This utility allows the operator to install a message, such as game location, that only appears on printouts . Press the Enter button to activate Set Game I.D.. Use the Up or Down button to rotate letters. Use the Start button to rotate punctuation marks, (if desired). Press the Enter button to lock in the desired letter and punctuation.

U.7 Factory Adjustment

Press the Enter button to restore the adjustments to factory settings, then press the Up button to display the next utility.

U.8 Factory Reset

Press the Enter button to restore the adjustments to their factory setting, clear the Audits, H.S.T.D Table, and Custom Message/Game I.D. Press the Up button to display the next utility.

U.9 Presets

Press the Enter button to activate the Presets Group. Use the Up or Down buttons to cycle through the available Presets. When the desired Preset is displayed, press the Enter button to lock in that Preset. If you realize you have made a mistake, press the Escape button while "Saving Adjustment Value" is displayed. The new value is ignored and the original value is retained.

U.9 01 Install Extra Easy

The operator can change the game play difficulty adjustments to a combination that is MUCH LESS difficult than the Factory Settings. The Game Difficulty Setting Table lists the adjustments and the settings that comprise the 'Extra Easy' Group.

U.9 02 Install Easy

The operator can change the game play difficulty adjustments to a combination that is somewhat LESS difficult than the Factory Settings. The Game Difficulty Setting Table lists the adjustments and the settings that comprise the 'Easy' Group.

U.9 03 Install Medium

The operator can change the game play difficulty adjustments to a combination that is about the SAME difficulty as the Factory Settings. The Game Difficulty Setting Table lists the adjustments and settings that comprise the 'Medium' Group.

U.9 04 Install Hard

The operator can change the game play difficulty adjustments to a combination that is somewhat MORE difficult than Factory Settings. The Game Difficulty Setting Table lists the adjustments and settings that comprise the 'Hard' Group.

U.9 05 Install Extra Hard

The operator can change the game play difficulty adjustments to a combination that is MUCH MORE difficult than Factory Settings. The Game Difficulty Setting Table lists the adjustments and settings that comprise the 'Extra Hard' Group.

Game Difficulty Setting Table for U.S./ Canadian/French Games

Adj. No.	Adjustment Description	Extra Easy U.9 01	Easy U.9 02	Medium U.9 03	Hard U.0 04	Extra Hard U.9 05
A.2 01	Special	5	3	2	1	1
A.2 02	Multiball	50	40	35	30	20
A.2 03	Extra Ball	30	20	10	5	5
A.2 04	Way Out of Control Difficulty	Easy	Easy	Medium	Medium	Hard
A.2 05	Way Out of Control Timer	15	15	15	10	20
A.2 06	Comic Difficulty	Ex. Easy	Easy	Medium	Medium	Hard
A.2 07	Comic Timer	10	10	10	8	10
A.2 08	Laff Attack Timer	25	20	15	10	8
A.2 09	Drink Timer	18	14	12	10	8
A.2 10	Merry Timer	20	15	13	11	9
A.2 11	Extra Ball Lit Memory	Yes	Yes	Yes	Yes	No
A.2 12	10X Playfield Timer	20	15	10	10	8
A.2 13	Extra Ball Lit	4	4	5	7	8

Game Difficulty Setting Table for German/European Games

Adj. No.	Adjustment Description	Extra Easy U.9 01	Easy U.9 02	Medium U.9 03	Hard U.0 04	Extra Hard U.9 05
A.2 01	Special	5	3	2	1	1
A.2 02	Multiball	50	40	35	30	20
A.2 03	Extra Ball	30	20	10	5	5
A.2 04	Way Out of Control Difficulty	Easy	Easy	Medium	Hard	Hard
A.2 05	Way Out of Control Timer	15	15	15	20	15
A.2 06	Comic Difficulty	Ex. Easy	Easy	Medium	Hard	Hard
A.2 07	Comic Timer	10	10	10	10	8
A.2 08	Laff Attack Timer	25	20	15	10	8
A.2 09	Drink Timer	18	14	12	10	8
A.2 10	Merry Timer	20	15	13	11	9
A.2 11	Extra Ball Lit Memory	Yes	Yes	Yes	No	No
A.2 12	10X Playfield Timer	20	15	10	10	8
A.2 13	Extra Ball Lit	4	4	5	7	8

U.9   06   Install 5 Ball   **.U**

The operator can change the game to 5 ball play, including the changing of
certain features to the recommended 5-ball level. The Preset Game Adjustments
Table for U.S./Canadian Games lists the adjustments and settings that comprise
the 'Install 5 Ball' Group.

U.9   07   Install 3 Ball

The operator can change the game to 3 ball play, including the changing of
certain features to the recommended 3-ball level. The Preset Game Adjustments
Table for U.S./Canadian Games lists the adjustments and settings that comprise
the 'Install 3 Ball' Group.

Preset Game Adjustments Table for U.S./Canadian Games

Adjustment Number	Adjustment Description	Install 5-Ball U.9 06	Install 3 Ball U.9 07
A.2 05	W.O.O.C. Timer	1 0	1 5
A.2 13	Light Extra Ball	8	5

U.9   08   Install Add -A -Ball

The operator utilizes this option to delete all Free Play awards and replace them
with Bonus Ball awards. Individual adjustments are affected, as follows:

Ad	Name	New Setting
A.1 13	Replay Boost	Off
A.1 14	Replay Award	Bonus Ball
A.1 15	Special Award	Bonus Ball
A.1 17	Bonus Ball Ticket	No
A.1 19	Match Feature	Off
A.4 04	Champion Credits	00
A.4 05	High Score 1 Credits	00
A.4 06	High Score 2 Credits	00
A.4 08	High Score 3 Credits	00
A.4 07	High Score 4 Credits	00

U.9   09   Install Ticket

The operator utilizes this option to delete Credit awards and replace them with
Ticket awards. Individual adjustments are affected as follows.

Ad	Name	New Settings
A.1 14	Replay Award	Ticket
A.1 15	Special Award	Ticket
A.1 16	Match Award	Ticket
A.1 17	Bonus Ball Ticket	Yes
A.1 31	TicketExpansion Board	Yes
A.4 02	H.S.T.D. Award	Ticket

U.9 10   Install Novelty
The operator utilizes this option to removes all Free Play and Bonus Ball awards.
Individual adjustments are affected as follows:

Ad		Name	New Setting
A.1	04	Max. Bonus Ball	Off
A.1	05	Replay System	Fixed
A.1	09	Replay Level 1	Off
A.1	10	Replay Level 2	Off
A.1	11	Replay Level 3	Off
A.1	12	Replay Level 4	Off
A.1	15	Special Award	Points
A.1	19	Match Feature	Off
A.4	01	Highest Score	On
A.4	04	Champion Credits	00
A.4	05	High Score 1 Credits	00
A.4	06	High Score 2 Credits	00
A.4	07	High Score 3 Credits	00
A.4	08	High Score 4 Credits	00

U.9 11   Install Buy-in
The operator uses this option to automatically set game pricing to 1 for 50¢/2 for
$1.00 and 1 Coin Buy-in (A.3 19) to YES.

U.9 17   Install German 1•
The operator uses this adjustment to modify the game pricing and the type of
game play. The Preset Game Adjustments Table for German/European Games
lists the adjustments and settings that comprise the 'Install German 1' Group.

U.9 18   Install German 2•
The operator uses this adjustment to modify the game pricing and the type of
game play. The Preset Game Adjustment Table for German/ European Games
lists the adjustments and settings that comprise the 'Install German 2' Group.

U.9 19   Install German 3•
The operator uses this adjustment to modify the game pricing and the type of
game play. The Preset Game Adjustments Table for German/European Games
lists the adjustments and settings that comprise the 'Install German 3' Group.

U.9 20   Install German 4•
The operator uses this adjustment to modify the game pricing and the type of
game play. The Preset Game Adjustments Table for German/European Games
lists the adjustments and settings that comprise the 'Install German 4' Group

U.9 21   Install German 5•
The operator uses this adjustment to modify the game pricing and the type of
game play. The Preset Game Adjustments Table for German/European Games
lists the adjustments and settings that comprise the 'Install German 5' Group.

U.9 22   Install German 6•
The operator uses this adjustment to modify the game pricing and the type of
game play. The Preset Game Adjustments Table for German/European Games
lists the adjustments and settings that comprise the 'Install German 6' Group.

• For German Jumpered CPU Boards only.

Preset Game Adjustments Table for German/European Games

Adj. #	Adj. Description	German 1 U.9 17	German 2 U.9 18	German 3 U.9 19	German 4 U.9 20	German 5 U.9 21	German 6 U.9 22
A.1 14	Replay Award	Credit	Ticket	Audit	Credit	Ticket	Audit
A.1 15	Special Award	Credit	Extra Ball	Points	Credit	Extra Ball	Points
A.1 15	Match Award	Credit	Ticket	Credit	Credit	Ticket	Credit
A.1 19	Match Feature	7%	7%	Off	7%	7%	Off
A.3 01	Game Pricing	6 spiele/5 DM	6 spiele/5 DM	6 spiele/5 DM	7 spiele/5 DM	7 spiele/5 DM	7 spiele/5 DM
A.4 02	H.S.T.D. Award	Credit	Ticket	Credit	Credit	Ticket	Credit
A.4 04	Champion Credits	03	03	00	03	03	00
A.4 05	High Score 1 Credits	01	01	00	01	01	00
A.4 06	High Score 2 Credits	00	00	00	00	00	00
A.4 07	High Score 3 Credits	00	00	00	00	00	00
A.4 08	High Score 4 Credits	00	00	00	00	00	00
A.4 10	Backup Champion	75,000,000	75,000,000	00	75,000,000	75,000,000	00
A.4 11	Backup High Score 1	60,000,000	60,000,000	00	60,000,000	60,000,000	00
A.4 12	Backup High Score 2	55,000,000	55,000,000	00	55,000,000	55,000,000	00
A.4 13	Backup High Score 3	50,000,000	50,000,000	00	50,000,000	50,000,000	00
A.4 14	Backup High Score 4	45,000,000	45,000,000	00	45,000,000	45,000,000	00

U.9 23   Install French 1*
The operator uses this adjustment to modify the game pricing and the type of play. The Preset Game Adjustments Table for French Games lists the adjustments and setting that comprise the 'Install French 1' Group.

U.9 24   Install French 2*
The operator uses this adjustment to modify the game pricing and the type of game play. The Preset Game Adjustments Table for French Games list the adjustments and settings that comprise the 'Install French 2' Group.

U.9 25   Install French 3*
The operator uses this adjustment to modify the game pricing and the type of game play. The Preset Game Adjustments Table for French Games list the adjustments and settings that comprise the 'Install French 3' Group.

U.9 26   Install French 4*
The operator uses this adjustment to modify the game pricing and the type of game play. The Preset Game Adjustments Table for French Games lists the adjustments and setting that comprise the 'Install French 4' Group.

U.9 27   Install French 5*
The operator uses this adjustment to modify the game pricing and the type of game play. The Preset Game Adjustments Table for French Games lists the adjustments and settings that comprise the 'Install French 5' Group.

U.9 28   Install French 6*
The operator uses this adjustment to modify the game pricing and the type of game play. The Preset Game Adjustments Table for French Games lists the adjustments and settings that comprise the 'Install French 6' Group.

*For French Jumpered CPU Boards only.

Preset Game Adjustments Table for French Games

Adj. #	Adj. Description	French1 U.9 23	French 2 U.9 24	French3 U.9 25	French4 U.9 26	French5 U.9 27	French6 U.9 28
U.9 06	Install 5 Ball	N/A	N/A	N/A	N/A	N/A	Yes

Press the Escape button to return to the Presets menu. Then press the Up button to display the next utility, (or the Down button to return to a previous utility).

U.10 Clear Credits

Press the Enter button to clear the game Credits. Press the Up button to display the next utility.

U.11 Auto Burn-in

Press the Enter button to activate Auto Burn-in. This utility allows you to automatically cycle through several tests. This helps in finding intermittent problems. The tests that Auto Burn-in cycles through are the Display Test, the Sound and Music Test, the All Lamps Test, the Solenoid Test, the Flashers Test, and the General Illumination Test.

Press the Escape button to return to the Utilities Menu. Then, either press the Up or Down button to return to a previous Utilities Menu Group, or press the Escape button again to return to the Main Menu. Once in the Main Menu either use the Up or Down buttons to return to a previous menu selection, or press the Escape button again to return to the Attract Mode.

The WPC game program has the capability to aid the operator and service personnel. At Game Turn-on or after pressing the Begin Test switch, once the game has been operating for an extended period, the display may signal with a message, "Press ENTER for Test Report". This indicates the game program has detected a possible problem with the game.

To obtain details of the problem, open the coin door and press the Begin Test switch. Press the Enter button to begin displaying the message(s). The following messages apply to your **PARTY ZONE** game.

Check Switch ##.

This message indicates that at least one switch was stuck 'On' at game turn-on or has NOT been actuated during ball play (for 90 balls or ≈30 games) by displaying the message "Adjust Switch ##", listing each problem switch by number. (The game program compensates the game play requirements affected by each disabled switch to allow 'nearly normal' play. This helps keep **PARTY ZONE** earning, until the service technician can repair the problem, bringing the game back to its normal good profits!)

To verify the problem, refer to the Test Menu text describing Switch Testing, and check each reported switch using applicable switch tests. Always check switch operation using a ball, to simulate game conditions. (Switch problems may often be resolved by adjusting the wire switch actuators, fixing switch circuitry problems, securing loose connectors, etc. Mechanisms using 'opto switches' (drop targets, etc.) need to be checked for proper power connections (+12V dc and ground).

Pinball Missing.

PARTY ZONE normally uses two balls; however, it will operate with one ball. This message announces that a ball is missing or stuck somewhere. When the ball is located, return it to the game via the Outhole. Other possibilities for this problem could be malfunctions of the Ball Trough switches or the Ball Shooter switch.

xxxxx Sw. Is Stuck On.

This message indicates that a switch, which is not usually On, remains in the On position after the game is switched On. The stuck switch is essential for game play (for example, a coin chute switch, the slam tilt switch, the plumb bob tilt switch), and should be cleared to permit proper game operation.

Ground Short Row-N, Wht-xxx.

Frequent appearance of this message requires activation of the Switch Levels Test to locate the switch causing the "WHT-xxx ROW x SHORT" message. Possible 'row short' causes are: 1) Slam Tilt (or other coin door) switch touching the grounded coin door; 2) A leaf-type, playfield switch touching a grounded part; 3) Players poking metallic objects (wires, coat hangers, etc.) into the game; 4) Switch cable insulation pierced or damaged allowing bare wire contact with a grounded part; 5) All switches in a row closing at the same time (Note: This instance is NOT a switch problem; however, for most games this is a very rare possibility).

Factory Settings Restored.

Repeated appearance of this message indicates that the CMOS RAM no longer retains any custom Pricing or Game Adjustment settings and has reverted to factory default settings. Generally, the following CPU checks will isolate the cause of the CMOS RAM memory failure. The voltage at pin 28 and pin 26 of U8 should be +5V (game turned On) and at least +4V (game turned Off). When the voltage drops below +4 V, memory reset occurs. Check the batteries and battery holder. Be sure that the batteries are good and that there is no contamination on the battery holder terminals. Turn the game OFF, and use an ohmmeter to check diodes D1 and D2 on the CPU Board. D1 should read 0 ohms when forward-biased and infinite ohms when reverse-biased. D2 should read 15 ohms when forward-biased and infinite ohms when reverse-biased.

U6 Checksum Error.

The game ROM checksum is invalid. If this occurs replace the game ROM.

Time and Date Not Set.

The real time clock is not running. If this occurs go to U.4 of the Utilities Menu and set the time and date.

The CPU has three L.E.D.s located on the upper left side of the board. On game power-up the top and bottom L.E.D.s turn On for a moment then, the top L.E.D. turns Off and the center L.E.D. starts to blink rapidly. The bottom L.E.D. remains On. The system has detected a problem if the following happens:

CPU Board L.E.D. Error Codes

Center L.E.D. blinks one time	-	ROM Error U6
Center L.E.D. blinks two times	-	RAM Error U8
Center L.E.D. blinks three times	-	Custom Chip Failure U9

Sound Board Beep Error Codes Upon Game Turn-On:

1 Beep	=	Sound Board O.K.
2 Beeps	=	U9 Failure (RAM)
3 Beeps	=	U18 Failure (ROM)
4 Beeps	=	U15 Failure (ROM)
5 Beeps	=	U14 Failure (ROM)

LED List
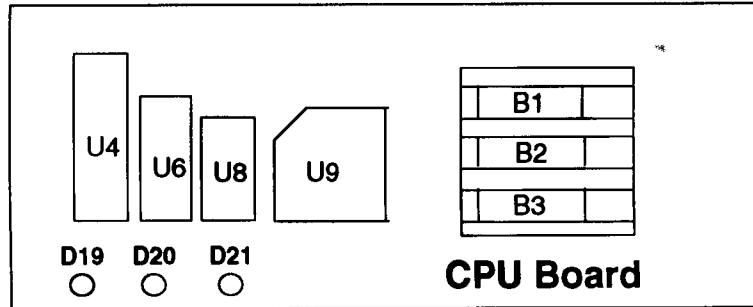
CPU Board

CPU Board

D19, Blanking
D20, Diagnostic
D21, +5vdc
At Game Turn-On = D19 & D21 On, D20 Off
During Normal Operation = D19 Off, D20 flashing, D21 On
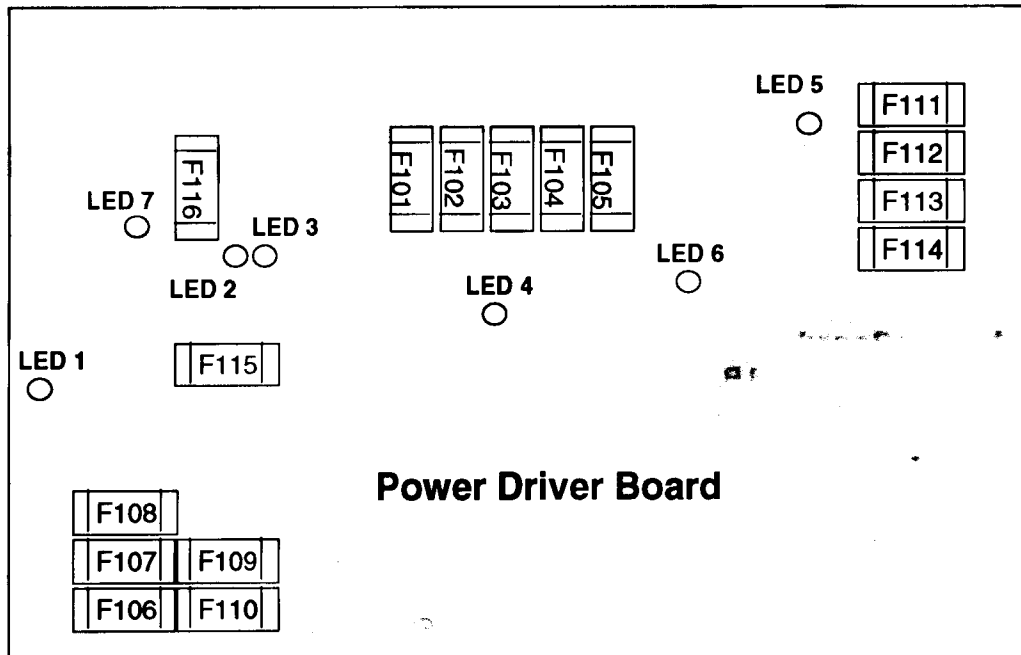
Power Driver Board

Power Driver Board

LED 1, +12vdc, Switch Circuit, Normally On
LED 2, High/Low Line Voltage Sensor, Normally On
LED 3, High/Low Line Voltage Sensor, Normally Off
LED 4, +5vdc, Digital Circuit, Normally On
LED 5, +20vdc, Flashlamp Circuit, Normally On
LED 6, +18vdc, Lamps Circuit, Normally On
LED 7, +12vdc, Power Circuit (Motors, Relays, Etc.), Normally On

Fuse List

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┌─────────────────────┐   ┌─────────────────────┐
│ Audio Board         │   │ Dot Matrix          │
│                     │   │ Controller Board    │
│                     │   │                     │
│                     │   │                     │
│   ┌──────┐          │   │         ┌──────┐    │
│   │ F501 │          │   │         │ F602 │    │
│   └──────┘          │   │         └──────┘    │
│   ┌──────┐          │   │         ┌──────┐    │
│   │ F502 │          │   │         │ F601 │    │
│   └──────┘          │   │         └──────┘    │
└─────────────────────┘   └─────────────────────┘
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┌──────────────────────────────────────────────────────┐
│ ┌──┐                                      ┌──────┐     │
│ │F │                                      │ F111 │     │
│ │1 │              ┌──┬──┬──┬──┬──┐        ├──────┤     │
│ │1 │              │F │F │F │F │F │        │ F112 │     │
│ │6 │              │1 │1 │1 │1 │1 │        ├──────┤     │
│ └──┘              │0 │0 │0 │0 │0 │        │ F113 │     │
│                   │1 │2 │3 │4 │5 │        ├──────┤     │
│      ┌──────┐     └──┴──┴──┴──┴──┘        │ F114 │     │
│      │ F115 │                             └──────┘     │
│      └──────┘                                          │
│                                                        │
│                       Power Driver Board               │
│   ┌──────┐                                             │
│   │ F108 │                                             │
│   ├──────┤──────┐                                      │
│   │ F107 │ F109 │                                      │
│   ├──────┤──────┤                                      │
│   │ F106 │ F110 │                                      │
│   └──────┴──────┘                                      │
└──────────────────────────────────────────────────────┘
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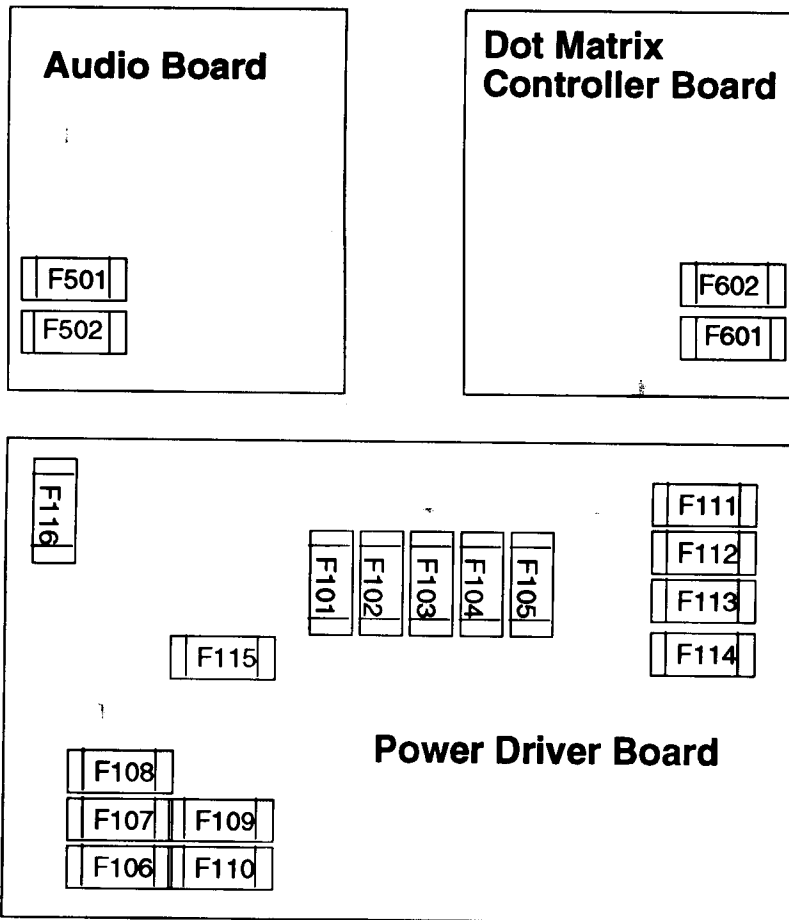
Audio Board

F501	-25V Circuit	3A, S.B.
F502	+25V Circuit	3A, S.B.

Dot Matrix Controller Board

F601	+80V A.C.	3/8A, S.B.
F602	+100V A.C.	3/8A, S.B.

Power Driver Board

F101	Left Flipper	2.5A, S.B.	F113	+5V Logic	5A, S.B.
F102	Right Flipper	2.5A, S.B.	F114	+18V Lamp Matrix	8A, N.B.
F103	Solenoid 25-28	3A, S.B.	F115	+12V Switch Matrix	3/4A, S.B.
F104	Solenoids 9-16	3A, S.B.	F116	+12V Secondary	3A, S.B.
F105	Solenoids 1-8	3A, S.B.			
F106	G.I. #2 Wht-Vio	5A, S.B.			
F107	G.I. #3 Wht-Yel	5A, S.B.		**Line Filter**	
F108	G.I. #5 Wht-Grn	5A, S.B.	Domestic Game		8A, N.B.
F109	G.I. #4 Wht-Orn	5A, S.B.	Foreign Game		4A, S.B.
F110	G.I. #1 Wht-Brn	5A, S.B.			
F111	Flasher Secondary	5A, S.B.			
F112	Solenoid Secondary	5A, S.B.			

MAINTENANCE INFORMATION

Regular maintenance is essential to a game's continuing contribution to the operator's earnings.

LUBRICATION

The two main lubrication points of the Ball Shooter Lane Feeder mechanism are the pivots for the arm. Note that the mechanism of other playfield devices are somewhat similar to the Ball Shooter Lane Feeder Device; and have the same lubrication requirements as the Ball Shooter Lane Feeder Device. A switch target grease is satisfactory for these devices.

Because of the functional design (arm-actuated via solenoid plunger operation), the pivot points of the Left and Right Kickers ("Slingshots") all require lubrication as a regular servicing procedure.

Lubrication to ensure proper operation also applies to the target blades of the Drop Targets. MBI Instrument Grease, also known as Drop Target Switch Lubricant, with a Williams' part number of 20-8886, is a recommended lubricant.

SWITCH CONTACTS

For proper game operation, switch contacts should be free of dust, dirt, contamination, and corrosion. Blade switch contacts are plated to resist corrosion. Cleaning blade switch contacts requires gentle closing of the contacts on a clean business card or piece of paper, and then pulling the paper about 2 inches, which should restore the clean contact surface. Adjust the switch contacts to a 1/16-inch gap.

CLEANING

Good game action and extended playfield life are the results of regular playfield cleaning. During each collection stop, the playfield glass should be removed and thoroughly cleaned and the playfield should be wiped off with a clean, lint-free cloth. The game balls should be cleaned and inspected for any chips, nicks, or pits. Replace any damaged balls to prevent playfield damage.

Regular, more extensive, playfield cleaning is recommended. However, avoid excessive use of water and caustic or abrasive cleaners because they tend to damage the playfield surface. Playfield wax (or any carnauba based wax), or polish may be used sparingly, to prevent a buildup on the playfield surface. Do not use cleaners containing petroleum distillates on any playfield plastics because they may dissolve the plastic material or damage the artwork.

Notes

Section 2

Game Parts Information

- ### *Parts Lists & Diagrams*

  Cabinet Parts
  Major Mechanism Locations Diagram
  Lamp Boards
  Game Circuit Boards
  Major Mechanism Assemblies
  Playfield Parts

Cabinet Parts
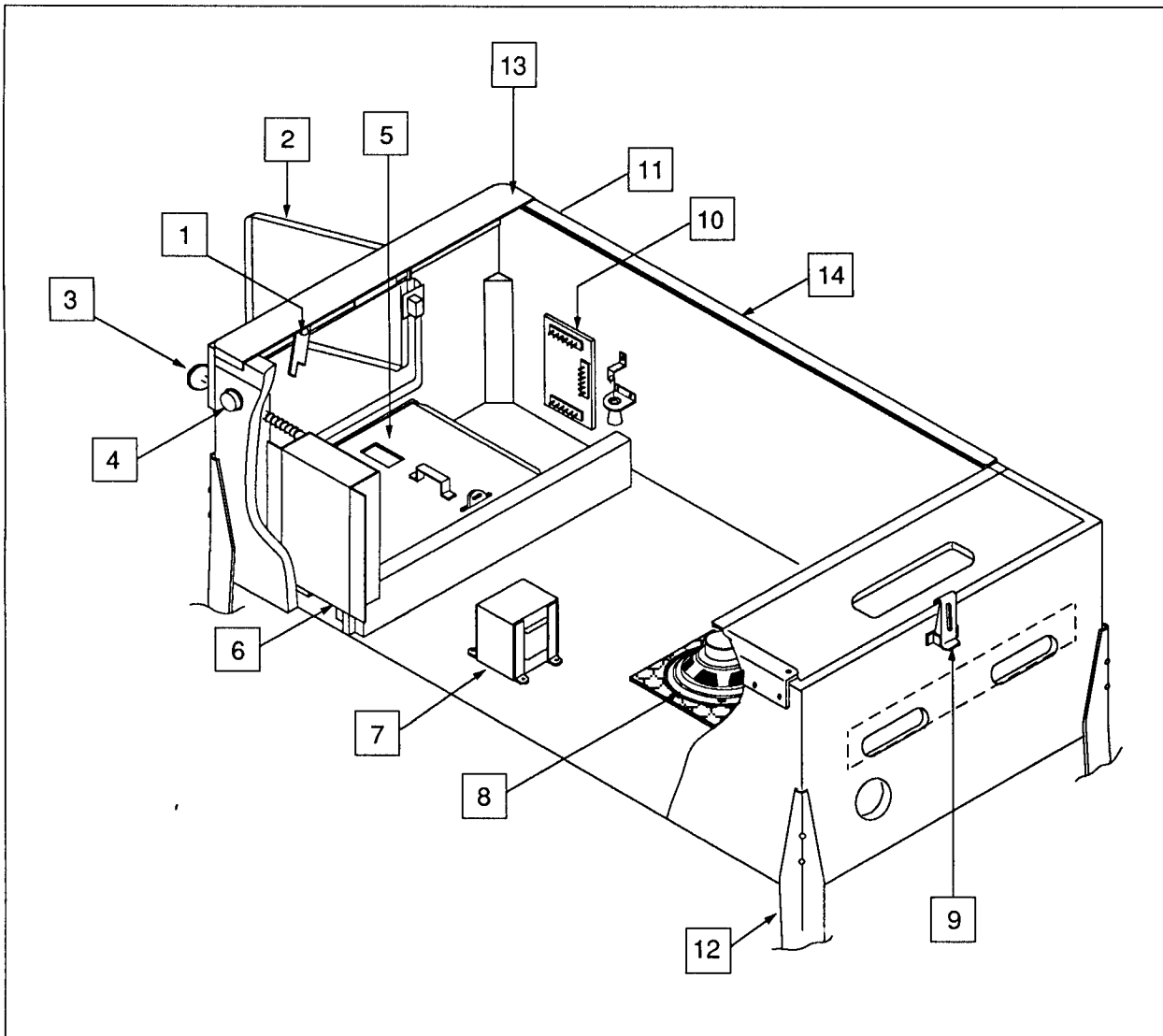
Cabinet Parts

Item	Part Number	Description
1.	D-9174-2	Lever Guide Assembly
2.	A-14148-1	Coin Door - 2 Slot
3.	B-12445-1	Ball Shooter Assembly
4.	B-12273-6	Flipper Button Assy. (Yellow)
5.	A-14642-1	Cashbox Assembly
6.	A-14744-USA	Line Filter Assembly
7.	5610-12835-00	Transformer, 115/230v
8.	5555-12015-00	Speaker, 8Ω, 6"
9.	20-9347	Toggle Latch
10.	A-14689	WPC Coin Door Interface Bd.
11.	B-12273-7	Flipper Button Assy. (Black)
12.	C-10843-1	Metal Leg
13.	D-12615	Front Molding Assy.
14.	A-12359-3	Side Molding

Miscellaneous Parts

Part Number	Description
08-7028-T	Tempered Playfield Glass: 21" x 43"
A-8552-20004	Tempered Backglass Assembly
08-7463	Backbox Glass: 27" x 23-1/2"
31-1357-20004	Screened Backglass
20-6500	Steel Ball, 1-1/16" (3)

Backbox Assembly

Speaker Panel Assembly

Backbox Assembly
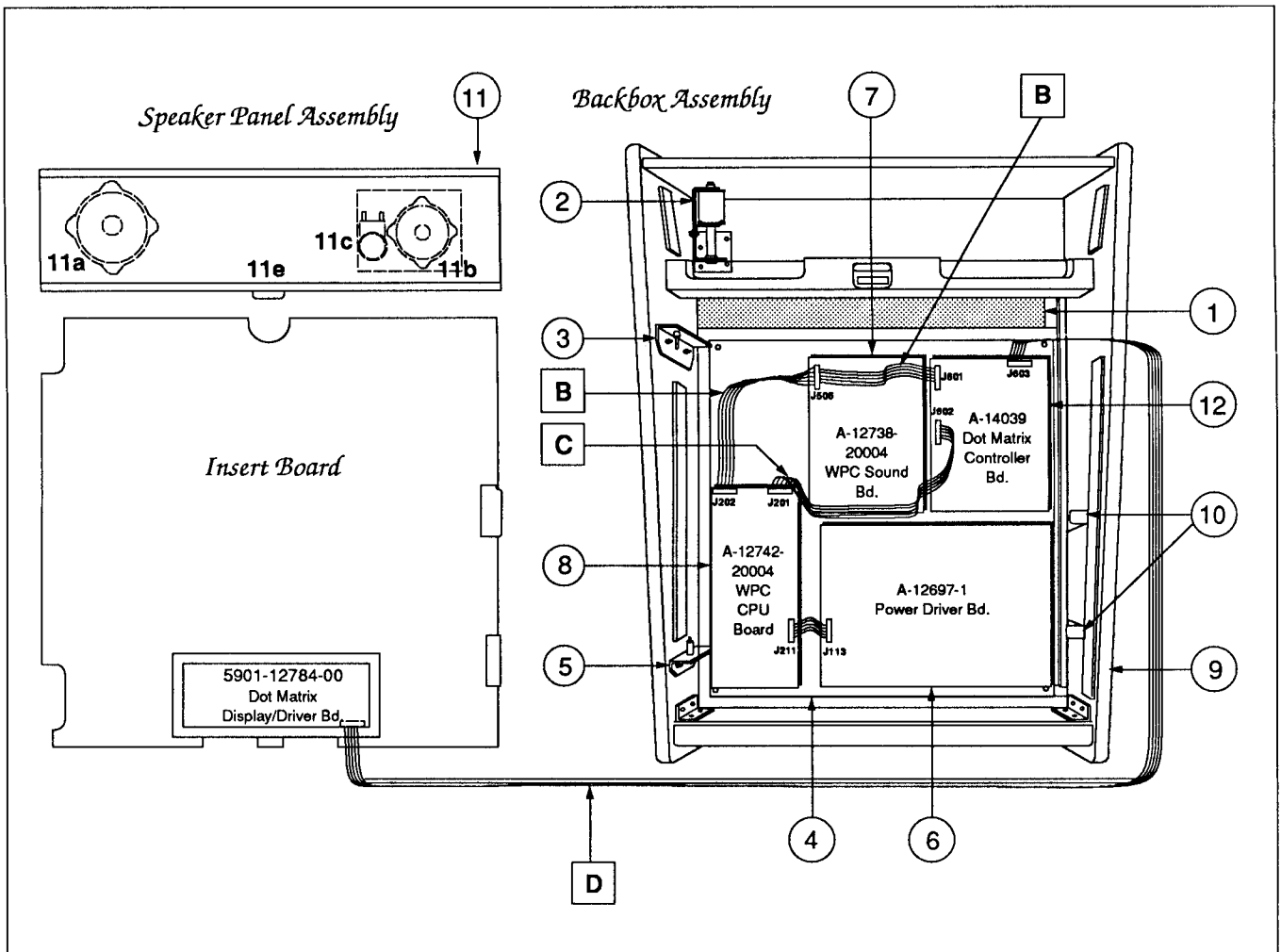
Item	Part Number	Description		Item	Part Number	Description
1.	01-6645	Venting Screen		12.	A-14039*	Dot Matrix Contoller Board
2.	B-10686-1*	Knocker & Bracket Assy.		13.	20004-IN	Insert Board
3.	A-12497	Upper Insert Bd Hinge Assy.		a)	01-6571	Hinge Mounting Bracket
4.	A-14092-1	Mounting Plate Assembly		b)	01-6655	Insert Latch
5.	A-12498	Lower Insert Bd Hinge Assy.		c)	5901-12784-00	Dot Matrix Display/Driver Bd.
6.	A-12697-1*	Power Driver Assembly				
7.	A-12738-20004*	WPC Sound Board				
8.	A-12742-20004*	WPC CPU Board				
9.	A-13767-20004	Backbox Assembly				
10.	01-9047	Insert Stop Bracket				
11.	A-14404	Speaker / Display Assy.				
a)	5555-12015-00	Speaker, 6", 8Ω, 20w				
b)	5555-12068-00	Speaker, 4" Piezo, 50w				
c)	A-14292-1	Cross-Over Coil Assy				
d)	31-1493	Name Plate, Logo				
e)	20-9637	Lock & Cam Kit Assembly				

RIBBON CABLES:

A.	5795-12653-03	Ribbon Cable, 3"
B.	5795-12837-01	Ribbon Cable, 18"
C.	5795-10938-14	Ribbon Cable, 14"
D.	5795-12838-60	Ribbon Cable, 60"

*   Refer to Individual Unit's Parts List

Locations Diagram - Game Major Mechanisms
Underside of Playfield, Viewed in Raised Position

A-8039-3
Outhole Assy.

C-13174-R
Right Flipper Assy.

C-13174-L
Left Flipper Assy.

B-12665
Kicker Arm Assy.
B-11203-R-1
Coil & Bracket Assy.

A-14768
High Driver Assy.

A-14766
Motor Opto Board

A-14756
Captain B.Zarr

A-12842-4
Jumper Bumpers(3)

A-14808
Dancer Mech. Assy.

A-14860
Ramp Assembly

Ball Trough Switches

C-9638
Ball Shooter Assy.
B-9362-L-2
Coil & Bracket Assy.

B-12665
Kicker Arm Assy.
B-11203-L-1
Coil & Bracket Assy.

B-9361-R-1
Ball Eject Assembly
B-9362-L-2
Coil & Bracket Assy.

D-11335-2
Ball Popper Assy.

A-14909
Back Panel Assy.

A-14863
Ball Popper Assy.

A-14983
Mandible Assy.

■ Lamp Boards

Item	Part Number	Description
A	A-14774	7-Lamp Assembly
B	A-14775	5-Lamp Assembly
C	A-14776	5-Lamp Assembly
D	A-14778	4-Lamp Assembly
E	A-14777	4-Lamp Assembly

Item	Part Number	Description
F	A-14779	3-Lamp Assembly
G	A-14781	3-Lamp Assembly
H	A-14780	4-Lamp Assembly
J	C-13337	Single Lamp Assy.

Lamp Boards

A-14774   7-Lamp Board

Part Number	Description
5768-12870-00	Lamp PCB
24-8767	Twist Lamp Socket
24-8768	Bulb #555, (6.3v, 0.25A.)
5070-09054-00	Diode, 1N4004
5791-10871-09	Connector, 9-pin Header Sq Flat

A-14775   5-Lamp Board

Part Number	Description
5768-12871-00	Lamp PCB
24-8767	Twist Lamp Socket
24-8768	Bulb #555, (6.3v, 0.25A.)
5070-09054-00	Diode, 1N4004
5791-10871-07	Connector, 7-pin Header Sq Flat

A-14776   4-Lamp Board

Part Number	Description
5768-12872-00	Lamp PCB
24-8767	Twist Lamp Socket
24-8768	Bulb #555, (6.3v, 0.25A.)
5070-09054-00	Diode, 1N4004
5791-10871-06	Connector, 6-pin Header Sq Flat

A-14777   4-Lamp Board

Part Number	Description
5768-12873-00	Lamp PCB
24-8767	Twist Lamp Socket
24-8768	Bulb #555, (6.3v, 0.25A.)
5070-09054-00	Diode, 1N4004
5791-10871-06	Connector, 6-pin Header Sq Flat

A-14778   4-Lamp Board

Part Number	Description
5768-12874-00	Lamp PCB
24-8767	Twist Lamp Socket
24-8768	Bulb #555, (6.3v, 0.25A.)
5070-09054-00	Diode, 1N4004
5791-10871-06	Connector, 6-pin Header Sq Flat

A-14779   3-Lamp Board

Part Number	Description
5768-12875-00	Lamp PCB
24-8767	Twist Lamp Socket
24-8768	Bulb #555, (6.3v, 0.25A.)
5070-09054-00	Diode, 1N4004
5791-10871-05	Connector, 5-pin Header Sq Flat

A-14780   4-Lamp Board

Part Number	Description
5768-12876-00	Lamp PCB
24-8767	Twist Lamp Socket
24-8768	Bulb #555, (6.3v, 0.25A.)
5070-09054-00	Diode, 1N4004
5791-10871-06	Connector, 6-pin Header Sq Flat

A-14781   3-Lamp Board

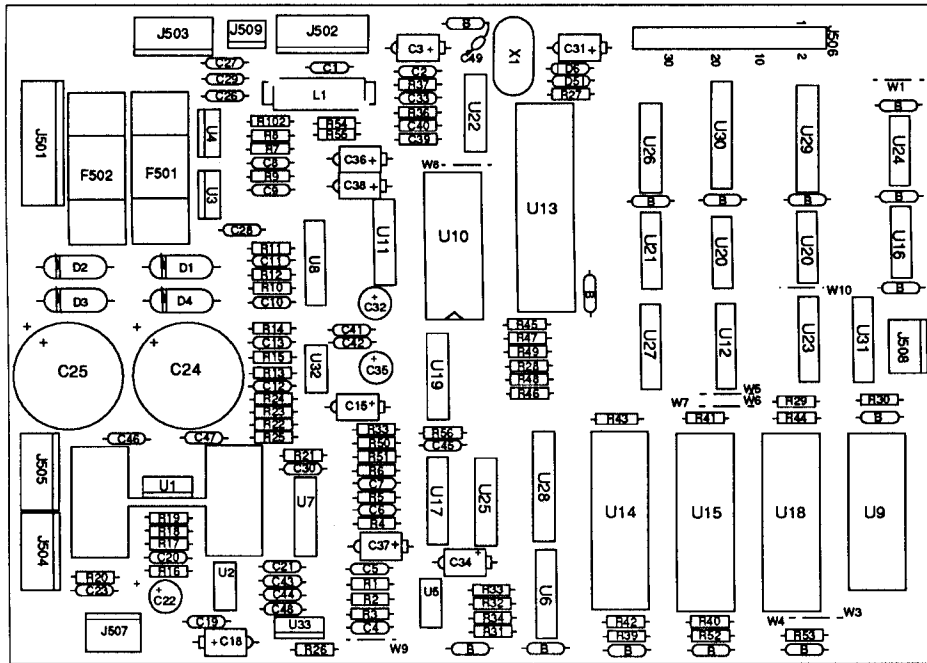| Part Number	Description
5768-12877-00	Lamp PCB
24-8767	Twist Lamp Socket
24-8768	Bulb #555, (6.3v, 0.25A.)
5070-09054-00	Diode, 1N4004
5791-10871-05	Connector, 5-pin Header Sq Flat

C-13337   Single Lamp Board

Part Number	Description
5768-12579-00	Lamp PCB
24-8803	Lamp Socket
24-8802	Bulb #906, (13v, 0.69A.)

PARTY ZONE

A-12738-20004   WPC Audio Board

Part No.	Ckt Designator	Description
01-9980		Shield: Wire Protector
20-9229	U1	Thermal Compound
4004-01005-06	U1	Mach. Screw, 4-40 x 3/8
4104-01012-04	U1	Sh. Mach. Screw, #4 x 1/4
4104-01012-04	U1	Sh. Metal Screw, #4 x 1/4
4404-01119-00	U1	Nut, 4-40 SNUT
5010-09324-00	R21	Resistor 27KΩ, 1/4w, 5%
5010-12065-00	R22, R25	Resistor, 120KΩ, 1/4w, 5%
5010-08991-00	R51	Resistor, 4.7KΩ, 1/4w, 5%
5010-09034-00	R13, R14, R29-R31, R33 R34, R50, R45-R49	Resistor, 10KΩ, 1/4w, 5%
5010-09035-00	R4	Resistor, 47KΩ, 1/4w, 5%
5010-09036-00	R35	Resistor, 100Ω, 1/4w, 5%
5010-09134-00	R1, R2, R6, R8, R9, R11, R12, R23, R24	Resistor, 150KΩ, 1/4w, 5%
5010-09162-00	R26, R102	Resistor, 100KΩ, 1/4w, 5%
5010-08774-00	R3, R5, R17, R19	Resistor, 22K, 1/4w, 5%
5010-09269-00	R15	Resistor, 12KΩ, 1/4w, 5%
5010-09358-00	R18, R32	Resistor, 1KΩ, 1/4w, 5%
5010-09416-00	R28, R36, R37, R39, R40-R44, R52, R53, R57	Resistor, 470Ω, 1/4w, 5%
5010-09534-00	W3, W5, W7-W10	Resistor, 0Ω
5010-10171-00	R38, R56	Resistor, 56Ω, 1/4w, 5%
5010-10258-00	R16	Resistor, 1M, 1/4w, 5%
5010-10650-00	R7, R10	Resistor, 62K, 1/4w, 5%
5010-10989-00	R27, R54, R55	Resistor, 470K, 1/4w, 5%
5010-12752-00	R20	Resistor, 1Ω, 1/4w, 5%
5040-08986-00	C3	Capacitor, 100M, 10v (±20%)
5040-09332-00	C15, C18, C34, C36, C38	Capacitor, 47μfd., 25v, Axial
5040-11036-00	C32, C35	Capacitor, 47μfd., 16v, Rad.
5040-12729-00	C24, C25	Capacitor, 4700μfd., 35v
5040-12750-00	C22	Capacitor, 22μfd., 35v, Rad.
5041-09031-00	C26-C29, C37, C46-C48	Capacitor, 1μfd. TANT
5041-09243-00	C20, C21	Capacitor, 10μfd. TANT
5043-08980-00	C41-C44, B(15)	Capacitor, .01M, 50v, (+80, -20)
5043-08996-00	C1, C2	Capacitor, .1μfd., 50v, 10%
5048-11027-00	C8, C10	Capacitor, 33pfd., 50v, 10%
5048-11028-00	C45	Capacitor, 22pfd., 50V, Axial
5048-11029-00	C33, C49	Capacittor, 100pfd., 50v
5048-11030-00	C12	Caapacitor, 470pfd., 50v
5048-11031-00	C19, C31	Capacitor, .001μfd., 50v, 10%
5048-11065-00	C13	Capacitor, .0022μfd., 50v, 10%, Axial
5048-11072-00	C39, C40	Capacitor, .0033μfd.
5048-12036-00	C23	Capacitor, .22μfd., 10v, Ceramic
5048-12745-00	C4, C6	Capacitor, 1800pfd., 50V, 10%
5048-12746-00	C5, C7	Capacitor, 330pfd., 50V
5048-12748-00	C9, C11, C30	Capacitor, 220pfd., 50V
5070-08919-00	D5, D6	Diode, 1N4148
5070-09045-00	D1-D4	Diode MR501, 3.0A.
5250-10495-00	U3	Reg. 7912 1.0A -12v
5281-09215-00	U22	IC, 74LS04 Hex INV
5281-09246-00	U12	IC, 74LS139 2-4 Dec.
5281-09486-00	U28-U30	IC, 74LS374 8 Dual Flipflop
5281-09487-00	U6, U23-U25	IC, 74LS74 Dual Flipflop
5281-09500-00	U31	IC, 74LS32
5281-09745-00	U26, U27	IC, 74LS138 DMLTPX
5281-09850-00	U20	IC, 74LS11 Tripple AND
5281-10577-00	U16	IC, 74LS125 O/B Bfr
5370-11086-00	U10	IC,, YM2151 Sound
5371-11087-00	U11	IC, YM3012 D/A
5400-10320-00	U13	IC, MPU 68B09E
5284-12651-00	U21	IC 4584
5340-12278-00	U9	S/Ram 2064
5370-09691-00	U17	IC, 55536 CVSD

Part No.	Ckt Designator	Description
5370-12260-00	U2	IC, 3340 Elec Atten
5370-12728-00	U1	IC, Audio Amp LM1875
5370-12730-00	U7, U8	IC, Op Amp TL084
5370-12742-00	U32	IC, Op Amp TL082
5371-12727-00	U19	Dac AD7524
5432-12726-00	U5	EE Prom Pot X9503
5460-12423-00	U4	IC, LM7812
5460-12743-00	U33	LM7809 TO-220
5520-09020-00	X1	Crystal, 3.58 MHz.
5521-10931-00	OSC1	Oscillator, 8.0 MHz.
5551-09822-00	L1	Ind, 4.7UH 3.0A.
5700-08985-00	U13	Socket, IC 40-pin, .6"
5700-09004-00	U10	Socket, IC 24-pin, .6"
5700-09006-00	U11	Socket, IC 16-pin, .3"
A-5343-20004-2	U14	IC, Audio ROM
A-5343-20004-3	U15	IC, Audio ROM
A-5343-20004-4	U18	IC, Audio ROM
5700-12088-00		Socket, IC 32-pin (U14, U15, U18)
5705-12755-00	U1	Heatsink 5299B-220
5731-08633-00	F501, F502	Fuse, 3A, S-B
5733-12060-01		Fuse Holder (F501, F502)
5766-12433-00		PCB-Sound 90
5791-10862-04	J504, J505	Connector, 4-pin Header Sq. .156
5791-10862-05	J502	Connector, 5-pin Header Sq. .156
5791-10862-07	J501	Connector, 7-pin Header Sq. .156
5791-12462-03	J509	Connector, 3-pin Header Sq. .100
5791-12462-04	J508	Connector, 4-pin Header Sq. .100
5791-12516-00	J506	34 Hen 2x17 STR
16-8850-359		PCB Label

A-12742-20004   WPC CPU Board

Item	Part Number	Designator	Description
1	5010-09034-00	R14-R22, R27-R42, R86, R90, R94, R98	Resistor, 10KΩ, 1/4w, 5%
2	5010-09085-00	R1, R2, R4, R93, R96, R97	Resistor, 1.5KΩ, 1/4w, 5%
3	5010-09314-00	R52, R54, R56, R58, R60, R62, R64, R66, R75-R82	Resistor, 1.2KΩ, 1/4w, 5%
4	5010-09358-00	R3, R43-R51, R53, R55, R57, R59, R61, R63, R65, R67-R74, R84	Resistor, 1KΩ, 1/4w, 5%
5	5010-09416-00	R5-R8, R12, R13, R87-R89	Resistor, 470Ω, 1/4w, 5%
6	5010-09534-00	W1, W4, W7, W13 - W18	Resistor, 0Ω
7	5010-10258-00	R95, R99	Resistor, .01μfdΩ, 1/4w, 5%
8	5010-10989-00	R92	Resistor, 470KΩ, 1/4w, 5%
9	5010-12104-00	R91	Resistor, 22μfd, 1/4w, 5%
10	5019-09362-00	SIP 1	SIP, 9R, 10-pin, 4.7KΩ, 5%
11	5040-08986-00	C31	Capacitor, 100μfd, 10v ($\pm$20%)
12	5043-08980-00	B	Capacitor, .01μfd, 50v, (+80, -20%)
13	5043-09030-00	C27	Capacitor, 0.047μfd, 50v ($\pm$20%)
14	5043-09065-00	C3 - C26	Capacitor, 470pfd, 50v ($\pm$20%)
15	5043-09491-00	C2, C29, C30, C34	Capacitor, 22pfd, 1KV, ($\pm$10%)
16	5043-09492-00	C28	Capacitor, 100pfd, 50v, ($\pm$10%)
17	5043-09845-00	C32, C33	Capacitor, 1KP, 50v, ($\pm$20%)
18	5070-08919-00	D2 - D18	Diode, 1N4148, 150MA
19	5070-09266-00	D1, D25	Diode, 1N5817, 1.0A.
20	5160-10269-00	Q1	Transistor, 2N3904, NPN
21	5162-12422-00	U20	IC, ULN, 2803A
22	5281-09308-00	U3	IC, 74LS245, Octal Bus Trncv
23	5281-09486-00	U14	IC, 74LS374, 8D F/F
24	5281-09851-00	U5	IC, 74LS14, SMT/TRG
25	5281-09867-00	U1, U2, U7	IC, Octal Buffer, 74LS244
26	5281-10182-00	U11, U12, U13, U15	IC, 74LS240 Driver
27	5284-12651-00	U21	IC, 4584
28	5340-12278-00	U8	S/RAM 2064
29	5370-12272-00	U16 - U19	IC, LM339, Quad. Comp
30	5370-12687-00	U10	MC, 34064 Reset Chip
31	5520-10438-00	X2	Crystal, 8.0MHz.
32	5520-12084-00	X1	Crystal 32.768 KHz
33	5551-09822-00	L1	ILN, 4.7 UH 3A
34	5671-09019-00	D19 - D21	DSPL LED RED
35	5700-08985-00	U4	Socket, IC 40P, .6"
36	5700-12088-00	U6	Socket, IC 32P, .6"
37	5700-12424-00	U9	Socket, 84 Pin PLCC
38	5764-12431-00		PC Board
39	5791-10850-00	J201, J204	Connector, 26-pin Header Str Sq.
40	5791-10862-07	J210	Connector, 7-pin Header Str Sq.
41	5791-12461-08	J212	Connector, 8-pin Header Str Sq.
42	5791-12461-09	J206 - J209	Connector, 9-pin Header Sq. pin
43	5791-12461-12	J205	Connector, 12-pin Header Sq. pin
44	5791-12516-00	J202, J211	34 Hen 2x17 STR
45	5881-09021-00	B1 - B3	Battery Holder "AA"
46	5048-11033-00	C50	Capacitor, 0.022μf, 10v
47	16-8850-358		PCB Label
48	A-5343-20004	U6	Game PROM Assembly
49	5410-12426-00	U9	WPC-89 ASIC
50	5400-10320-00	U4	IC MPU 68B09E
51	5880-09022-00	B1 - B3	Battery, Alkaline, 1.5v ("AA")

J202 J201
SR1 R96
U3 U2 U1
J203
R86 U25 R97
U5 U4 R3 R2 R1
D19 R6 R84 R5 C1 R13
R8 R7 C50
D20 U21 R90 U6 W2
D21 R91 R92 W1
R94 X1 C29 C30 C28 W6 W4
U7 U8 W7 W5 R12
W3 R93 D11 D2
J204 W11 W12 W13 W14 W15 W16 W17 W18 U9 R87 R88 R89
R14 R15 R16 R17 R18 R19 R20 R21
U11 X2 R99 C2 R95 C34 U10 C27 R22 J211
U12
U13 C31
U14 B3 B2 B1
U15 L1 C33 J210
R39 R40 R41 R42 C32
U17 U16 R35 R36 R37 R38 R31 R32 R33 R34 R27 R28 R29 R30
R47 R48 R49 R50 R43 R44 R45 R46 U20 U19 U18
D14 C22 D13 C21 D12 C20 D11 C19 R78 R77 R76 R75 R74 R73 R72 R71 R70 R69 R68 R67 R66 R65 R64 R63 R62 R61 R60 R59 R58 R57 R56 R55 R54 R53 R52 R51
D18 C26 D17 C25 D16 C24 D15 C23 R82 R81 R80 R79 C18 C17 C16 C15 C14 C13 C12 C11 D10 C10 R89 C9 C8 R77 C7 C6 C5 C5 C4 C3
R98
J212 J206 J208
Q1 J205 J207 J209

A-12697-1   WPC Power Driver Assembly

Item	Part Number	Ckt Designator	Description
1	20-9229	Q2, Q10, Q12, Q14, Q16, Q18	Thermal Compound
2	4006-01005-06	Q1, Q2	Mach. Screw, 6-32 x 3/8
3	4406-01128-00	Q1, Q2	Nut, 6-32 KEPS
4	4004-01005-06	Q10, Q12, Q14, Q16, Q18	Mach. Screw, 4-40 x 3/8
5	4404-01119-00	Q10, Q12, Q14, Q16, Q18	Nut, 4-40 SNUT
6	5010-08981-00	R260	Resistor, 10KΩ, 1/2w, 5%
7	5010-08991-00	R9, R12, R15, R18, R21, R23, R27, R31, R35, R39, R43, R47, R51, R55, R59, R63, R67, R71, R75, R79, R83, R87, R91, R95, R99, R126, R128, R130, R132, R134, R136, R138, R140, R209, R227	Resistor, 4.7KΩ, 14w, 5%
8	5010-08992-00	R8, R11, R14, R17, R20, R177, R179, R181, R183, R185, R187, R189, R191, R208	Resistor, 560Ω, 1/4w, 5%
9	5010-08993-00	R25, R29, R33, R37, R41, R45, R49, R53, R57, R61, R65, R69, R73, R77, R81, R85, R89, R93, R97, R101, R103, R106, R109, R112, R115, R118, R121, R124	Resistor, 68Ω, 1/4w, 5%
10	5010-08997-00	R24, R28, R32, R36, R40, R44, R48, R52, R56, R60, R64, R68, R72, R76, R80, R84, R88, R92, R96, R100, R102, R105, R108, R111, R114, R117, R120, R123, R195	Resistor, 2.7KΩ, 1/4w, 5%
11	5010-08998-00	R155, R157, R159, R161, R165, R167, R169, R171	Resistor, 2.2KΩ, 1/4w, 5%
12	5010-09034-00	R3, R4, R6, R142-R149, R197-R198	Resistor, 10KΩ, 1/4w, 5%
13	5010-09085-00	R194, R196, R251, R253-R257	Resistor, 1.5KΩ, 1/4w, 5%
14	5010-09086-00	R252	Resistor, 6.8KΩ, 1/4w, 5%
15	5010-09224-00	R1, R2, R192, R201- R205	Ressistor, 270Ω, 1/4w, 5%
16	5010-09314-00	R176, R178, R180, R182, R184, R186, R188, R190	Resistor, 1.2KΩ, 1/4w, 5%
17	5010-09324-00	R206	Resistor, 27KΩ, 1/4w, 5%
18	5010-09358-00	R154, R156, R158, R160, R164, R166, R168, R170, R162, R193, R199, R200 R250	Resistor, 1KΩ, 1/4w, 5%
19	5010-09361-00	R104, R107, R110, R113 R116, R119, R122, R125	Resistor, 220Ω, 1/4w, 5%
20	5010-09416-00	R22, R26, R30, R34, R38, R42, R46, R50, R54, R58, R62, R66, R70, R74, R78, R82, R86, R90, R94, R98, R127, R129, R131, R133, R135, R137, R139, R141	Resistor, 470Ω, 1/4w, 5%
21	5010-09534-00	W1, W2	Resistor, 0Ω
22	5010-11079-00	R7, R10, R13, R16, R19	Resistor, 51Ω, 1/4w, 5%
23	5010-12427-00	R150-R153, R172-R175	Resistor, .22Ω, 1w, 5%
24	5012-12632-00	R224	Resistor, .12Ω, 10w, 5%
25	5012-12238-00	R210, R211	Resistor, 3.3KΩ, 5w, 10%
26	5019-10143-00	SR1	SIP, 9R, 10 pin, 470Ω, 5%
27	5040-08986-00	C4	Capacitor, 100µfd, 10v (±20%)
28	5040-09421-00	C2	Capacitor, 100µfd, 25v (+50, -10%)
29	5040-09537-00	C8	Capacitor, 100µfd, 100v (±20%)
30	5040-12313-00	C5, C6, C7, C11, C30	Capacitor, 15,000µfd, 25v (±20%)
31	5043-08980-00	B-BYPASS	Capacitor, .01µfd, 50v (+80, -20%)
32	5043-08996-00	C13-C20, C31	Capacitor, .1µfd, 50v (±20%)
33	5043-09845-00	C1, C12	Capacitor, 1,000pfd, 50v (±20%)
34	5048-10994-00	C3	Capacitor, .33µfd, 50v (±20%) Ax.
35	5070-08919-00	D33, D34	Diode, 1N4148, 150MA.
36	5070-09054-00	D1-D3, D5-D12, D17-D32, D38, D39	Diode, 1N4004, 1.0A.
37	5100-09690-00	BR3-BR5	Bridge Rectifier, 35A., 200v
38	5131-12725-00	Q10, Q12, Q14, Q16, Q18	Triac, BT138E
39	5162-12422-00	U19	IC, ULN 2803
40	5162-12635-00	Q20, Q22, Q24, Q26, Q28 Q30, Q32, Q34, Q36, Q38, Q40, Q42, Q44, Q46, Q48, Q50, Q52, Q54, Q56, Q58, Q63, Q65, Q67, Q69, Q75, Q77, Q79, Q81, Q83 - Q90	Transistor, TIP 102

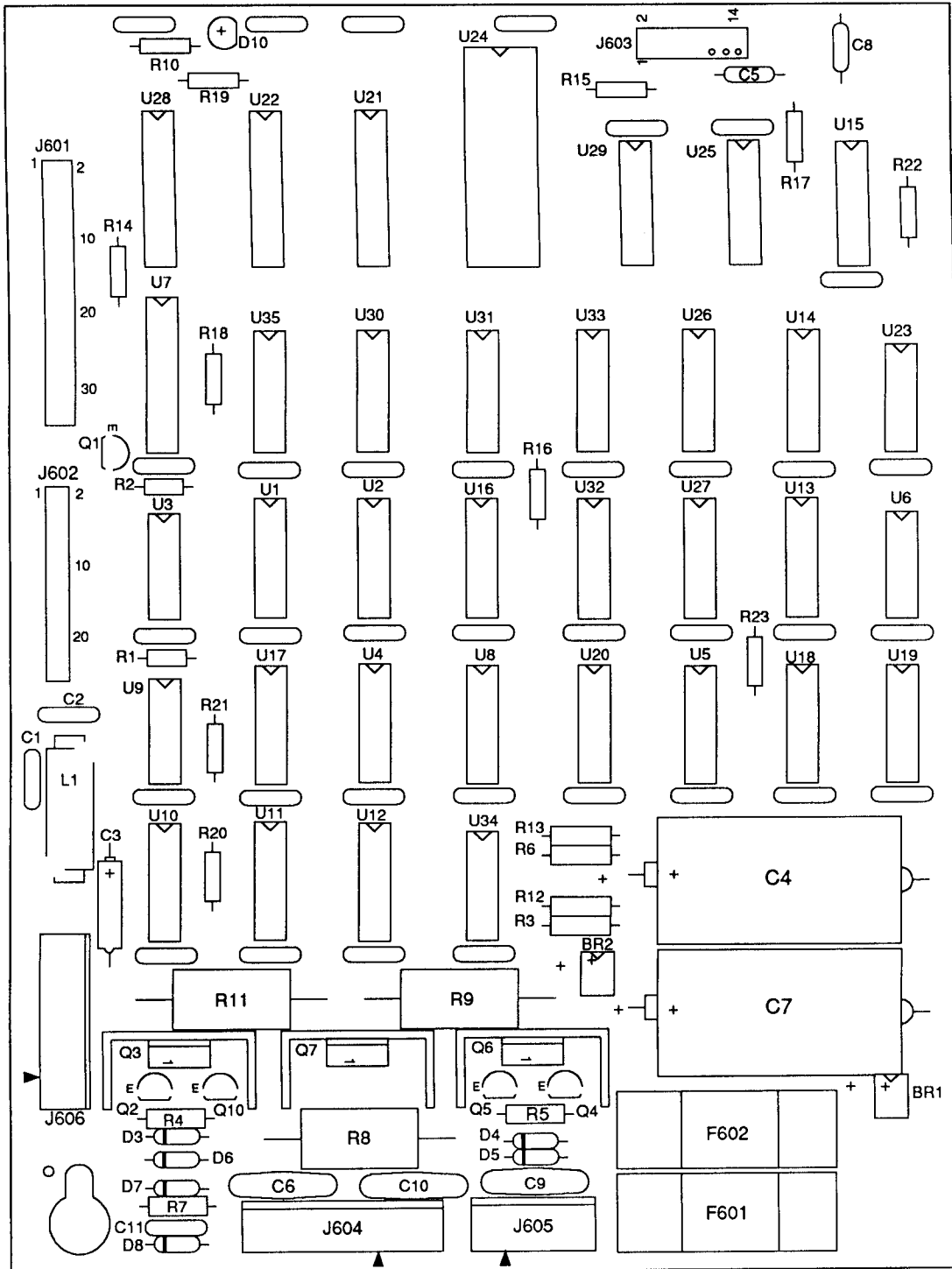| Item	Part Number	Ckt Designator	Description
41	5194-09055-00	Q9, Q11, Q13, Q15, Q17, Q19, Q21, Q23, Q25, Q27, Q29, Q31, Q33, Q35, Q37, Q39, Q41, Q43, Q45, Q47, Q49, Q51, Q53, Q55, Q57, Q59-Q62, Q71-Q74, Q99	Transistor, 2N5401 PNP
42	5191-12179-00	Q64, Q66, Q68, Q70, Q76 Q78, Q80, Q82	Transistor, TIP36C PNP
43	5192-12428-00	Q91-Q98	Transistor, TIP 107
44	5250-12634-00	Q1	Reg LM 323 5v
45	5281-09486-00	U1-U5, U18	IC, 74LS374 8 Dual D Flipflop
46	5281-09487-00	U10-U13	IC, 74LS74 Dual D flipflop
47	5281-10182-00	U9	IC, 74LS240, L/Drvr
48	5370-12272-00	U6, U15, U16	IC, LM339 Quad. Comp
49	5460-12413-00	Q2	IC, LM 7812
50	5490-10892-00	U7, U8	Opto Isolator, 4N25
51	5580-08994-01	RLY 1	Relay 4PDT 6VDC5A VS
52	5671-09019-00	LED1 - LED7	Diaplay LED Red
53	5701-09652-00	Q1	Thermal Pad TO-3
54	5705-09199-00	Q2	Heatsink, #6030B
55	A-13944	Bridge Assembly	WPC Heatsink Rectifier Assy
56	5705-12637-00	Q1	Heatsink 5054
57	5705-12638-00	Q10, Q12, Q14, Q16, Q18	Heatsink 5298B
58	5733-12060-01		Fuse Holder, F101-F116
59	5763-12405-00		Bare PCB
60	5791-10862-03	J108, J119, J136	Connector, 3-pin Header STR Sq.
61	5791-10862-04	J103, J116-J118	Connector, 4-pin Header STR Sq.
62	5791-10862-05	J112, J104-J106, J123, J124, J128, J129, J131, J132, J105	Connector, 5-pin Header STR Sq.
63	5791-10862-06	J107	Connector, 6-pin Header STR Sq.
64	5791-10862-07	J101, J109, J114	Connector, 7-pin Header STR Sq.
65	5791-10862-09	J102, J110, J122, J125, J127, J130, J137, J138	Connector, 9-pin Header STR Sq.
66	5791-10862-11	J120, J121	Connector, 11-pin Header STR Sq.
67	5791-10862-12	J115	Connector, 12-pin Header STR Sq.
68	5791-10862-13	J126	Connector, 13-pin Header STR Sq.
69	5791-12461-05	J111	Connector, 5-pin Header STR Sq.
70	5791-12461-09	J133-J135	Connector, 9-pin Header STR Sq.
71	5791-12516-00	J113	34 HEN 2x17 STR
72	5824-09248-00	TP1-TP8	Test Point #1502-1
73	5041-09163-00	C9	Capacitor, 2.2µfd TANT
74-100	Not Used		
101	16-8850-323		ID Label
102	5730-09071-00	F114	Fuse, 8A, 32v
103	5731-09128-00	F101, F102	Fuse, S-B, 2.5A., 250v
104	Not Used		
105	5731-09651-00	F106-F113	Fuse, S-B, 5A., 250v
106	Not Used		
107	5731-10356-00	F103-F105, F116	Fuse, S-B, 3A., 250v
108	5730-09797-00	F115	Fuse, S-B, 3/4A., 250v

NOTE:

For schematic refer to drawing #16-9057.
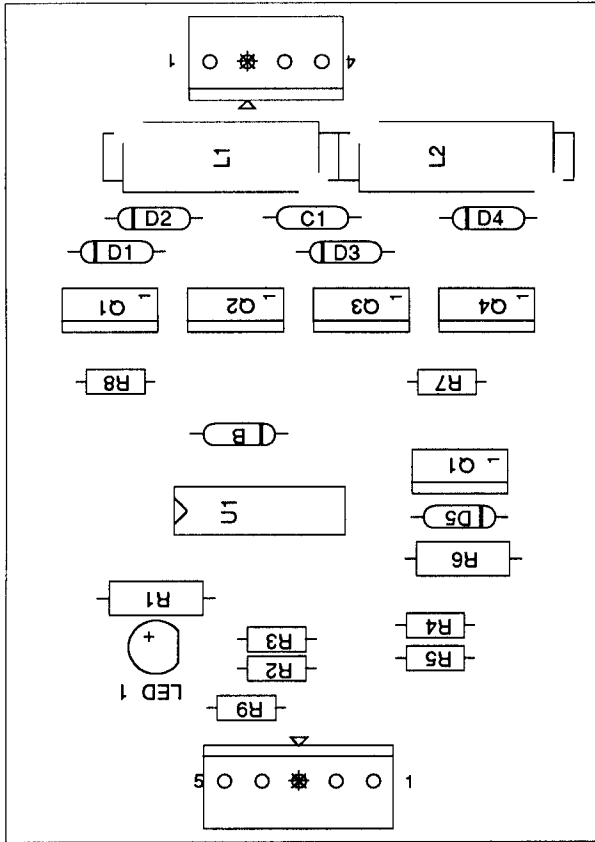
A-12697-1 WPC Power Driver Board
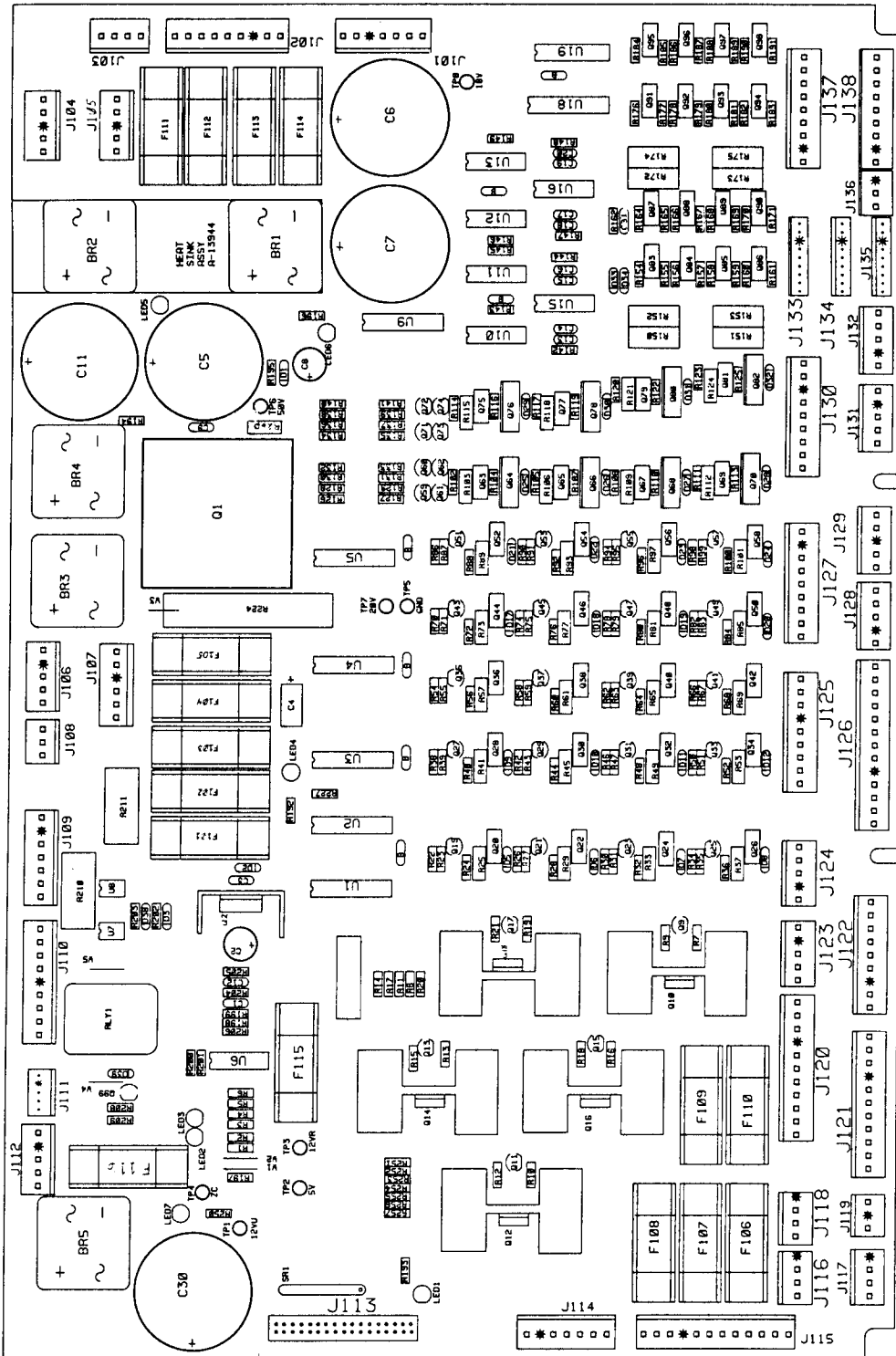
A-14039   Dot Matrix Controller Assembly

Item	Part Number	Ckt Designator	Description
1	5010-08991-00	R1	Resistor, 4.7KΩ, 1/4w, 5%
2	5010-09224-00	R10	Resistor, 270Ω, 1/4w, 5%
3	5010-09534-00	R7	Resistor, 0Ω
4	5010-12832-00	R3, R6, R12, R13	Resistor, 47KΩ, 1/2w, 5%
5	5010-12841-00	R4, R5	Resistor, 120Ω, 1/2w, 5%
6	5012-12830-00	R9	Resistor, 1.8KΩ, 5w, 5%
7	5012-12842-00	R11	Resistor, 120Ω, 5w, 5%
8	5012-12843-00	R8	Resistor, 4.7K, 5w, 5%
9	5040-08986-00	C3	Capacitor, 100µfd., 10v, (±20%)
10	5040-12324-00	C4, C7	Capacitor, 150µfd., 160v, (±50%)
11	5043-08980-00	BYPASS	Capacitor, .01µfd., 50v, (+80, -20%)
12	5043-09072-00	C6, C9, C10	Capacitor, .1µfd., 500v, (+80, -20%)
13	5043-09845-00	C1, C2, C11	Capacitor, 1KP, 50v, (±20%)
14	5070-09054-00	D7	Diode, 1N4004, 1.0A.
15	5075-12824-00	D6, D8	Zener, 1N4742A, 12v
16	5075-12823-00	D3 - D5	Zener, 1N4758A, 62v
17	5100-12833-00	BR1, BR2	Bridge, 400v, 1A.
18	5160-10269-00	Q1	Transistor, 2N3904 NPN
19	5164-09056-00	Q2, Q10	Transistor, MPSD02, NPN
20	5164-12154-00	Q3, Q7	Transistor, MJE15030 NPN
21	5194-09055-00	Q4, Q5	Transistor, MPSD52 PNP
22	5194-12155-00	Q6	Transistor, MJE15031 PNP
23	5281-09738-00	U16, U25 - U27	IC, 74LS157
24	5281-10033-00	U3	IC, 74LS30
25	5281-10043-00	U31 - U33, U35	IC, 74LS175
26	5311-10946-00	U4, U5, U17, U18, U20	IC, 74HC74
27	5311-10947-00	U9	IC, 74HC125
28	5311-10951-00	U10, U11	IC, 74HC161
29	5311-10977-00	U6	IC, 74HC04
30	5311-12817-00	U29	IC, 74HC165
31	5311-12819-00	U21	IC, 74HC688
32	5311-12820-00	U23	IC, 74HC27
33	5311-12822-00	U13 - U15	IC, 74HC193
34	5315-12009-00	U22	IC, 74HCT374
35	5315-12812-00	U1, U2, U30	IC, 74HCT138
36	5281-09308-00	U28	IC, 74HCT245
37	5315-12815-00	U8, U34	IC, 74HCT08
38	5315-12816-00	U19	IC, 74HCT32
39	5315-12821-00	U7	IC, 74HCT240
40	5340-12278-00	U24	S/RAM 2064 150NS
41	5551-09822-00	L1	IND 4.7µH, 3.0A.
42	5671-09019-00	D10	Display LED Red
43	5705-09199-00	Q3, Q6, Q7	Heatsink 6030B
44	5731-12328-00	F601, F602	Fuse, 3/8A.,SB, 250v
45	5733-12060-00		Fuse Holder (F601, F602)
46	5760-12710-00		PC Board
47	5791-10850-00	J602	Connector, 26-pin STR Sq.
48	5791-10862-05	J605	Connector, 5-pin Header Sq.
49	5791-10862-07	J606	Connector, 7-pin Header Sq.
50	5791-10862-08	J604	Connector, 8-pin Header Sq.
51	5791-12516-00	J601	34 Hen 17x2 STR
52	5791-12827-00	J603	14 Hen 7x2 STR
53	5010-09036-00	R14-R23	Resistor, 100Ω, 1/4w, 5%
54	20-9229	Q3, Q6, Q7	Thermal Compound
55	4006-01003-06	Q3, Q6, Q7	Mach. Screw, 6-32 x 3/8
56	4406-01128-00	Q3, Q6, Q7	Nut, 6-32 KEPS
57	5043-09492-00	C5, C8	Capacitor, 100P, 50v, (±10%)
58	5010-10171-00	R7	Resistor, 56Ω, 1/4w, 5%

# A-14039   Dot Matrix Controller Assembly

R10 D10 U24 J603 C8
R19 C5 R15
U28 U22 U21 U29 U25 R17 U15 R22
J601 R14 U7 R18 U35 U30 U31 U33 U26 U14 U23
Q1 R16
J602 R2 U3 U1 U2 U16 U32 U27 U13 U6
C2 R1 R23
C1 U9 R21 U17 U4 U8 U20 U5 U18 U19
L1
C3 U10 R20 U11 U12 U34 R13 R6 C4
R12 R3 C7
R11 R9 BR2
Q3 Q7 Q6 BR1
J606 Q2 R4 Q10 Q5 R5 Q4 F602
D3 D6 R8 D4 D5 F601
D7 C6 C10 C9
R7 J604 J605
C11
D8

A-14768   High Driver Assembly

Part Number	Designator	Description
5768-12868-00		High Current Driver w/Brake
5162-12635-00	Q1, Q3, Q5	Transistor TIP 102
5192-12428-00	Q2, Q4	Transistor TIP 107
5370-12272-00	U1	IC, LM339 Quad Comp.
5551-09822-00	L1, L2	Ind., 4.7µH, 3.0A.
5791-12273-04		Connector, 4-pin Header Sq.
5791-12273-05		Connector, 5-pin Header Sq.
5070-09054-00	D1 - D5	Diode, 1N4004, 1.0A.
5043-08996-00	C1	Cap., 0.1M, 50v, (+1, -20%)
5043-08980-00	B	Cap., 0.01M, 50v, (+80, -20%)
5010-09314-00	R2, R3, R7 - R9	Resistor, 1.2KΩ, 1/4w, 5%
5010-09034-00	R4, R5	Resistor, 10KΩ, 1/4w, 5%
5010-08930-00	R1, R6	Resistor, 470Ω, 1/4w, 5%
5671-09019-00	LED 1	Display LED, Red

A-14689
WPC Coin Door Interface Board
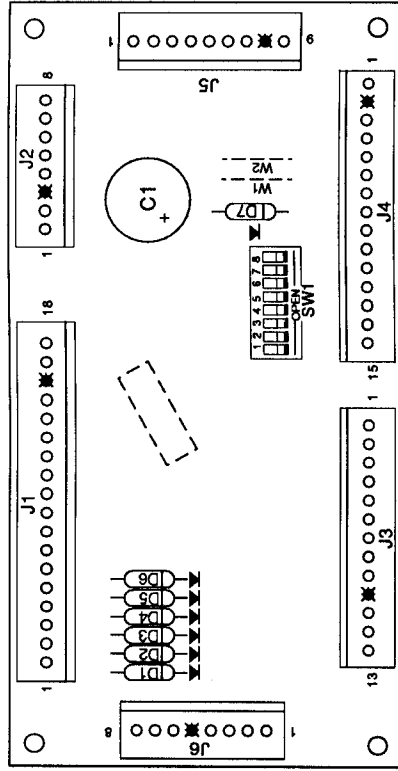
Part Number	Designator	Description
5768-12855-00		WPC Bare PC Board
5070-09054-00	D1-D7	Diode, 1N4004, 1.0A.
5791-10862-18	J1	Connector, 18-pin Header Str Sq.
5791-10862-08	J2, J6	Connector, 8-pin Header Str Sq.
5791-10862-13	J3	Connector, 13-pin Header Str Sq.
16-8850-355		I.D. Label

Notes:
1. For Belgium, France and England use A-14102-1 Coin Door Interface Board.
2. For schematic refer to drawing #16-9152.

A-14766
Motor Opto Switch Assembly
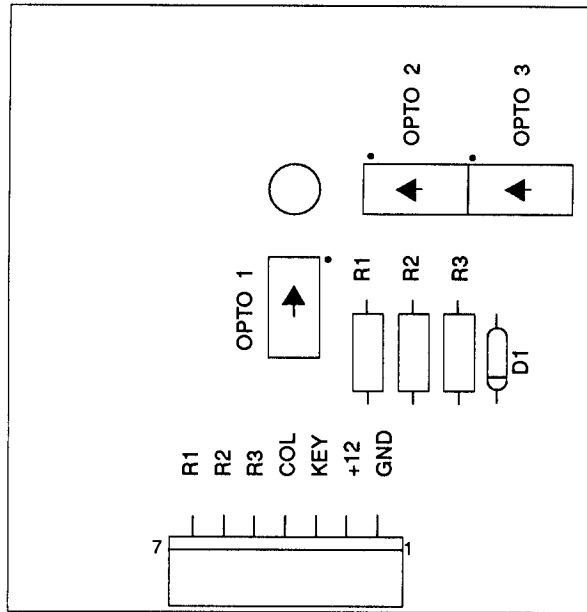
Part Number	Designator	Description
5768-12866-00		PC Board
5070-09054-00	D1	Diode, 1N4004, 1.0A.
5010-08930-00	R1 - R3	Resistor, 470Ω, 1/2w, 5%
5490-12451-00	Opto 1 - Opto 3	Opto Inter Lg. 10MA
5791-10869-07		Connector, 7-pin Header Sq.

PARTY ZONE

C-13174-R   Flipper Assembly (Right)
C-13174-L   Flipper Assembly (Left)

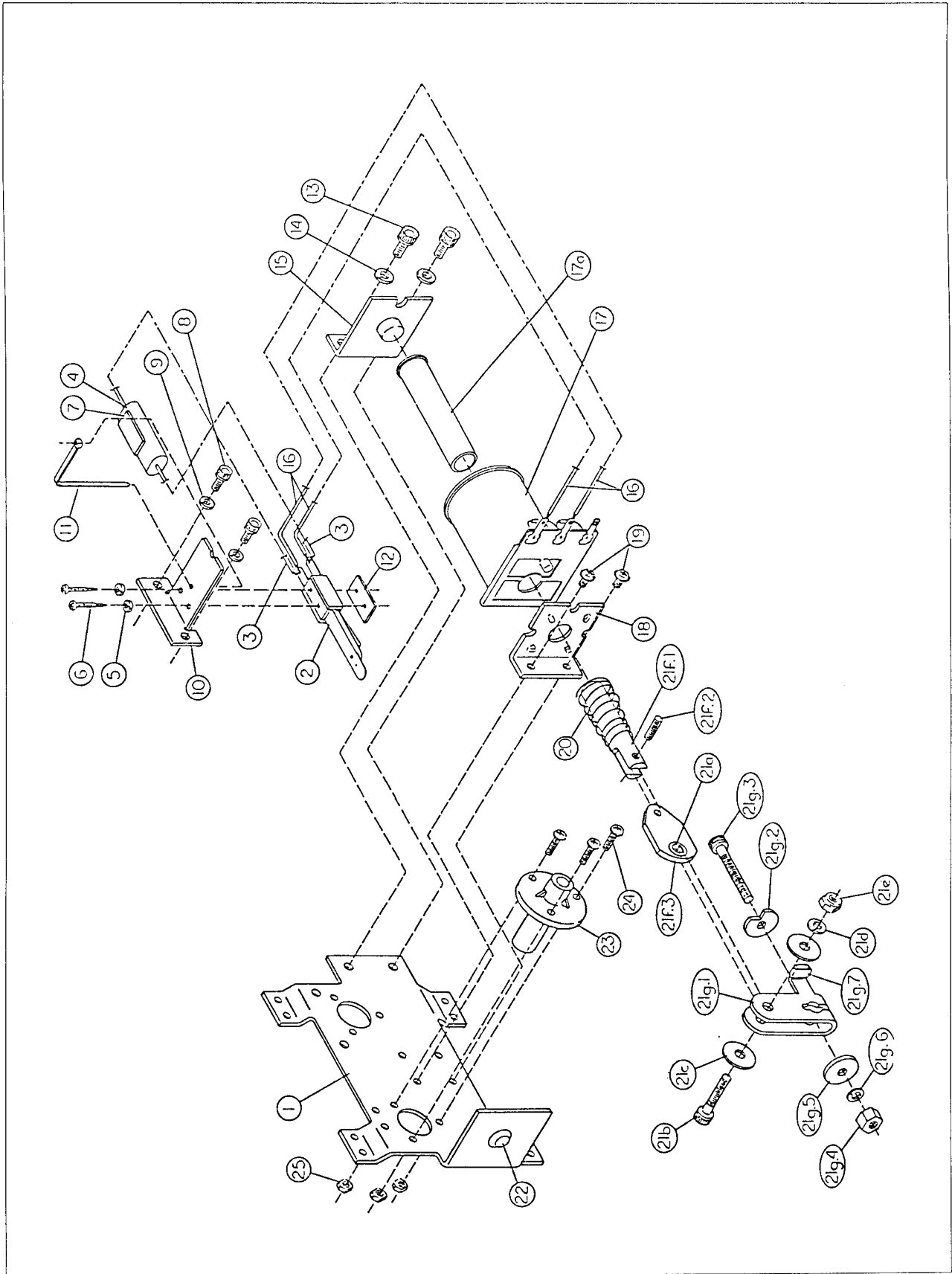| Item	Part Number	Description
1.	B-13104-R	Flipper Base Assy, Right
*	B-13104-L	Flipper Base Assy, Left
2.	03-7811	End of Stroke (EOS) Sw.
3.	RM-21-06	Sleeve, Vinyl (Cap. leads)
4.	5045-12098-00	Capacitor, 2.2 µFd, 250V, 20%
5.	4701-00002-00	Lockwasher, #6 Split
6.	4105-01019-10	Sh. Metal Screw,#5 x 5/8
7.	23-6622	Tape, Double-sided
8.	4008-01079-05	Cap Screw, 8-32 x 5/16
9.	4701-00003-00	Lockwasher, #8 Split
10.	01-9375	Switch Mounting Bracket
11.	03-7520-2	Ty-Wrap, Nylon
12.	20-6516	Speednut, Tinnerman
13.	4010-01066-06	Cap Screw, 10-32 x 3/8, SH
14.	4701-00004-00	Lockwasher, #10 Split
15.	A-12111	Flipper Stop Assembly
16.	HW-30018-6	Wire, 18 AWG, Blue
17.	FL-11630	Flipper Coil (Red)
18.	01-7695	Solenoid Bracket
19.	4006-01017-04	Mach. Screw, 6-32 x 1/4
20.	10-376	Coil Plunger Spring
21.	B-10655-R	Crank Link Assembly, Right
*	B-10655-L	Crank Link Assembly, Left
a)	02-4179	Link Spacer Bushing
b)	4010-01086-14	Cap Screw, 10-32 x 7/8, SH
c)	4700-00023-00	Flatwasher, 5/8 x 13/64 x 16ga.
d)	4701-00004-00	Lockwasher, #10 Split
e)	4410-01132-00	Nut, 10-32 ESNA
f)	A-10656	Flipper Link Assembly
1.)	02-4219	Coil Plunger
2.)	20-9370-1	Spring Pin, 5/32 dia. x 7/16
3.)	03-8050-1	Flipper Link
g)	B-10657-R	Flipper Crank Assy, R.
*	B-10657-L	Flipper Crank Assembly
1.)	01-8073-R	Flipper Crank, Right
*	01-8073-L	Flipper Crank, Left
2.)	17-1037	Crank Washer
3.)	4010-01066-20	Cap Screw,10-32 x 1-1/4
4.)	4410-01127-00	Nut, 10-32 Hex Head
5.)	4700-00107-00	Flatwasher, 5/8 x 13/64 x 12ga.
6.)	4701-00004-00	Lockwasher, #10 Split
7.)	RM-23-06	Tubing, H. S. 1/4 DWP
22.	23-6577	Bumper Plug
23.	03-7568	Flipper Bushing
24.	4006-01005-06	Mach. Screw, 6-32 x 3/8
25.	4406-01117-00	Nut, 6-32 Hex.

Flipper Assembly Notes...

1. Each Flipper Assembly on the Lower Playfield in mounted beneath the playfield, in conjunction with the plastic Flipper Paddle and Shaft (20-9592-7) and Flipper Rubber (23-6519-6) on the upper side of the playfield.
2. The tip of the EOS Switch must travel 0.150 (+ .010, - .000) inch, before the contacts fully open, with the flipper in the actuated position. The EOS Switch contacts must have a gap of 0.062 (± .015) inch. Adjustment of the EOS Switch must be made at a minimum distance of 0.25 inch from the switch body.
3. All moving elements of the assembly must operate freely, with no evidence of binding.
4. The large end of the Coil Plunger Spring (item 20) must fit within the four lugs of the Solenoid Bracket.
5. For coil replacement, remove the Solenoid Bracket (Item 18) to prevent screw damage.
6. Use Loctite™ 242 when reattaching screws to the Flipper Stop Assembly, the Solenoid Bracket, and the Flipper Bushing.
7. When replacing their Bumper Plug (item 22) to restore proper flipper operation, readjust the flipper paddle and shaft position.
8. Solid-color blue wire connects to the banded end of each diode, mounted on the connector end of the Flipper Coil (item 17). Trace-color wire connects to the unbanded end of the diode.

Note:
     ＊= Items for Left Flipper Assembly Only.

A-12842-4   Jumper Bumper Assembly

Item	Part Number	Description
1	AE-26-1200	Coil Assembly
2	B-12749	Core Plug & Bracket Assy.
3	03-8324-5	Thunder Bumper Base, Wht.
4	01-9166	Switch Plate
5	01-9321	Switch Plate
6	01-9319	Plunger Bracket
7	01-9117	Mounting Bracket
8	02-3406-1	Plunger Coil
9	4705-00002-00	Spring Washer, 1/2"
10	01-9116	Bracket Plate
11	01-9320	Plate, Bakelite
12	10-411	Compression Spring
13	A-14271	Socket Assembly
a)	24-8768	Bulb #555 (6.3v., 0.25A.)
b)	24-8767	Twisted Lamp Socket
14	Not Used	
15	Not Used	
16	03-8292-7	Body, Black
17	A-12854	Flange & Stud Assembly
18	03-6035-7	Wafer, White
19	10-326	Compression Spring
20	4408-01119-00	Nut, 8-32 ESN
21	4406-01119-00	Nut, 6-32 ESN
22	B-13267	Switch & Diode Assembly
a)	SW-1A-187	Switch
b)	5070-09054-00	Diode, 1N4004, 1.0A.
23	4008-01070-14	Mach. Screw, 8-32 x 7/8
24	4005-01016-18B	Mach. Screw, 5-40 x 1-1/8
25	4008-01015-04	TT, 8-32 x 1/4
26	4008-01015-06	TT, 8-32 x 3/8
27	4108-01001-10	Sh. Metal Screw, #8 x 5/8
* 28	03-7066	Coil Tubing
29	03-8291-16	Thumper Bumper Cap, Yellow
30	4004-01003-08	Mach. Screw, 4-40 x 1/2
31	03-6047-16	Spacer, 1-1/16"

* Not Shown.

Jumper Bumper Assembly
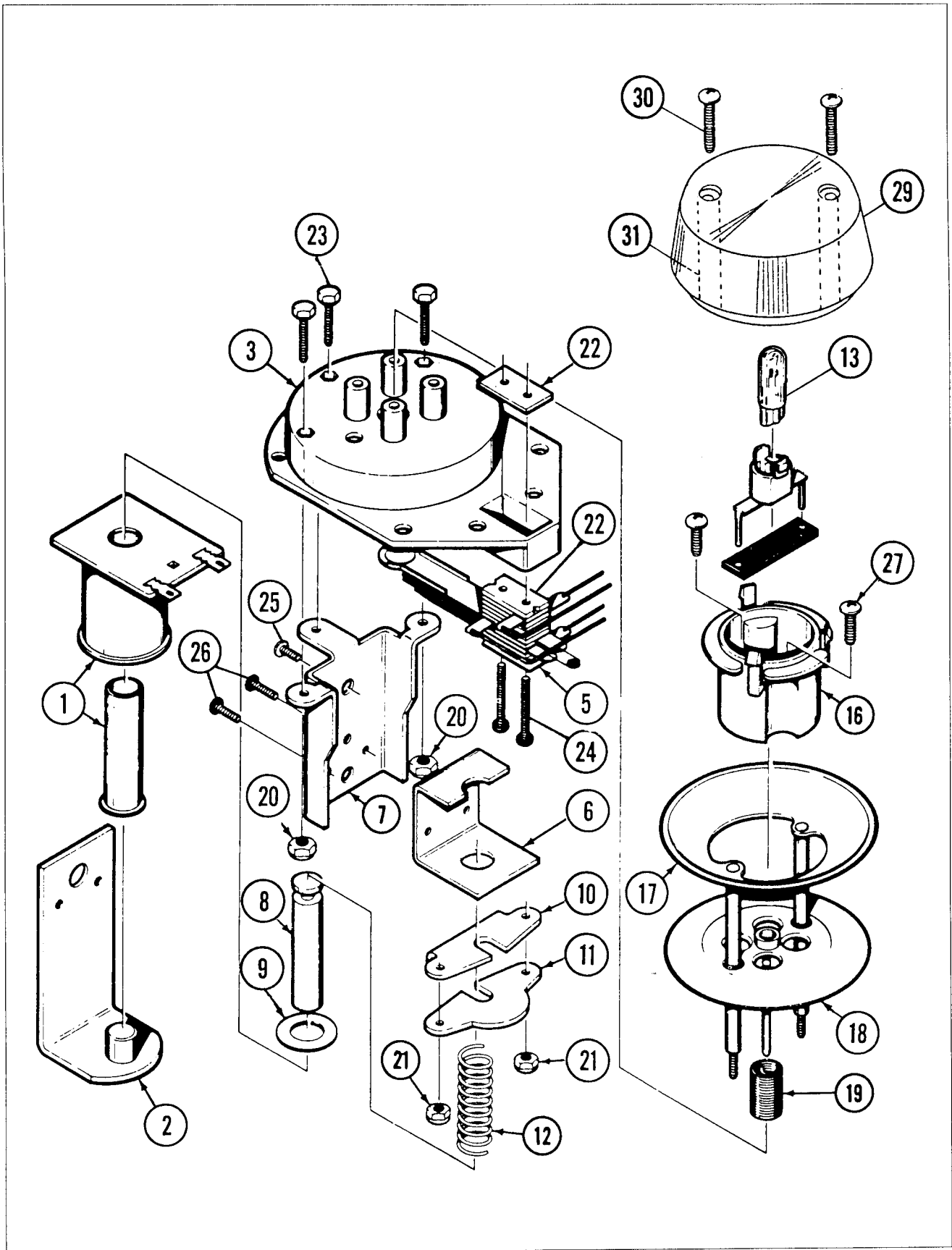
C-9638   Ball Shooter Lane Feeder
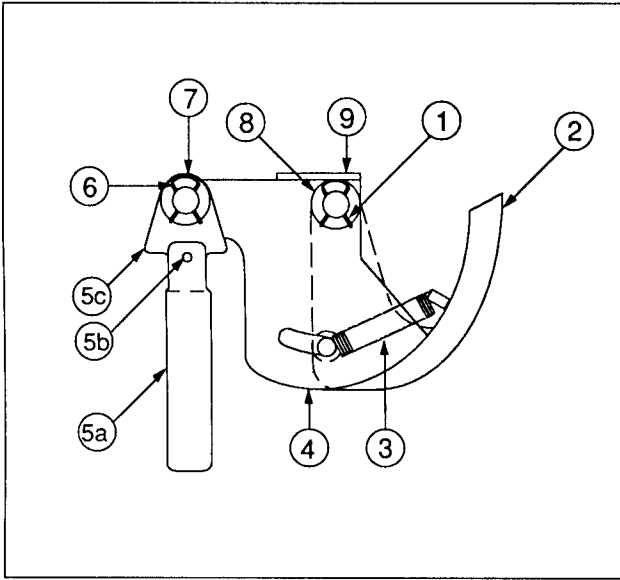
Item	Part Number	Description
1.	12-6227	Hair Pin Clip
2.	A-8247	Eject Cam Assembly
3.	10-362	Ejector Spring (Plain)
4.	A-6949-L	Spring Plate Assembly
5.	A-8050-1	Coil Plunger Assy, 2-1/8"
a)	02-3407-2	Coil Plunger, 2-1/8"
b)	20-8716-5	Roll Pin, 1/8 x 7/16
c)	03-8085	Armature Link
6.	12-6227	Hair Pin Clip
7.	4700-00030-00	Flatwasher, 17/64 x1/2 x 15ga.
8.	4700-00103-00	Flatwasher, 17/64 x1/2 x 28ga.
9.	A-8268	Mounting Bracket Assembly

Associated Parts

B-9362-L-2		Coil & Bracket Assembly
	B-7572-1	Bracket & Stop Assembly
	01-8-508-S	Coil Retaining Bracket
	4006-01017-06	Mach. Screw, 6-32 x 3/8
	4406-01119-00	Nut, 6-32 ESN
AE-26-1200		Coil Assembly
03-7066		Coil Tubing

A-8039-3   Outhole Kicker Assembly
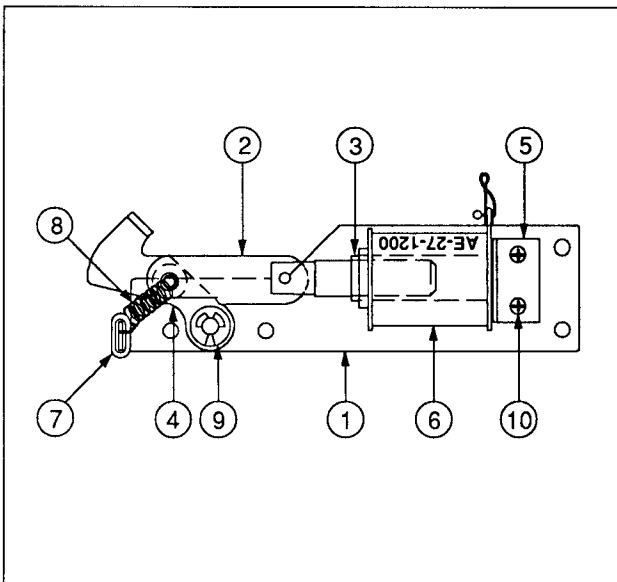
Item	Part Number	Description
1.	A-6378	Mounting Plate Assembly
2.	A-8335	Coil Plunger Assembly
a)	02-2364	Coil Plunger
b)	20-8716-5	Roll Pin, 1/8 x 7/16
c)	01-4251	Ball Return Link
3.	03-7066	Coil Tubing
4.	A-6889	Kicker Lever Assembly
5.	A-8038	Coil Stop Assembly
6.	AE-27-1200	Coil Assembly
7.	03-7176-1	Striker Ring
8.	10-101-4	Spring-Reset
9.	20-8712-25	"E" Ring, 1/4" Shaft
10.	4006-01003-03	Mach. Screw, 6-32 x 3/16

B-12665   Kicker Arm (Slingshot) Assembly
w/Coil & Bracket Assemblies (B-112003-R-1 & B-11203-L-1)

Playfield shown
for reference
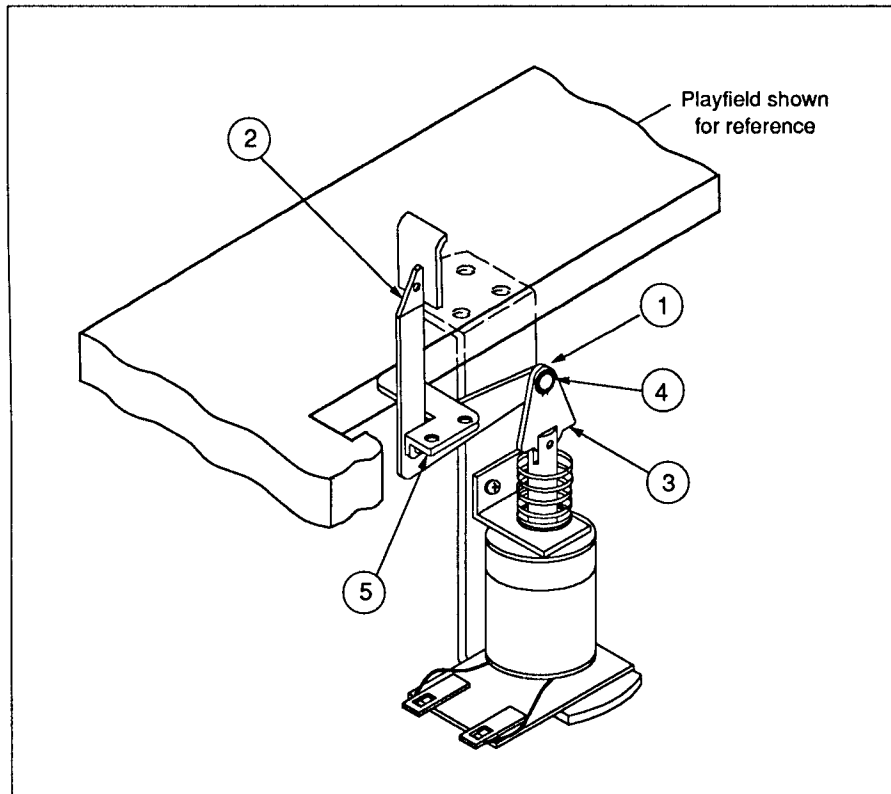
Item	Part Number	Description
1.	12-6227	Clip, Hairpin
2.	A-12664	Kicker Crank Assembly
3.	A-5103	Coil Plunger Assembly
a)	02-2364	Coil Plunger
b)	20-8716-5	Roll Pin, 1/8 x 7/16
c)	03-8085	Armature Link
4.	4700-00030-00	Flatwasher, 17/64 x 1/2 x 15ga.
5.	A-5653	Mounting Bracket Assembly

Associated Parts for Left Kicker

B-11203-R-1	Coil & Bracket Assembly
B-7572-1	Bracket & Stop Assembly
01-8-508-S	Coil Retaining Bracket
4006-01017-06	Mach. Screw, 6-32 x 3/8
4406-01119-00	Nut, 6-32 ESN
AE-26-1500	Coil Assembly
03-7066	Coil Tubing

Associated Parts for Right Kicker

B-11203-L-1	Coil & Bracket Assembly
B-7572-1	Bracket & Stop Assembly
01-8-508-S	Coil Retaining Bracket
4006-01017-06	Mach. Screw, 6-32 x 3/8
4406-01119-00	Nut, 6-32 ESN
AE-26-1500	Coil Assembly
03-7066	Coil Tubing

PARTY ZONE

D-11335-4
Ball Popper Assembly
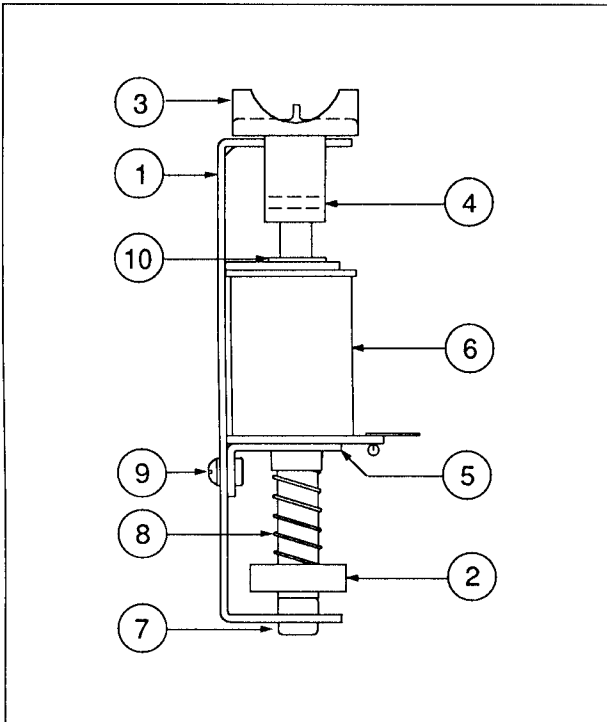
Item	Part Number	Description
1.	B-11631	Bracket Assembly
2.	A-11336	Armature Assembly
3.	03-8053	Ball Popper Cap
4.	20-9314-7	Dowel Pin, 3/32 x 1/2"
5.	01-9794	Mounting Bracket
6.	AE-26-1200	Coil Assembly
7.	23-6420	Rubber Grommet
8.	10-135	Spring
9.	4008-01017-04	Mach. Screw, #8-32 x 5/16
10.	03-7067	Coil Tubing

B-10686-1
Knocker Assembly
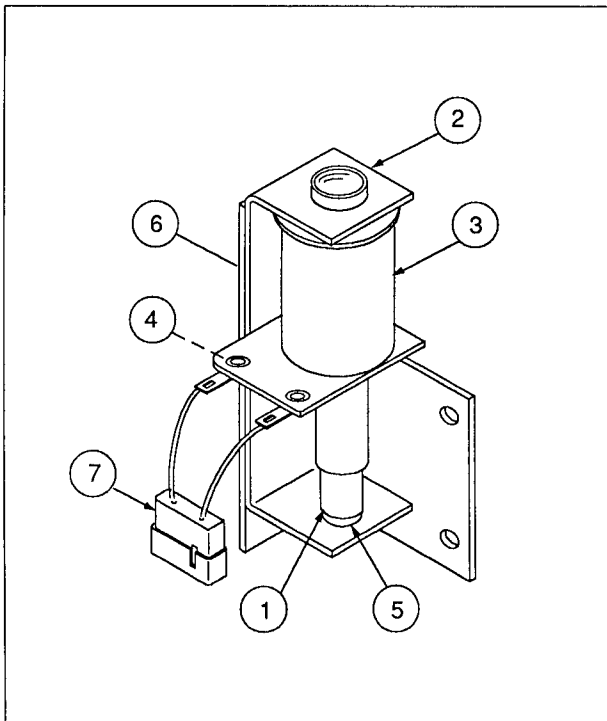
Item	Part Number	Description
1.	A-5387	Coil Plunger Assembly
a)	02-2653	Coil Plunger
b)	03-6013	Bell Arm Ext.
2.	B-7409-2	Mtg. Bracket Assembly
3.	AE-23-800	Coil Sub-Assembly
4.	01-8-508-T	Coil Retaining Bracket
5.	23-6420	Rubber Grommet
6.	4008-01017-06	Mach. Screw, 8/32 x 3/8
7.	H-11835	Knocker Cable
8.	03-7067-5	Coil Tubing

B-9361-R-1   Ball Eject Assembly
w/Coil & Bracket Assembly: B-9362-L-2
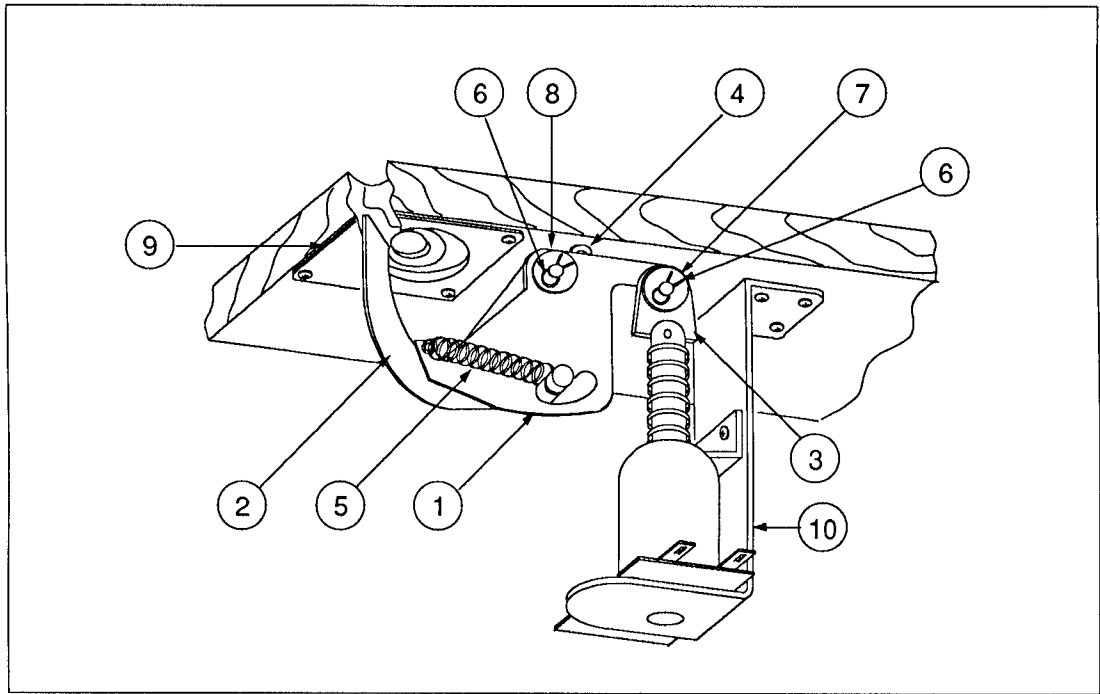
Item	Part Number	Description
1.	A-6949-R	Spring Plate
2.	A-7471-R	Eject Cam Assembly
3.	A-8050-1	Plunger Assy., 2-1/8"
a)	02-3407-2	Plunger Coil
b)	03-8085	Armature Link
c)	20-8716-5	Roll Pin, 1/8 x 7/16"
4.	A-8268	Mounting Bracket Assy.
5.	10-362	Eject Spring
6.	12-6227	Hairpin Clip
7.	4700-00030-00	FW, 17/64 x 1/2 x 15ga.
8.	4700-00103-00	FW, 17/64 x 1/2 x 28ga.

Associated Parts:

Item	Part Number	Description
9.	03-7351-1-9	Eject Shield
10.	B-9362-L-2	Coil & Bracket Assy.
a)	AE-26-1200	Coil Assembly
b)	B-7572-1	Bracket & Stop Assy.
c)	01-8-508-S	Coil Retainer Bracket
d)	03-7066	Coil Tubing
e)	4006-01017-06	Mach. Screw, 6-32 x 3/8
f)	4406-01119-00	Nut, 6-32 ESN

Standup Target Assemblies

A-14793-   B-14604-   B-12912-
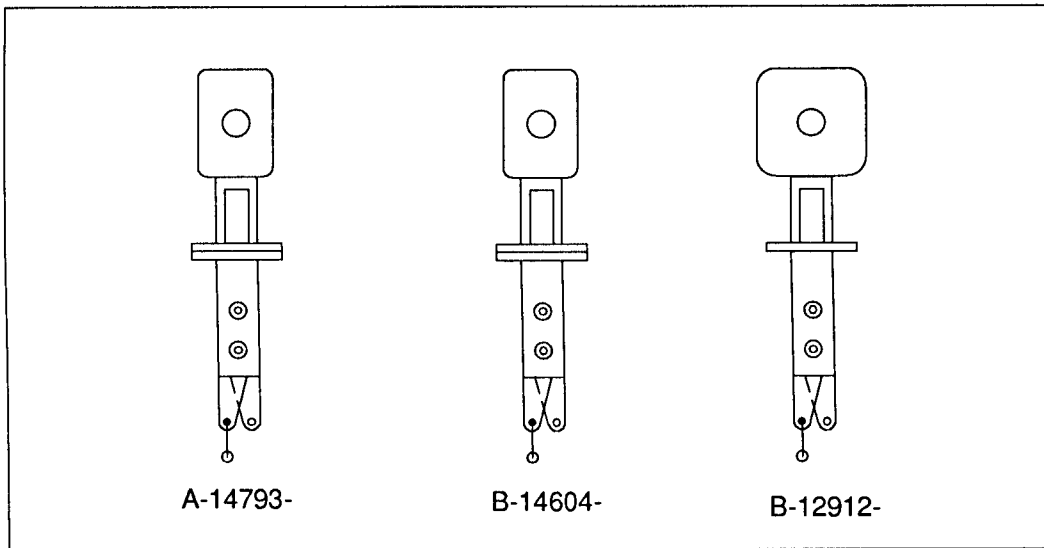
B-12912-19   Standup Target

Part Number	Description
SW-1A-184-19	Standup Tgt. Sw.
03-8304-19	Sq. Target, Yellow
5070-09054-00	Diode, 1N4004

B-12912-20   Standup Target

Part Number	Description
SW-1A-184-20	Standup Tgt. Sw.
03-8304-20	Sq. Target, Orange
5070-09054-00	Diode, 1N4004

B-12912-21   Standup Target

Part Number	Description
SW-1A-184-21	Standup Tgt. Sw.
03-8304-21	Sq. Target, Green
5070-09054-00	Diode, 1N4004

B-12912-22   Standup Target

Part Number	Description
SW-1A-184-22	Standup Tgt. Sw.
03-8304-22	Sq. Target, Blue
5070-09054-00	Diode, 1N4004

B-12912-24   Standup Target

Part Number	Description
SW-1A-184-24	Standup Tgt. Sw.
03-8304-24	Sq. Target, White
5070-09054-00	Diode, 1N4004

A-14604-20   Standup Target

Part Number	Description
03-8563-20	Skirted Target, Orange
5070-09054-00	Diode, 1N4004

A-14793 -19   Standup Target

Part Number	Description
03-8563-19	Skirted Target, Yellow
5070-09054-00	Diode, 1N4004

A-14760   Cosmic Cottage Assembly
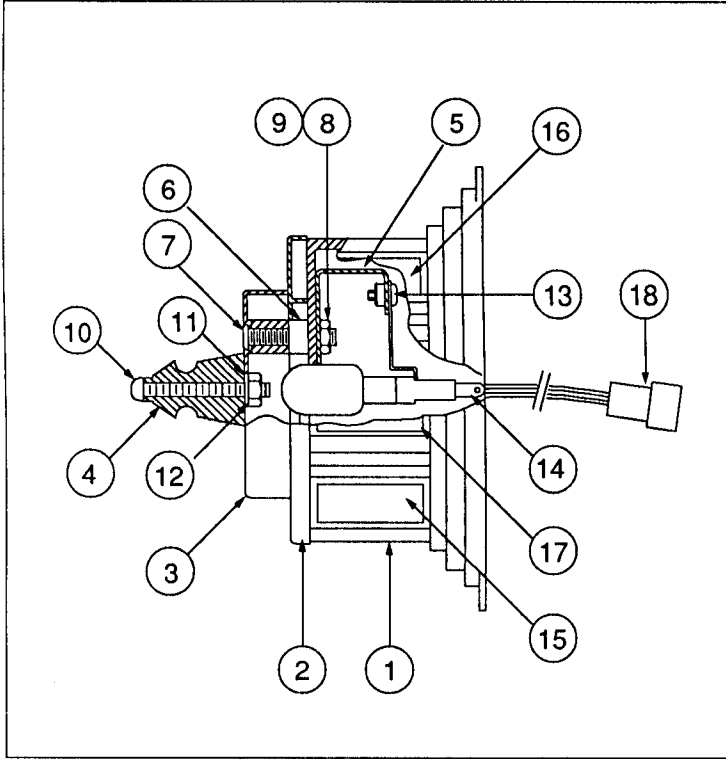
Item	Part Number	Description
1.	03-8596	Cosmic Cottage
2.	03-8276-18	Collar - Cap T/Bumper
3.	17-1113	Rework - Cap T/Bumper
4.	03-8319-18	Bumper Post #8, Violet
5.	A-14916	Lamp Bracket Assy.
6.	03-6047-18	Tubing, 3/16"
7.	4004-01005-14	MS, 4-40 x 7/8"
8.	4700-00002-00	FW, 1/8 x 9/2 x 21ga.
9.	4404-01117-00	Hex Nut #4-40
10.	4008-01005-22	MS, 8-32 x 1-3/8
11.	4700-00016-00	FW, 3/16 x 7/16 x 17ga.
12.	4408-01128-00	Nut #8-32 KEPS
13.	4006-01003-03	Mech., 6-32 x 3/16
14.	A-14495	Bulb & Socket Assy.
a)	24-8802	Bulb #906 (13v, .69A)
15.	31-2-20004-3	Decal
16.	31-2-20004-2	Decal
17.	31-2-20004-1	Decal
18.	H-14952	Flashlamp Cable

Ball Trough Switches
(Viewed from underside of playfield to show locations)

B-8925   Ball Trough Switch Plate Assembly

PARTY ZONE
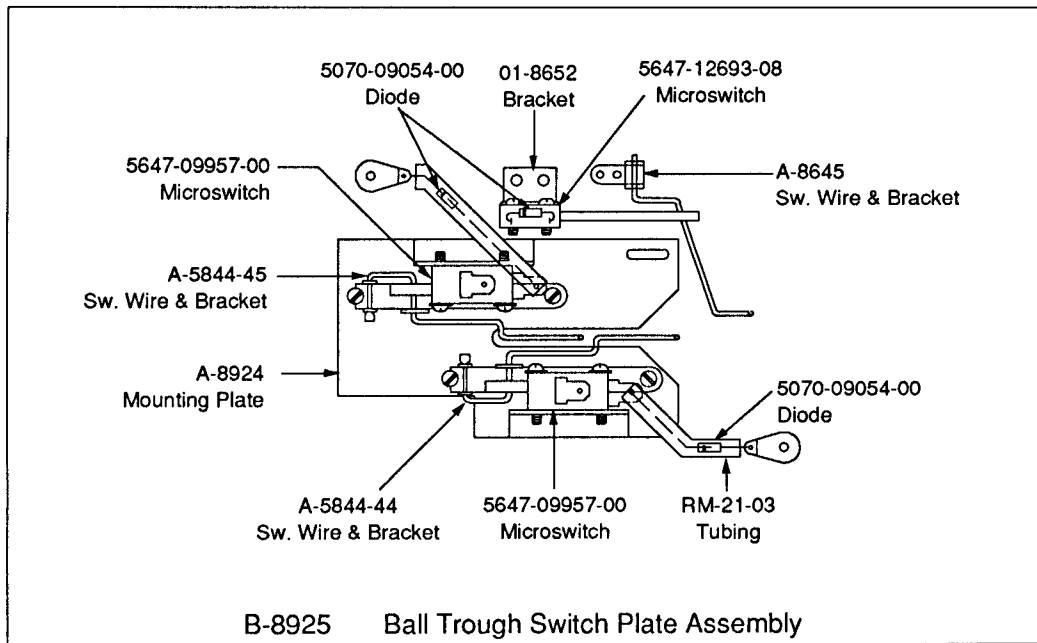
A-14909   Back Panel Assembly

Item	Part Number	Description
1.	A-13100-1	Ball Gate Assembly
2.	A-14859	Light Assembly
a)	C-13337	PCB & Light Assembly
* 3.	A-14863	Ball Popper Assembly (See p. 2.28)
4.	A-14910	Back Panel Sub-Assembly
5.	12-6984	Wire Ramp
6.	4106-01033-08	Sh. Metal Screw, #6 x 1/2"
7.	4006-01003-12	Mach. Screw, #6-32 x 3/4"
8.	4008-01016-10	Mach. Screw, #8-32 x 5/8"
9.	4008-01005-06	Mach. Screw, #8-32 x 3/8"
10.	4700-00016-00	Flatwasher, 3/16 x 7/16 x 17ga.
11.	4701-00003-00	Lockwasher #8 Split
12.	01-9170	Gusset Bracket
13.	4008-01015-12B	Mach. Screw, #8-32 x 3/4
* 14.	A-14983	Mandible Mech. Assembly (See p. 2.29)
15.	4106-01114-08	TCS #6 x 1/2
16.	A-14761	Bracket & Lamp PC Board
a)	A-14767	3-Lamp Board
b)	A-14802	Head Bracket Assy.
c)	07-6688-17N	Rivet, 5/32 x 1/8"
17.	03-8597	Robotic Comic Head Assembly
18.	4006-01003-06	Mach. Screw, #6-32 x 3/8"
19.	24-8768	Bulb #555 (6.3v, .25A)
20.	03-8063-6	Sleeve, Yellow
21.	03-8063-4	Sleeve, Red
22.	H-14953	Solenoid Cable
23.	H-14956	Switch Cable

* Refer to unit's individual parts listing.

A-14909   Back Panel Assembly

PARTY ZONE
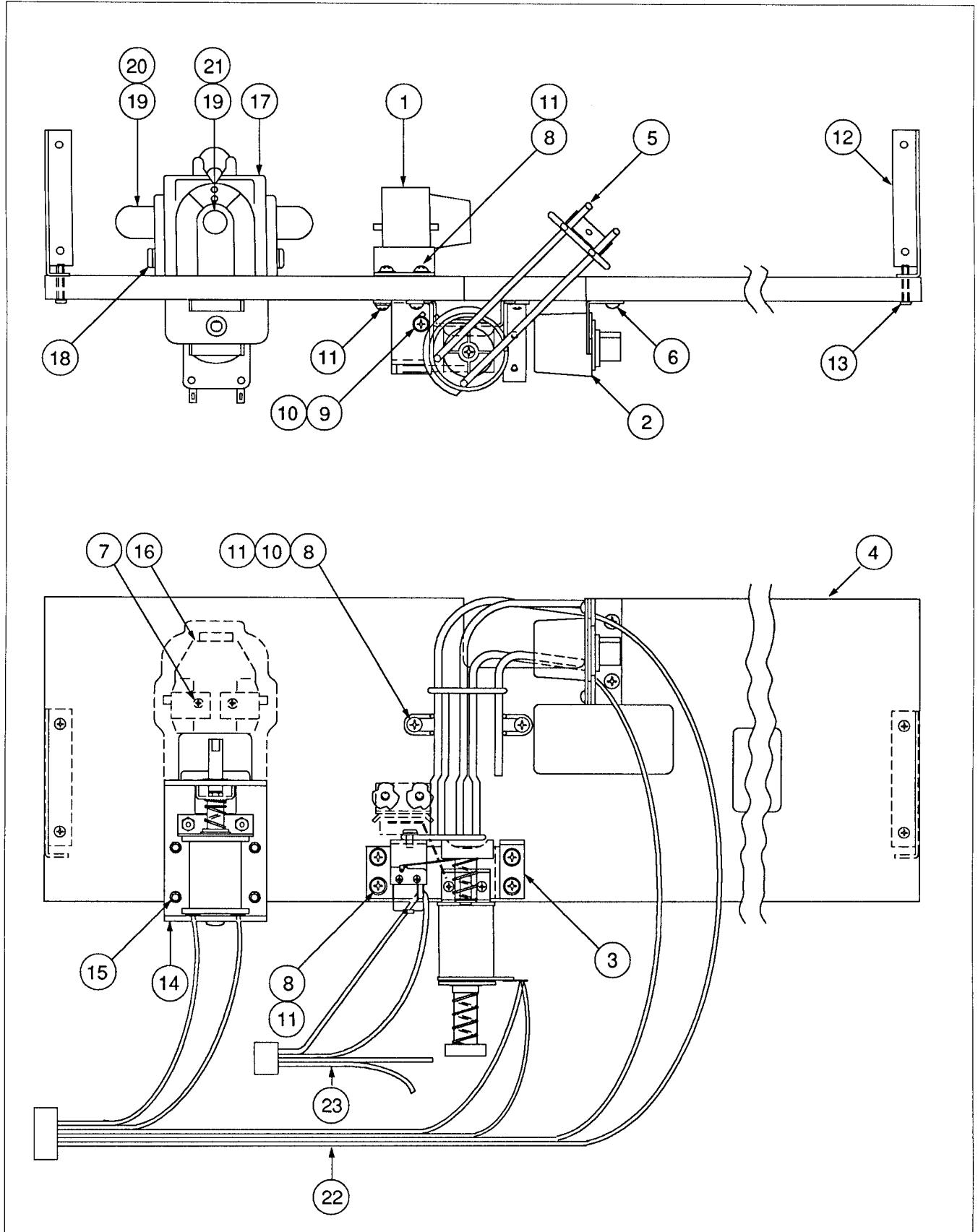
A-14863   Ball Popper Assembly
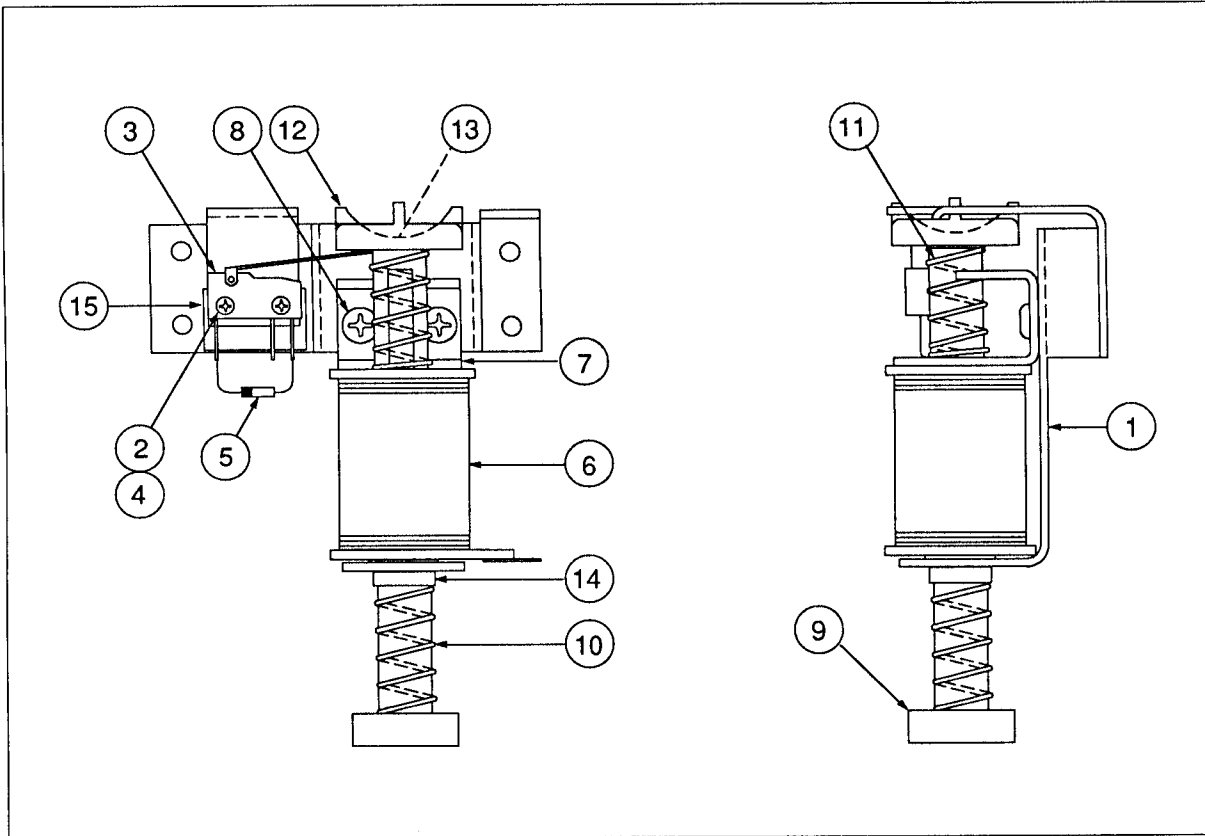
Item	Part Number	Description
1.	01-10339	Bracket
2.	01-8240	Nut Plate #2-56
3.	5647-12693-24	Microswitch
4.	4002-01105-07	Mach. Screw, #2-56 x 7/16
5.	5070-09054-00	Diode, 1N4001
6.	AE-26-1200	Coil Assembly
7.	01-10420	Coil Retainer Bracket
8.	4008-01015-06	Mach. Screw, #8-32 x 3/8
9.	A-14585	Armature & Ext. Assembly
a)	03-8560	Shaft
b)	20-8716-20	Roll Pin, 1/8 x 3/8"
10.	10-135	Plunger Spring
11.	10-428	Spring
12.	03-8561	Ball Popper Cup
13.	4106-01152-06	Mach. Screw, #6 x 3/8
14.	03-7067	Coil Tubing
15.	01-8600	Switch Insulator

A-14983   Mandible Mechanism Assembly
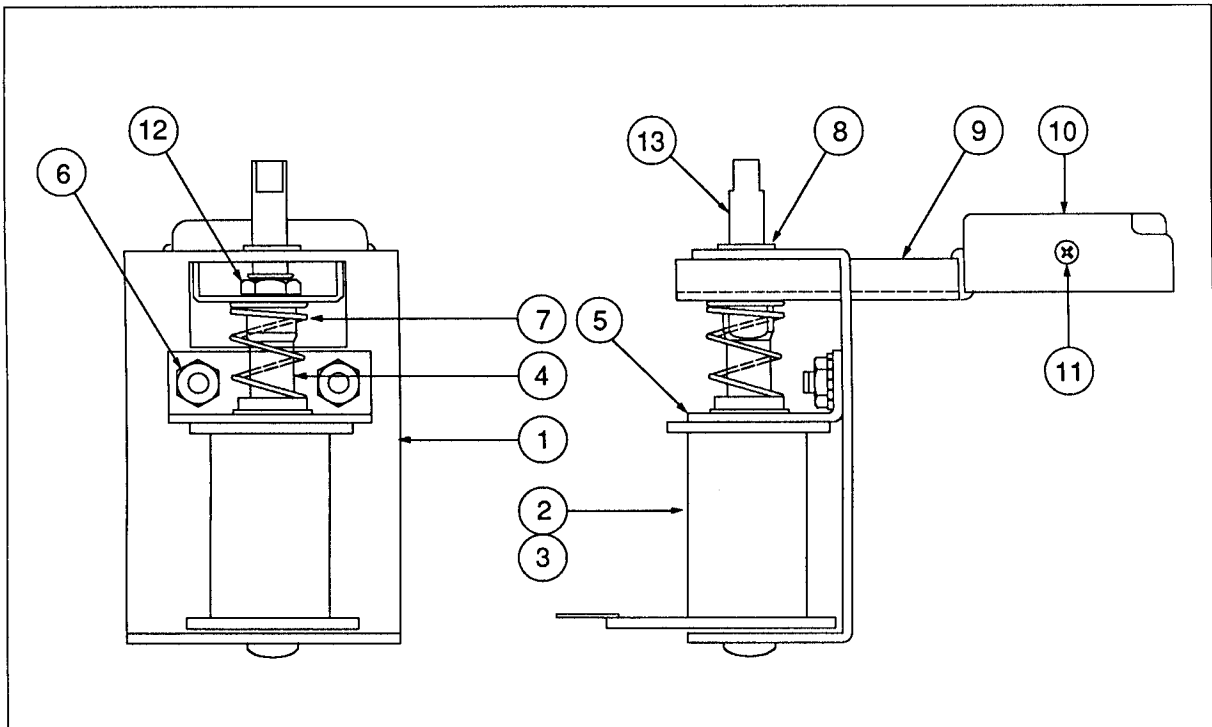
Item	Part Number	Description
1.	A-14982	Mandible Bracket Assembly
2.	03-7066	Coil Tubing
3.	AE-30-2000	Coil Assembly
4.	02-4302	Shaft
5.	01-9350	Coil Support Bracket
6.	4406-01128-00	Nut, 6-32 KEPS
7.	10-428	Spring
8.	20-8790	Nyliner, 1/4"
9.	01-10407	Bracket
10.	03-8599	Robotic Comic Jaw
11.	4006-01003-06	Sh. Metal Screw, 6-32 x 3/8
12.	4410-01129-00	Nut, 10-32 KEPS
13.	02-4571	Pin Guide

A-14756   Captain B.Zarr Assembly
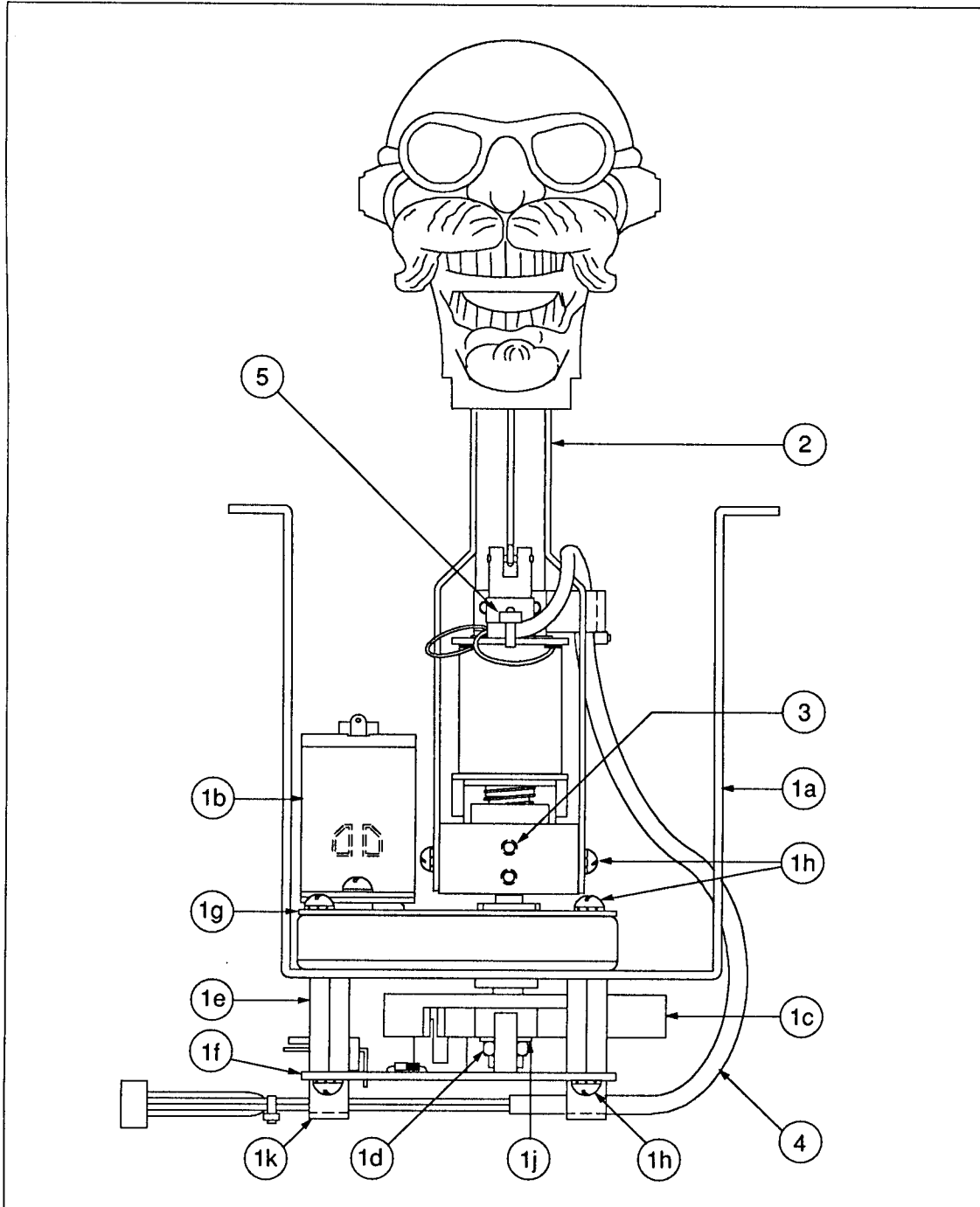
Item	Part Number	Description	Item	Part Number	Description
1.	A-14759	Bracket & Motor Assy.	h)	4010-01006-04	Mach. Screw, 10-32 x 1/4
a)	01-10275	Motor Mounting Bracket	j)	4700-00011-00	Flatwasher, 11/64 x 7/16
b)	14-7968	Motor, 12V	k)	03-7655-4	Harness Clip
c)	03-8580	Opto Switch Actuator	2.	A-15008	Head Mech. Assy. (See p. 2.31)
d)	4408-01119-00	Nut, 8-32 ESN	3.	4008-01076-06	Set Screw, #-32 x 3/8
e)	02-4564	Standoff, #10-32	4.	H-14955	Motor Cable
f)	A-14766	Motor Opto Switch	5.	03-7520-2	Ty-Wrap
g)	01-10276	Stop Plate			

A-15008   Head Mechanism Assembly
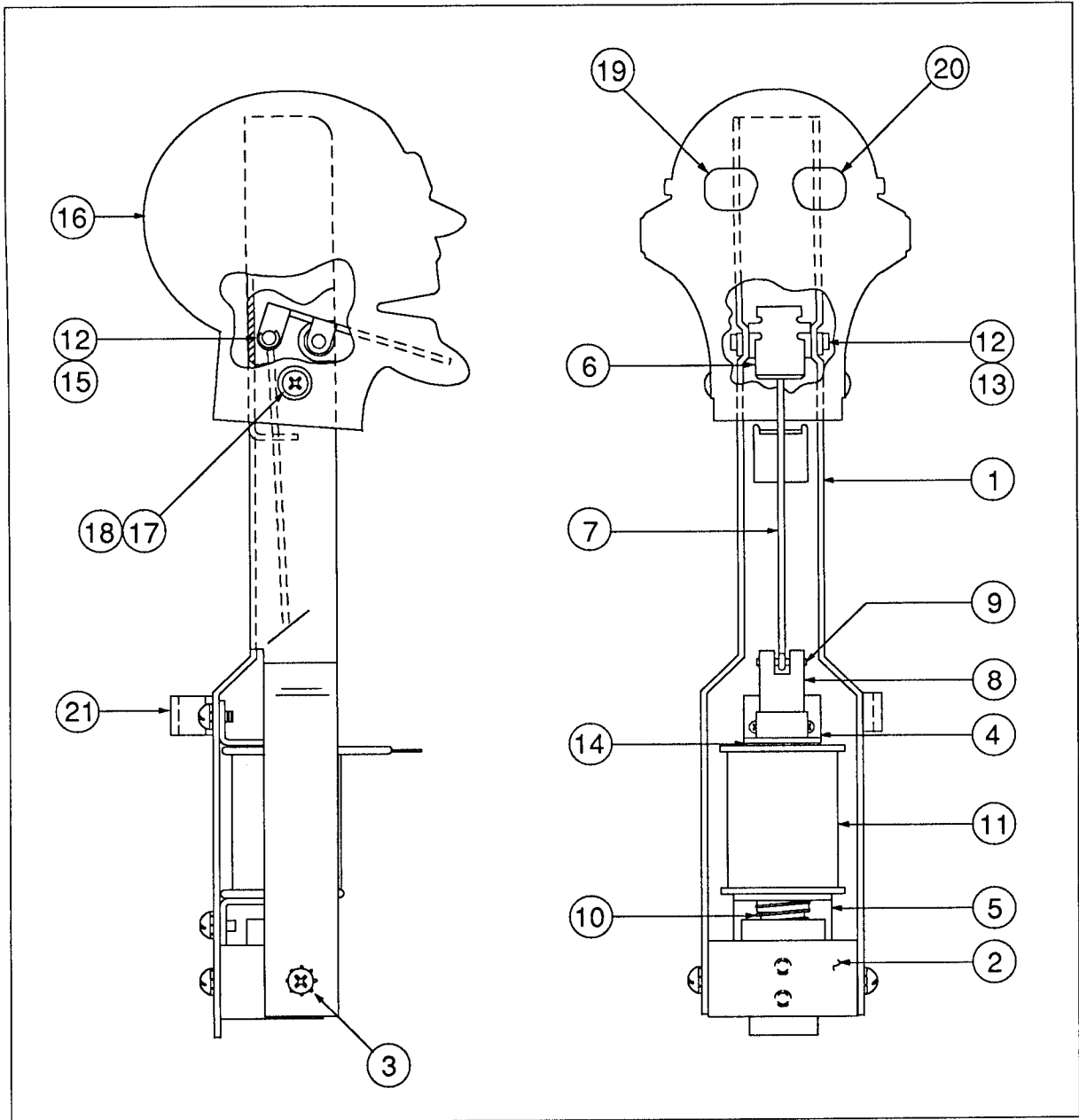
Item	Part Number	Description	Item	Part Number	Description
1.	01-10270	Head Mech. Bracket	12.	20-8712-14	"E"-Ring
2.	02-4557	Base Block	13.	02-4556	Pivot Pin
3.	4008-01017-04	Mach. Screw, 8-32 x 1/4 Lg.	14.	03-7067	Tubing Coil
4.	01-10272	Coil Bracket, Upper	15.	02-4556-1	Pivot Pin
5.	01-9794	Coil Bracket, Lower	16.	03-8600	Captain B.Zarr
6.	01-10274	Jaw Actuator	17.	02-4573	Spacer
7.	12-6987-1	Jaw Actuator Rod	18.	4006-01027-06	Mach. Screw, 6-32 x 3/8"
8.	A-14758	Armature & Shaft Assy.	19.	31-1357-20004-1	Decal, Eye
9.	20-8716-18	Roll Pin, 3/32 x 3/8	20.	31-1357-20004-2	Decal, Eye
10.	10-135	Coil Plunger Spring	21.	03-7655-4	Harness Clip
11.	AE-26-1500	Coil Assembly			

PARTY ZONE
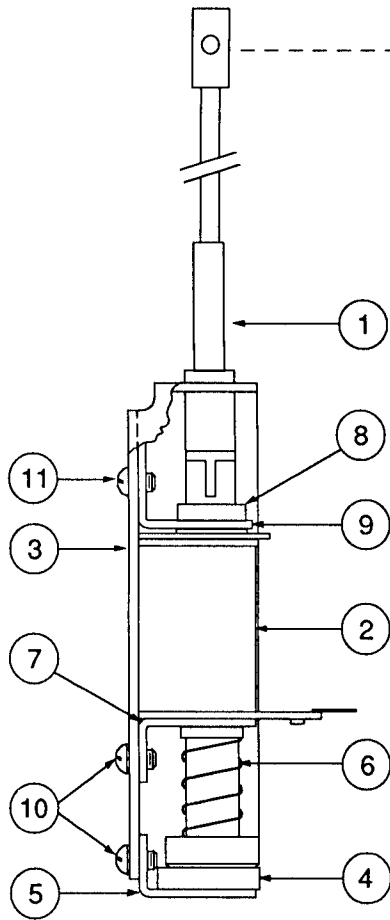
A-14808
Dancing Mechanism Assy.
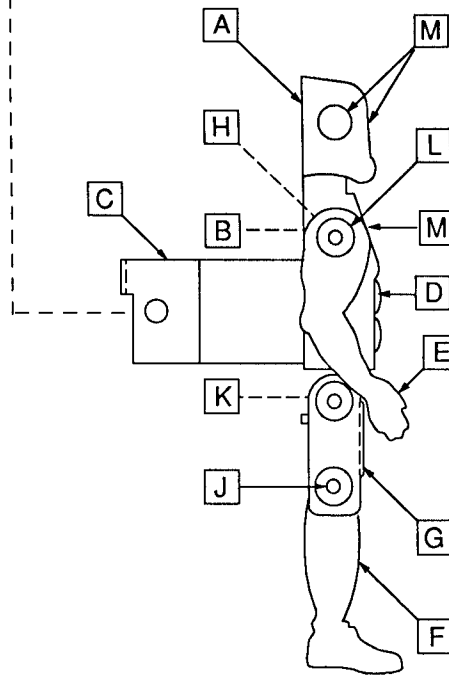
A-14803
Dancing Dummy Assy.

A-14808
Dancer Mechanism Assembly

Item	Part Number	Description
1.	A-14882	Push Rod Assembly
a)	02-4562	Shaft - Dancing Dummy
b)	02-4570-1	Shaft Extension
c)	20-8716-20	Roll Pin, 1/8 x 3/8"
2.	AE-26-1200	Coil Assembly
3.	01-10291	Mechanism Bracket
4.	23-6629	Rubber Grommet
5.	01-10366	Stop Bracket
6.	10-135	Spring Coil
7.	01-9794	Mounting Bracket
8.	03-7067	Coil Tubing
9.	01-10365	Mounting Bracket
10.	4008-01003-04	Mach. Screw, 8-32 x 1/4
11.	4008-01015-04	Mach. Screw, 8-32 x 1/4

A-14803
Dancing Dummy Assembly

Item	Part Number	Description
A.	03-8605	Dancing Dummy Body
B.	01-10367	Body Mounting Bracket
C.	01-10374	Bracket
D.	07-6688-19	Rivet, 7/32 x 1/8"
E.	31-1641-1	Arm
F.	31-1641-2	Leg (Lower)
G.	01-10290	Leg (Upper)
H.	02-4566-1	Pivot Pin, 1.32 Lg.
J.	02-4566-2	Pivot Pin, .22 Lg.
K.	02-4566-3	Pivot Pin, .76 Lg.
L.	20-9689	Springrip Fastener
M.	31-2-20004-6	Decal, Top
	31-2-20004-7	Decal, Top
	31-2-20004-8	Decal, Top
	31-2-20004-9	Decal, Top

Unique Parts

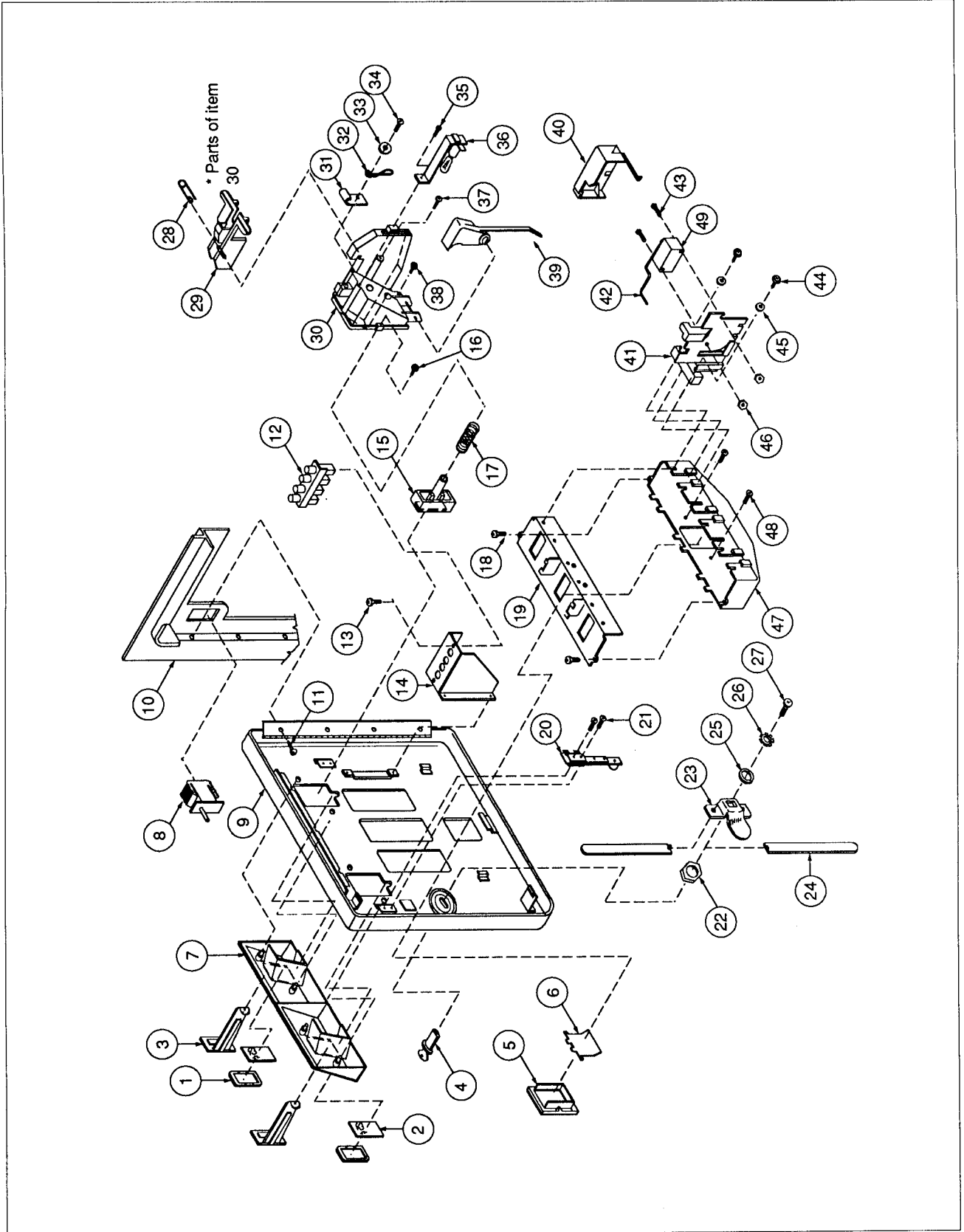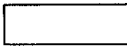| Part Number	Description	Part Number	Description
A-12738-20004	WPC Sound Board	A-14937	Ball Guide Assembly
A-12742-20004	WPC CPU Board	A-14983	Mandible Mech. Assembly
A-12842-4	Jumper Bumper Assembly	A-14984	Ramp
A-13204-20004	Bottom Arch Assembly	A-15005	Playfield Plastic Assy. (Rocket Sign)
A-13767-20004	Backbox Assembly	A-15006	Playfield Plastic Assy. (Chic Sign)
A-13769-20004	Playfield & Insert Assembly	A-15007	Playfield Plastic Assy. (Cottage Sign)
A-14604-20	Standup Target Assy. - Orange	A-18552-20004	Backglass Assembly
A-14642-1	Cashbox Assembly	A-12912-19	Standup Target Assy. (Yellow)
A-14759	Bracket & Motor Assembly	A-12912-20	Standup Target Assy. (Orange)
A-14760	Cosmic Cottage Assembly	A-12912-21	Standup Target Assy. (Green)
A-14766	Motor Opto Switch	A-12912-22	Standup Target Assy. (Blue)
A-14767	3-Lamp Board	A-12912-24	Standup Target Assy. (White)
A-14768	High Driver Assembly		
A-14774	7-Lamp Board		
A-14775	5-Lamp Board	H-14896	Playfield Switch Cable
A-14776	4-Lamp Board	H-14897	Playfield Lamp Cable
A-14777	4-Lamp Board	H-14898	Playfield Solenoid Cable
A-14778	4-Lamp Board	H-14899	Insert Cable
A-14779	3-Lamp Board	H-14900	Cabinet Cable
A-14780	4-Lamp Board	H-14951	Comic Cable
A-14781	3-Lamp Board	H-14953	Back Panel Solenoid Cable
A-14793-19	Standup Target Assy. -Yellow	H-14954	Rocket Flashlamp Cable
A-14802	Head Bracket Assembly	H-14955	Motor Cable
A-14803	Dancing Dummy Assembly	H-14956	Back Panel Switch Cable
A-14808	Dancer Mechanism Assembly	H-14957	General Switch Cable
A-14850	Ball Gate Assembly		
A-14851	Ball Guide Assembly		
A-14852	Ball Guide Assembly	03-8319-18	Post #8, Violet
A-14853	Ball Guide Assembly	31-1-20004-1	Playfield Plastics
A-14854	Ball Guide Assembly	thru	
A-14855	Ball Guide Assembly	31-1-20004-20	Playfield Plastics
A-14856	Ball Guide Assembly	31-1002-20004	Screened Playfield
A-14857	Ball Guide Assembly	31-1008-20004	Screened Bottom Arch
A-14858	Ball Guide Assembly	31-1009-20004	Screened Shooter Gauge
A-14859	Light Assembly	31-1357-20004	Screened Backglass
A-14860	Ramp Assembly	31-1639-1	Decal - Eye
A-14863	Ball Popper Assembly	31-1639-2	Decal - Eye
A-14883	Rocket Assembly	31-1641-1	Arm - Dancing Dummy
A-14909	Back Panel Assembly	31-1641-2	Leg - Dancing Dummy
A-14911	Ramp & Nut Assembly	31-2-20004-1	Decal Set- Top
A-14916	Lamp & Bracket Assembly	thru	
A-14929	Ball Gate Assembly	31-2-20004-9	Decal Set- Top
A-14930	Ball Gate & Sw. Assembly	31-3-20004-1	Decal - Bottom
A-14932	Ball Guide Assembly		

A-14148-1　Coin Door Assembly
U.S.A. Door with Decals
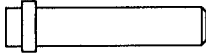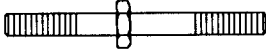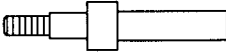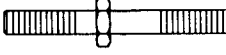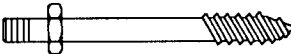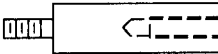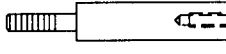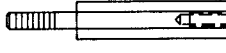
Item	Part No.	Description	Quantity
1	27-1038	Button Cover	2 or 3
2	27-1041-1　58	Price Panel	2 or 3
3	27-1026-1　17	Coin Entry Plate	2 or 3
4	27-1016	Lock Assembly	1
5	27-1061-1	Coin Return - Bezel	1
6	27-1062	Coin Return Flap	1
7	27-1021	Button Housing - 2-slot	1
	27-1022	Button Housing - 3-slot	1
8	27-1111	Interlock Switch	1
9	27-1006-1	Coin Door , 2-Slot	1
	27-1007-1	Coin Door , 3-Slot	1
10	27-1005	Coin Door Frame	1
11	27-1003	M/C Screw, 6-32 x 3/16	4
12	5641-12724-00	Diagnostic Switch	1
13	27-1101	M/C Screw, 4-40 x 1/4	2
14	01-9885	Bracket, Diagnostic Switch	1
15	03-7601-4	Button, Red	2
	03-7601-7	Button, Black	2
16	27-1078	M/C Screw, 6-32 x 3/8	2 or 3
17	27-1039	Conical Spring	2 or 3
18	27-1079	Self-tapping Screw, #6 x 1/4	2
19	27-1077-1	Coinbox Cover	1
20	27-1066	Slam Switch	1
21	27-1067	M/C Screw, 4-40 x 1/2	2
22	27-1017	Nut (key)	1
23	27-1012	Locking Cam	1
24	27-1011	Locking Arm	2
25	27-1020	Washer	1
26	27-1018	Star Washer	1
27	27-1019	M/C Screw, 1/4-28 x 5/16	1
28	Not Used		
29	Not Used		
30	27-1112	Coin Inlet Chute	2 or 3
31	27-1088	Cable Clamp	2 or 3
32	27-1025	Key Hook	1
33	27-1086	Washer, #6	2 or 3
34	27-1078	M/C Screw, 6-32 x 3/8	1 or 2
	27-1113	M/C Screw, 6-32 x 7/16	1
35	27-1079	Self-tapping Screw, #6 x 1/4	2 or 3
36	27-1084	Lamp Socket	2 or 3
	27-1085	Lamp	2 or 3
37	27-1096	Self-tapping Screw, #5 x 3/8	2 or 3
38	27-1087	M/C Screw, 6-32 x 5/8	2 or 3
39	27-1082	Lever Arm	2 or 3
40	27-1097	Switch Cover	2 or 3
41	27-1091-1	Coin Accept Chute	2 or 3
42	27-1075	Wire Form (Small)	2 or 3
	or		
	27-1093	Wire Form (Large)	
43	27-1094	M/C Screw, 4-40 x 7/8	4 or 6
44	27-1087	M/C Screw, 6-32 x 5/8	4 or 6
45	27-1086	Washer, #6	4 or 6
46	27-1095	Nut, 4-40 ESNA	4 or 6
47	27-1076-1	Coin Return Box	1
48	27-1078	M/C Screw, 6-32 x 3/8	2
49	27-1092	Microswitch	2 or 3

A-14148-1   Coin Door Assembly
U.S.A. Door with Decals

Metal & Plastic Posts

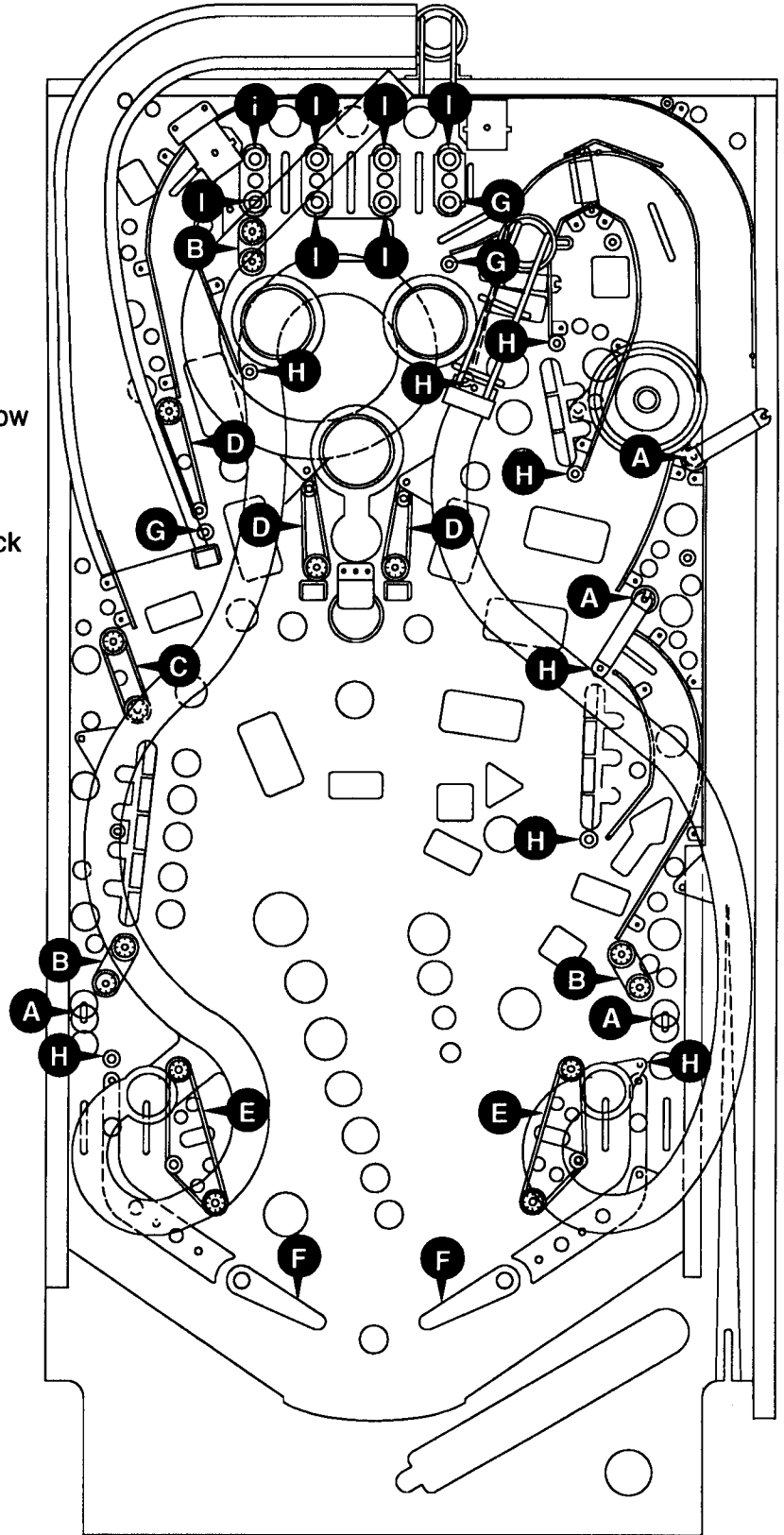|	Part Number	Description	Quantity
	02-3409	Spring Post	2
	02-3905	Bumper Post, #8 WS	2
	02-4008	Rubber Bumper Post, 8-32	2
	02-4020	Support Post	2
	02-4036	Rubber Bumper Post	9
	02-4177	Ball Guide Post	1
	02-4424-1	Spring Post, 6-32 x 8-32	3
	02-4424-2	Spring Post, 6-32 x 8-32	4
	02-4426-1	Post, #6-32 / #8 SMS	11
	02-4426-2	Post, #6-32 / #8 SMS	1
	02-4564	Standoff, #10-32	4
	02-4567-1	Standoff, 8-32 MS, 2-5/16"	1
	02-4567-2	Standoff, 8-32 MS, 2-5/8"	1
	02-4568-1	Standoff, 8-32 MS, 1-9/16"	1
	03-8365-16	Post, 3/8 x 1-3/16 (Tr. Yellow)	12
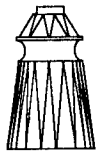
03-8319-16
Star Post, #8 (Tr. Yellow) [15]
03-8319-18
Star Post, #8 (Tr. Violet) [1]
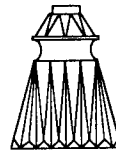
03-8370-16
Jewel Post
(Tr. Yellow) [4]

PARTY ZONE

RUBBER RINGS

ITEM	PART NO.	QTY	DESCRIPTION
A.	23-6300	4	5/16" Rubber Ring
B.	23-6301	3	3/4" Rubber Ring
C.	23-6303	1	1 1/4" Rubber Ring
D.	23-6304	3	1 1/2" Rubber Ring
E.	23-6305	2	2" Rubber Ring
F.	23-6519-6	2	Flipper Rubber Yellow
G.	23-6535	3	Bumper Rubber
H.	23-6556	8	Bumper Sleeve Black
I.	23-6441-1	7	Rubber Ring

LAMP MATRIX

J137

```
9 ⌐ YEL-GRY   Column 8
7 ⌐ YEL-VIO   Column 7
6 ⌐ YEL-BLU   Column 6
5 ⌐ YEL-GRN   Column 5
4 ⌐ YEL-BLK   Column 4
3 ⌐ YEL-ORN   Column 3
2 ⌐ YEL-RED   Column 2
1 ⌐ YEL-BRN   Column 1
```

J133

```
           11  21  31  41  51  61  71  81
1 ⌐ RED-BRN  Row 1
           12  22  32  42  52  62  72  82
2 ⌐ RED-BLK  Row 2
           13  23  33  43  53  63  73  83
3 ⌐ RED-ORN  Row 3
           14  24  34  44  54  64  74  84
5 ⌐ RED-YEL  Row 4
           15  25  35  45  55  65  75  85
6 ⌐ RED-GRN  Row 5
           16  26  36  46  56  66  76  86
7 ⌐ RED-BLU  Row 6
           17  27  37  47  57  67  77  87
8 ⌐ RED-VIO  Row 7
           18  28  38  48  58  68  78  88
9 ⌐ RED-GRY  Row 8
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Column ⊘ / Row

Lamp

Yellow (B+) ——→ Red

Column → / Row ↓	1 Yellow-Brown J137-1 Q98	2 Yellow-Red J137-2 Q97	3 Yellow-Orange J137-3 Q96	4 Yellow-Black J137-4 Q95	5 Yellow-Green J137-5 Q94	6 Yellow-Blue J137-6 Q93	7 Yellow-Violet J137-7 Q92	8 Yellow-Gray J137-9 Q91
1 Red-Brown J133-1 Q90	End Zone 11	5 Million 21	Party Animals 31	Big Bang 41	Dance Contest 51	Request 61	Right Fuel 1 71	Left End Zone 81
2 Red-Black J133-2 Q89	Extra Ball 12	Boppers 1 Million 22	Party Monster 32	Fuel 1 42	Left Fuel 1 52	Time 62	Right Fuel 2 72	Right End Zone 82
3 Red-Orange J133-4 Q88	Shoot Again 13	10X Playfield 23	Party Dudes 33	Fuel 2 43	Left Fuel 2 53	Make A Request 63	Right Fuel 3 73	Comic 1 83
4 Red-Yellow J133-5 Q87	Ramp Eat 14	Special 24	EDM Qual. 1 34	Fuel 3 44	Left Fuel 3 54	Be Merry 64	Drink 74	Comic 2 84
5 Red-Green J133-6 Q86	2X Playfield 15	Jet Equal Million 25	EDM Qual. 2 35	Fuel 4 45	Way 55	Bonus 5X 65	Left Bopper 75	Comic 3 85
6 Red-Blue J133-7 Q85	HA 1 16	Bop B 26	EDM Qual. 3 36	Fuel 5 46	Out 56	Bonus 10X 66	Right Bopper 76	D.J. Eject 86
7 Red-Violet J133-8 Q84	HA 2 17	Bop O 27	EDM Qual. 4 37	Fuel 6 47	Of 57	Bonus 15X 67	Bottom Bopper 77	Not Used 87
8 Red-Gray J133-9 Q83	HA 3 18	Bop P 28	EDM Qual. 5 38	Fuel 7 48	Control 58	Bonus 20X 68	Credit Button 78	Not Used 88

PARTY ZONE   2.38

LAMP LOCATIONS

Item No.	Bulb No.	Lamp Assy. No.	Description
11	24-6549	A-11271	End Zone #44
12	24-6549	A-11271	Extra Ball #44
13	24-6549	A-11754	Shoot Again #44
14	24-6549	A-11271	Ramp Eat #44
15	24-6549	A-11271	2X Playfield #44
16	24-8768	A-14781	HA 1 #555
17	24-8768	A-14781	HA 2 #555
18	24-8768	A-14781	HA 3 #555
21	24-8768	A-14778	5 Million #555
22	24-8768	A-14778	Boppers 1 Million #555
23	24-8768	A-14778	10X Playfield #555
24	24-8768	A-14778	Special #555
25	24-6549	A-11271	Jets Equal Million #44
26	24-6549	A-11271	Bop B #44
27	24-6549	A-11271	Bop O #44
28	24-6549	A-11271	Bop P #44
31	24-8768	A-14779	Party Animals #555
32	24-8768	A-14779	Party Monsters #555
33	24-8768	A-14779	Party Dudes #555
34	24-8768	A-14775	EDM Qual. 1 #555
35	24-8768	A-14775	EDM Qual. 2 #555
36	24-8768	A-14775	EDM Qual. 3 #555
37	24-8768	A-14775	EDM Qual. 4 #555
38	24-8768	A-14775	EDM Qual. 5 #555
41	24-6549	A-11271	Big Bang #44
42	24-8768	A-14774	Fuel 1 #555
43	24-8768	A-14774	Fuel 2 #555
44	24-8768	A-14774	Fuel 3 #555
45	24-8768	A-14774	Fuel 4 #555
46	24-8768	A-14774	Fuel 5 #555
47	24-8768	A-14774	Fuel 6 #555
48	24-8768	A-14774	Fuel 7 #555
51	24-8768	A-14780	Dance Contest #555
52	24-8768	A-14780	Left Fuel 1 #555
53	24-8768	A-14780	Left Fuel 2 #555
54	24-8768	A-14780	Left Fuel 3 #555
55	24-8768	A-14777	Way #555
56	24-8768	A-14777	Out #555
57	24-8768	A-14777	Of #555
58	24-8768	A-14777	Control #555
61	24-6549	A-11754	Request #44
62	24-6549	A-11754	Time #44
63	24-6549	A-11271	Make a Request #44
64	24-6549	A-11271	Be Merry #44
65	24-8768	A-14776	Bonus 5X #555
66	24-8768	A-14776	Bonus 10X #555
67	24-8768	A-14776	Bonus 15X #555
68	24-8768	A-14776	Bonus 20X #555
71	24-6549	A-11271	Right Fuel 1 #44
72	24-6549	A-11271	Right Fuel 2 #44
73	24-6549	A-11271	Right Fuel 3 #44
74	24-6549	A-11271	Drink #44
75	24-8768	A-14271	Left Bopper #555
76	24-8768	A-14271	Right Bopper #555
77	24-8768	A-14271	Bottom Bopper #555
78	---	20-9663-1	Credit Button
81	24-6549	A-11271	Left End Zone #44
82	24-6549	A-11271	Right End Zone #44
83	24-8768	A-14767	Comic 1 #555
84	24-8768	A-14767	Comic 2 #555
85	24-8768	A-14767	Comic 3 #555
86	24-6549	A-11754	D.J. Eject #44
87-88			Not Used

2.39

PARTY ZONE

Switch Matrix

White ——▶—o╱o—— Green

Dedicated Grounded Switches

Orange-Brown (1) J206-1 U17-5 — Left Coin Chute	D1
Orange-Red (2) J205-2 U17-7 — Center Coin Chute	D2
Orange-Black (3) J205-3 U17-11 — Right Coin Chute	D3
Orange-Yellow (4) J205-4 U17-9 — 4th Coin Chute	D4
Orange-Green (5) J205-6 / U16-9 — Normal Function / Test Function, Service Credits / Escape	D5
Orange-Blue (6) J205-7 / U16-11 — Normal Function / Test Function, Volume Down / Down	D6
Orange-Violet (7) J205-8 / U16-7 — Normal Function / Test Function, Volume Up / Up	D7
Orange-Gray (8) J205-9 / U16-5 — Normal Function / Test Function, Begin Test / Enter	D8

Column / Row	1 Green-Brown J206-1 U20-18	2 Green-Red J206-2 U20-17	3 Green-Orange J206-3 U20-16	4 Green-Yellow J206-4 U20-15	5 Green-Black J206-5 U20-14	6 Green-Blue J206-6 U20-13	7 Green-Violet J206-7 U20-12	8 Green-Gray J206-9 U20-11
1 White-Brown J208-1 U18-11	Right Flipper 11	Slam Tilt 21	Back Ramp Switch 31	Back Ball Popper 41	Head Opto 1 51	Shooter Lane 61	Cottage Entrance 71	Way 81
2 White-Red J208-2 U18-9	Left Flipper 12	Coin Door Closed 22	Not Used 32	Right Ball Popper 42	Head Opto 2 52	Lane To Top 62	Enter Left Ramp 72	Out 82
3 White-Orange J208-3 U18-5	Start Button 13	Ticket Opto 23	Not Used 33	Left Jet Bumper 43	Head Opto 3 53	Out Of Control 63	Left Ozone 73	Of 83
4 White-Yellow J208-4 U18-7	Plumb Bob Tilt 14	Always Closed 24	EDM Qual. 1 34	Right Jet Bumper 44	Left Return Lane 54	Top Rebound 64	Right Ozone 74	Control 84
5 White-Green J208-5 U19-11	Not Used 15	Not Used 25	EDM Qual. 2 35	Bottom Jet Bumper 45	Left Drain 55	Skill Shot 65	Outhole 75	2nd Cottage Switch 85
6 White-Blue J208-7 U19-9	HA 1 16	Bop B 26	EDM Qual. 3 36	Not Used 46	End Zone Target 56	Request 66	Trough 1 76	Not Used 86
7 White-Violet J208-8 U19-5	HA 2 17	Bop O 27	EDM Qual. 4 37	Not Used 47	Right Return Lane 57	D.J. Eject 67	Trough 2 77	Not Used 87
8 White-Gray J208-9 U19-7	HA 3 18	Bop P 28	EDM Qual. 5 38	Not Used 48	Right Drain 58	Time 68	Trough 3 78	Not Used 88

SWITCH LOCATIONS

Item	Switch Number	Switch Assy.	Description
11	SW-10A-48	A-9990-1	Right Flipper
12	SW-10A-48	A-9990-1	Left Flipper
13	---	20-9663-1	Start Button
14	---	20-6502-A	Plumb Bob Tilt
15	---	---	Not Used
16	---	B-12912-24	HA 1
17	---	B-12912-24	HA 2
18	---	B-12912-24	HA 3
21	---	27-1066	*Slam Switch
22	---	A-8630	*Coin Door Closed
23	---	Not Used	*Ticket Opto.
24	---	A-8630	*Always Closed
25	---	---	Not Used
26	5647-12693-18	A-12687	Bop B
27	5647-12693-18	A-12687	Bop O
28	5647-12693-18	A-12687	Bop P
31	5647-12693-21	A-14860	Back Ramp Switch
32-33	---	---	Not Used
34	---	B-12912-21	EDM Qual. 1
35	---	B-12912-21	EDM Qual. 2
36	---	B-12912-21	EDM Qual. 3
37	---	B-12912-21	EDM Qual. 4
38	---	B-12912-21	EDM Qual. 5
41	5647-12693-24	A-14863	Back Ball Popper
42	SW-1A-167	A-11657	Right Ball Popper
43	SW-1A-187	B-13267	Left Jet Bumper
44	SW-1A-187	B-13267	Right Jet Bumper
45	SW-1A-187	B-13267	Bottom Jet Bumper
46-48	---	---	Not Used
51	5490-12451-00	A-14766	Head Opto. 1
52	5490-12451-00	A-14766	Head Opto. 2
53	5490-12451-00	A-14766	Head Opto. 3
54	5647-12693-19	A-12688-1	Left Return Lane
55	5647-12693-19	A-12688-1	Left Drain
56	---	A-14604-20	End Zone Target
57	5647-12693-19	A-12688-1	Right Return Lane
58	5647-12693-19	A-12688-1	Right Drain
61	5647-12693-04	A-11619	Shooter Lane
62	5647-12696-19	A-12688	Lane to Top
63	5647-12693-19	A-12688	Out of Control
64	---	A-4834-J	Top Rebound
65	5647-12693-19	A-12688	Skill Shot
66	---	A-14793-19	Request
67	5647-12133-11	A-9381-R	D.J. Eject
68	---	A-14793-19	Time
71	5647-12693-36	A-14930	Cottage Entrance
72	5647-12693-36	A-14860	Enter Left Ramp
73	SW-1A-114	A-4834-H	Left Sling
74	SW-1A-114	A-4834-H	Right Sling
75	5647-12133-12	A-10417	Outhole
76	5647-12693-08	A-11680	Trough 1
77	5647-09957-00	B-8925	Trough 2
78	5647-09957-00	B-8925	Trough 3
81	---	B-12912-20	Way
82	---	B-12912-21	Out
83	---	B-12912-19	Of
84	---	B-12912-22	Control
85	5647-12693-19	A-12688-1	2nd Cottage Switch
86-88	---	---	Not Used

SOLENOID/FLASHER TABLE

Sol. No.	Function	Solenoid Type	Wire Color	Connection	Driver Trnstr	Solenoid Part Number Flashlamp Type
01	Back Ball Popper	High Power	Vio-Brn	J130-1	Q82	AE-26-1200
02	Right Ball Popper	High Power	Vio-Red	J130-2	Q80	AE-26-1200
03	D.J. Mouth	High Power	Vio-Orn	J130-4	Q78	AE-26-1500
04	D.J. Eject	High Power	Vio-Yel	J130-5	Q76	AE-26-1200
05	Dancin' Dummy	High Power	Vio-Grn	J130-6	Q64	AE-26-1200
06	Comic Mouth	High Power	Vio-Blu	J130-7	Q66	AE-30-2000
07	Knocker	High Power	Vio-Blk	J130-8	Q68	AE-23-800
08	Not Used					
09	Outhole	Low Power	Brn-Blk	J127-1	Q58	AE-27-1200
10	Ball Release	Low Power	Brn-Red	J127-3	Q56	AE-26-1200
11	Left Jet Bumper	Low Power	Brn-Org	J127-4	Q54	AE-26-1200
12	Right Jet Bumper	Low Power	Brn-Yel	J127-5	Q52	AE-26-1200
13	Bottom Jet Bumper	Low Power	Brn-Grn	J127-6	Q50	AE-26-1200
14	Not Used					
15	Left Sling	Low Power	Brn-Vio	J127-8	Q46	AE-26-1500
16	Right Sling	Low Power	Brn-Gry	J127-9	Q44	AE-26-1500
17	Cottage Flasher	Flasher	Blk-Brn	J125-1, J126-1	Q42	#906
18	Rocket Flashers	Flasher	Blk-Red	J125-2, J126-2	Q40	#906
19	Out Of Control	Flasher	Blk-Org	J125-3, J126-3	Q38	#89
20	Comic Flasher	Flasher	Blk-Yel	J125-5, J126-4	Q36	#906
21	Ozone Flashers	Flasher	Blu-Grn	J125-6, J126-5	Q28	#906
22	Right Side Flashers	Flasher	Blu-Blk	J125-7, J126-6	Q30	#89, #906
23	Head On/Off	Low Power	Blu-Vio	J126-7	Q34	AE-26-1500
24	Head Direction	Low Power	Blu-Gry	J126-8	Q32	14-7968 12V
25	Boppers Flasher	Flasher	Blu-Brn	J122-1	Q26	#89
26	Left Side Flashers	Flasher	Blu-Red	J122-2, J123-3	Q24	#89, #906
27	Top Left Flashers	Flasher	Blu-Org	J122-3, J123-4	Q22	#89, #906
28	D.J. Flasher	Flasher	Blu-Yel	J122-4, J123-5	Q20	#906
	General Illumination Circuits					
01	Illumination String 1	G.I.	Brown	J120-1	Q18	#44
02	Illumination String 2	G.I.	Orange	J120-2	Q10	#44
03	Illumination String 3	G.I.	Yellow	J120-3	Q14	#44
04	Illumination String 4	G.I.	Green	J121-5	Q16	#555
05	Illumination String 5	G.I.	Violet	J121-6	Q12	#555
	Lower Right Flipper		Blu-Yel	J109-7		FL-11630
	Lower Left Flipper		Gry-Yel	J109-5		FL-11630

SOLENOID /FLASHER LOCATIONS

Item	Coil/Flasher No.	Assy. No.	Description
01	AE-26-1200	A-14863	Back Ball Popper
02	AE-26-1200	D-11335-4	Right Ball Popper
03	AE-26-1500	A-14757	D.J. Mouth
04	AE-26-1200	B-9362-L-2	D.J. Eject
05	AE-26-1200	A-14808	Dancin' Dummy
06	AE-30-2000	A-14983	Comic Mouth
07	AE-23-800	B-10686-1	Knocker
08	---	---	Not Used
09	AE-27-1200	A-8039-3	Outhole
10	AE-26-1200	B-9362-L-2	Ball Release
11	AE-26-1200	A-12842-4	Left Jet Bumper
12	AE-26-1200	A-12842-4	Right Jet Bumper
13	AE-26-1200	A-12842-4	Bottom Jet Bumper
14	---	---	Not Used
15	AE-26-1500	B-11203-R-1	Left Sling
16	AE-26-1500	B-11203-L-1	Right Sling
17	24-8802	A-14495	Cottage Flasher #906
18	24-8802	C-13337	Rocket Flashers #906
19a	24-8704	A-8798	Out Of Control #89
19b	24-8704	A-9302	Out Of Control #89
20	24-8802	A-12336-1	Comic Flasher #906
21	24-8802	C-13337	Ozone Flashers #906
22	24-8704	A-8798	Right Side Flashers #89
	24-8802		Backbox Insert #906
23	AE-26-1500	A-14766	Head On/Off
24	14-7968	A-14766	Head Direction 12V
25	24-8704	A-9302	Boppers Flasher #89
26	24-8704	A-8798	Left Side Flashers #89
	24-8802		Backbox Insert #906
27	24-8704	A-8798	Top Left Flasher #89
	24-8802		Backbox Insert #906
28	24-8802	A-12336-1	D.J. Flasher #906

General Illumination Circuits

*01	24-6549	A-11905	Left Playfield String #44
*02	24-6549	A-11905	Red Playfield String#44
*03	24-6549	A-11905	Right Playfield String #44
*04	24-8768	---	Bottom Insert String #555
*05	24-8768	---	Top Insert String #555
*	FL-11630	C-13174-L	Left Flipper Assy.
*	FL-11630	C-13174-R	Right Flipper Assy.

*Not Shown
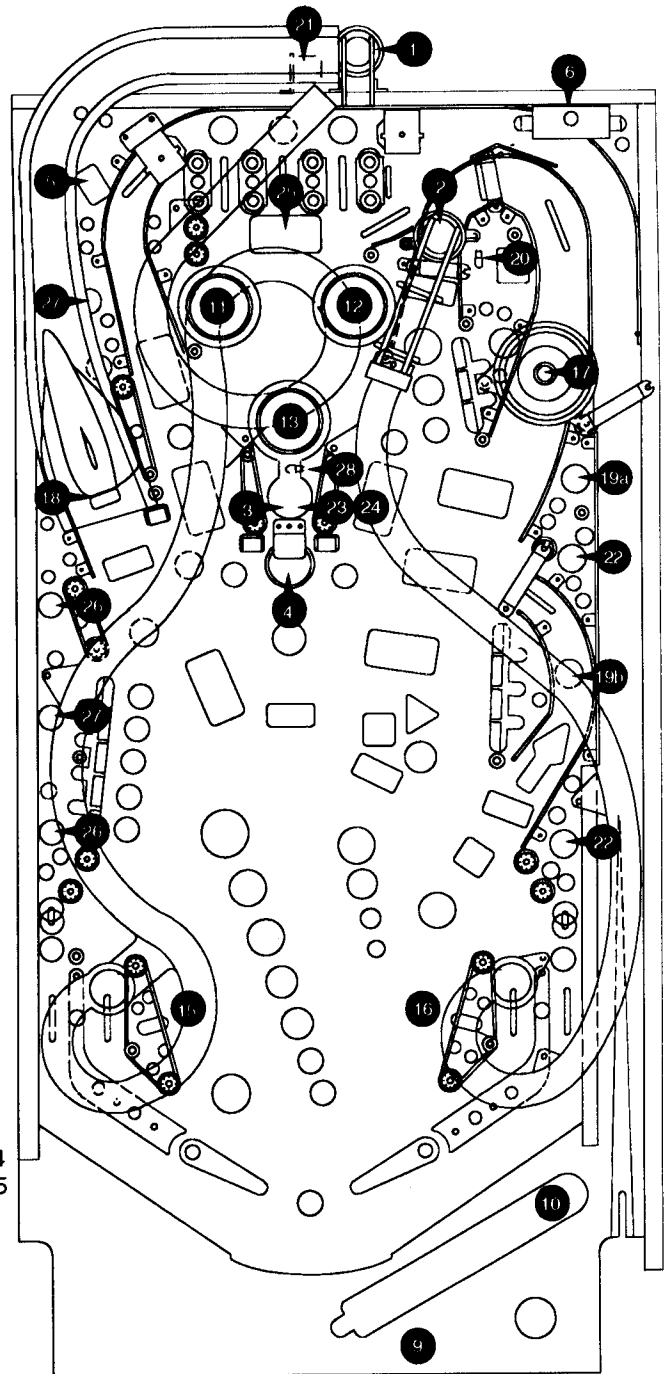
PLAYFIELD PARTS

Item	Part Number	Description
1	A-14859	Light Assy.
2	A-14860	Ramp Assy.
3	01-9170	Gusset Brkt.
4	A-8244-L	Ball Gate Assy.
5	12-6466-3A	Wire Guide 7/8"
6 a	A-14803	Dancing Dummy Assy.
b	A-14808	Dancer Mech Assy.
7	03-8318-16	Yellow Light Hood
8	12-6997	Ball Guide Wire
9	A-14853	Ball Guide Assy.
10	A-14984	Upper Left Ramp Assy.
11	A-14852	Ball Guide Assy.
12	A-14883	Rocket Assy
13	A-12842-4	Jumper Bumper Assy.
14 a	02-4436-18	Ramp Mtg. Post 1 11/16
b	02-4335-13	Ramp Mtg. Post 1 9/16
15	02-4335-9	Ramp Mtg. Post 1.94
16	A-14756	Capt. B. Zarre Assy.
	A-15008	Head Mech. Assy.
	A-14759	Brkt. & Motor Assy.
17	A-14604-20	Orange Target Assy.
18	A-14793-19	Yellow Target Assy. (2)
19	A-14854	Ball Guide Assy.
20	02-4567-1	Ramp Mtg. Post 2 5/16
21	B-12912-21	Green Target Assy. (6)
22	03-8584	Lower Left Ramp
23	01-9510	#8 Adj. Post Plate
24	01-10375	Ball Deflector
25 a	B-11203-R-1	Coil & Brkt. Assy.
b	B-12665	Nylon Kicker Assy.
26	B-8284-1	Kicker Count Switch
27	B-12919	Flipper Ball Guide Assy.
28	C-13174-L	Flipper Mech Assy.
29	20-9592-7	Flipper Bat Assy.
30	12-6871	Biff Bar
31	01-3569-1	Ball Return Runway
32	01-5575	Bottom Arch Mtg. Brkt.
33	01-8419	Plyfld Hold Down Brkt.
34	12-6542	Wire Gate
35	A-8039-3	Ball Release Assy.
36	A-8645	Wire Form & Brkt. Assy.
37	B-8623	Guide & Baffle Assy.
38	B-8925	Micro Switch Plate Assy.
39	B-9362-L-2	Coil & Brkt. Assy.
40	C-8235	Ball Runway Assy.
41	C-9638	Multi-Ball Eject Assy.
42	C-13174-R	Flipper Mech Assy.
43	B-12918	Flipper Ball Guide Assy.
44 a	B-11203-L-1	Coil & Brkt. Assy.
b	B-12665	Nylon Kicker Assy.
45	02-4568-1	Ramp Mtg. Post 1 9/16
46	A-14911	Right Ramp Assy.
47	B-12912-20	Orange Target Assy.
48	B-12912-19	Yellow Target Assy.
49	B-12912-22	Blue Target Assy.
50	02-4567-3	Ramp Mtg. Post 2 5/8
51	12-6999	Ball Guide Wire
52	A-14929	Ball Gate Assy.
53	A-14856	Ball Guide Assy.
54 a	B-9362-L-2	Coil & Brkt. Assy.
b	B-9361-R-1	Eject Assy.
c	A-9381-R	Switch Assy.
d	03-7351-1-9	Red Shield
55	01-6933	Ball Stop
56	A-14855	Ball Guide Assy.
57	A-14857	Ball Guide Assy.
58	A-14930	Ball Gate Assy.
59	A-14760	Cosmic Cottage Assy.
60	B-12912-24	White Target Assy. (3)
61	12-6983	Wire Ramp
62	A-14858	Ball Guide Assy.
63	A-14932	Ball Guide Assy.
64	A-14850	Ball Gate Assy.
65 a	D-11335-4	Ball Popper Assy.
b	A-11657	Ball Popper Switch
66	A-14851	Ball Guide Assy.
67	A-14937	Ball Gate Assy.
68	12-6996	Ball Guide Wire
69	A-13100-1	Ball Gate Assy.
70 a	A-14802	Head Brkt Assy.
b	A-14983	Mandible Mech. Assy.
c	A-14761	Lamp Board & Brkt.
71	A-14909	Back Panel Assy.
72	A-14863	Ball Popper Assy.
73	12-6984	Wire Ramp
74	02-4252-9	Ramp Mtg. Post 9/16
75	A-14930	Ball Gate & Switch Assy.

Not Shown:

A-13204-20004	Bottom Arch Assy.
12-6842	Wire Fence
16-20004-1	Instruction Card
20-9041	Tinnerman
20-9045	Instruction Card Cover
23-6313-1	Grommet
31-1008-20004	
20004- Plastics	Playfield Plastics Set
31-1002-20004	Screened Playfield
01-10413	Metal Ramp Cover
03-7557	Slingshot Mylar
*03-7960-20004-1	Full Playfield Mylar
03-7960-20004-2	Jet Area Mylar
03-7966	Ball Drop Mylar
20-6500	Steel Ball (3)
A-14632-2	Cable Clamp Brkt. Assy.
A-14632-3	Cable Clamp Brkt. Assy.
A-14632-4	Cable Clamp Brkt. Assy.

* The Party Zone Diamond Plate™ playfield does not require a full mylar. However, mylars can be purchased thru your local Bally Distributor.

PLAYFIELD PARTS LOCATIONS
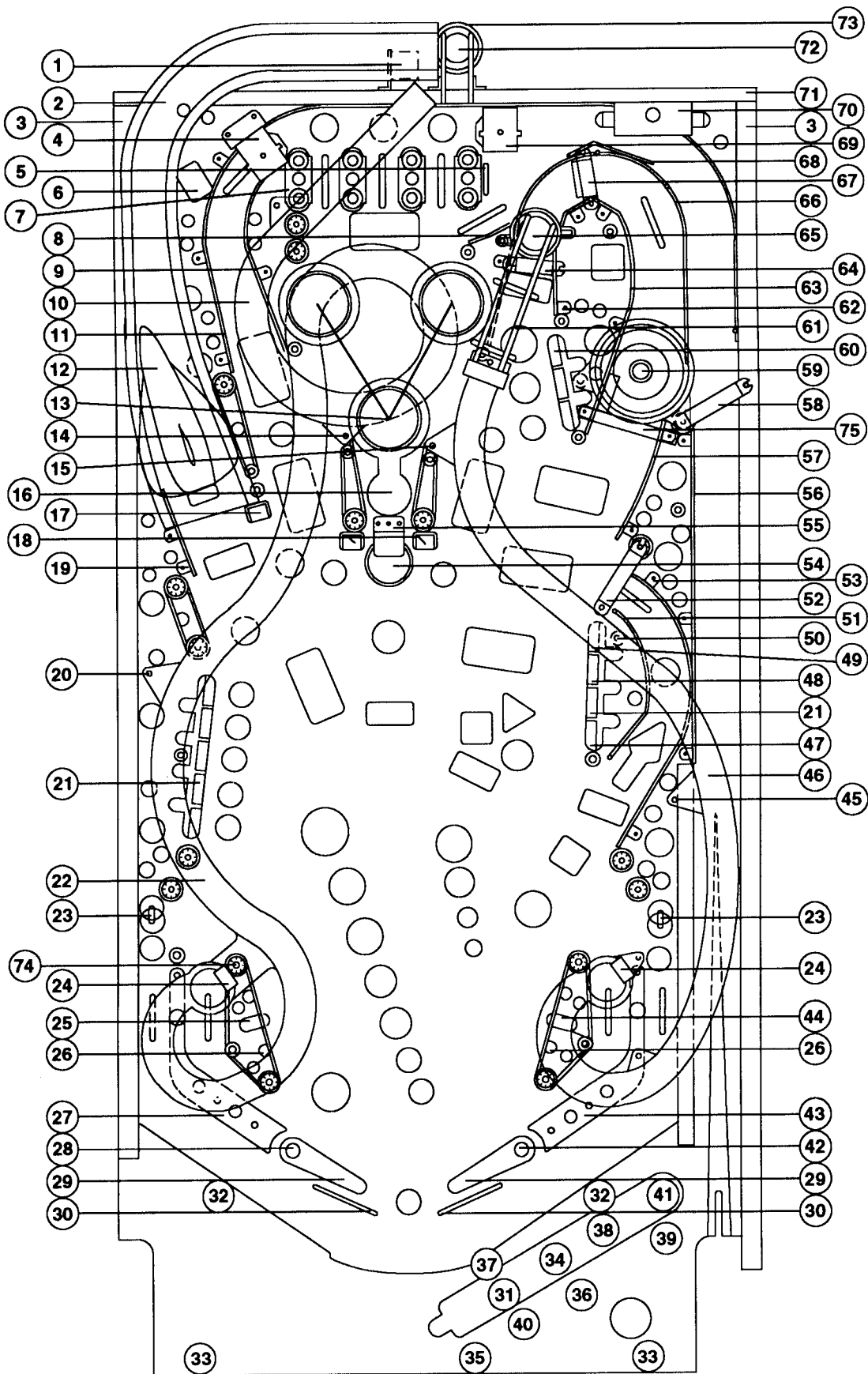
PARTY ZONE

Notes...

Section 3

Wiring Diagrams and Schematics

Flipper Wiring
Coin Interface Wiring
Motor Opto Switch Board
High Driver Board
Solenoid Wiring
Interboard Wiring

### CONNECTOR & COMPONENT IDENTIFICATION

Since **PARTY ZONE** uses WILLIAMS ELECTRONICS GAMES, INC. WPC Electronics System, a new technique to identify connectors and other game components must be introduced. Each plug or jack receives a number that identifies the circuit board and position on that board that it connects to. J-designations refer to the male part of a connector. P-designations refer to the female part of a connector. For example, J101 designates jack 1 of board 1 (a Power Driver Board Board jack); P206 designates plug 6 of board 2 (a CPU Board plug). Identifying the specific pin number of a connector involves a hyphen, which separates the pin number from the plug or jack designation. For example, J101-3 refers to pin 3 of jack 1 on board 1.

Other game components may also have similar numbers to clarify their locations or related circuits. For example, F501 refers to a fuse located on the Sound Board.

Prefix numbers for the WPC circuit boards are listed below.

1- Power Driver Board
2- CPU Board
5- Sound Board
6- Dot Matrix Controller
   Dot Matrix Display/Driver Board

FLIPPER and LANE CHANGE CIRCUIT
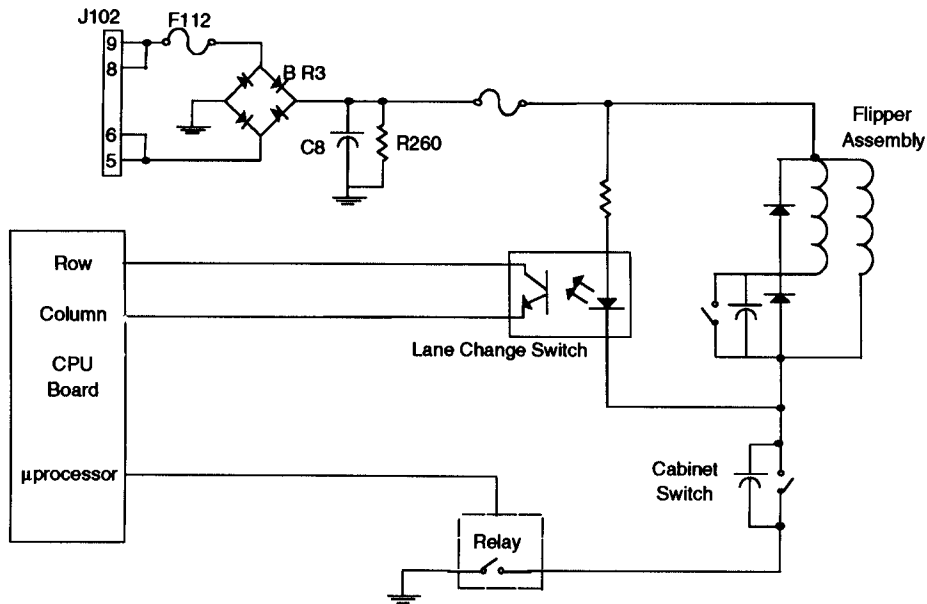
Block Diagram of Flipper & Lane Change Circuit
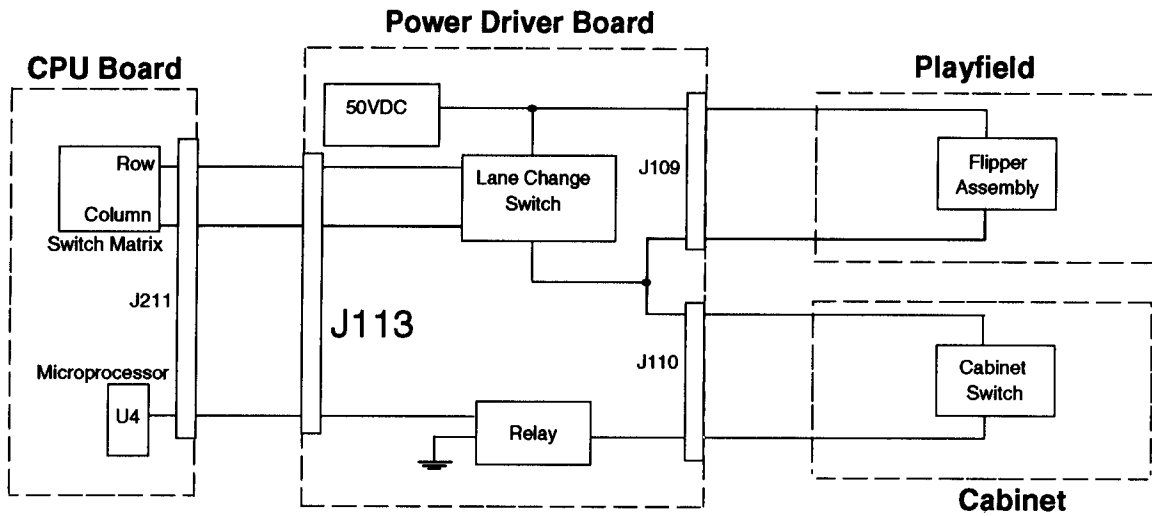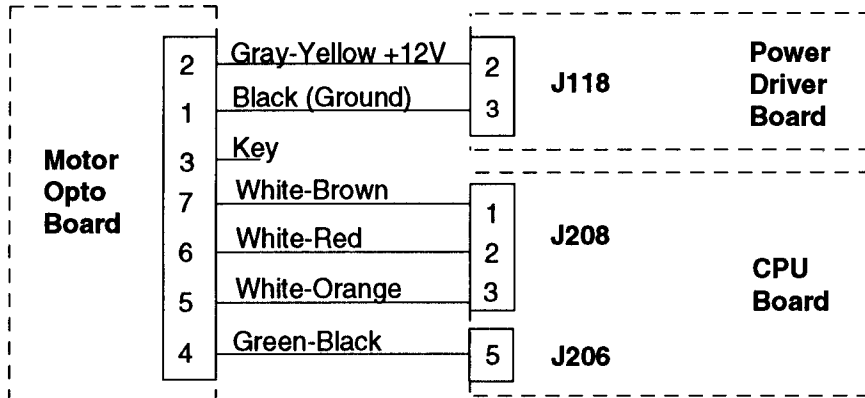
A-14689
Coin Door Interface Board Schematic

Coin Door Interface Board

ECA Coin Door   J4

C1 1000 MFD
+12VDC
Power Ground

W1
W2
Key

Front Door Switch
Credit Switch
Plumb Bob Switch
Lamp

Coin 1
Coin 2
Coin 3
Coin 4

Coin 1
Coin 2
Coin 3
Coin 4
Coin5/6
Coin 7/8
Select

Off
Enable

Sw.1 of DIP Sw.

J5
Grn/Red   1
Wht/Org   2
Vio/Blk T/Drive 5
Key   8
Power Ground   6
+50VDC   4
+20VDC   3
+12VDC   7
NC   9

D7

J6
Col. 1   8
Col. 1   7
Col. 2   6
Key   5
Grn/Brn Col. 1
Grn/Red Col. 2
Key
Wht/Red Row 2 D5
Wht/Orn Row 3 D4
Wht/Yel Row 4 D3
Red/Gry Row 1 D1
D2

To Door   J3
1
2
12   D6
13
3
4
5
6
7
8
9
1
Key
10

Vio/Blk T/Drive
J2
Vio/Blk T/Drive 6
Key   3
Power Ground   5
+50VDC   7
+20VDC   8
+12VDC   4
Vio 6.3VAC   2
Wht/Vio 6.3VAC   1

J1
Grn/Brn Col. 1   7
Grn/Red Col. 2   7
Wht/Brn Row 1   6
Wht/Red Row 2   5
Wht/Orn Row 3   4
Wht/Yel Row 4   3
Switch Ground   15
Orn/Brn Left Coin 1   14
Orn/Red Center Coin 2 13
Orn/Blk Right Coin 3 12
Orn/Yel Coin 4   17
Orn/Grn Dig. Sw 1   11
Orn/Blu Dig. Sw 2   10
Orn/Vio Dig. Sw 3   9
Orn/Gry Dig. Sw 4   8
Orn/Wht Enable   18
Key   16
Red/Gry Row 1   2

Power Driver Board
J116
NU
3
NU
NU
2
J119 3 1

CPU Board
J212
1
2
4
6
7
8
10
J205
1
2
3
4
5
6
7
8
9
2

Power Driver Board
J133 9

PARTY ZONE   3-3

Motor Opto Switch Assy.
A-14766

Board Assy.

Schematic

Circuit Diagram

PARTY ZONE 3-4
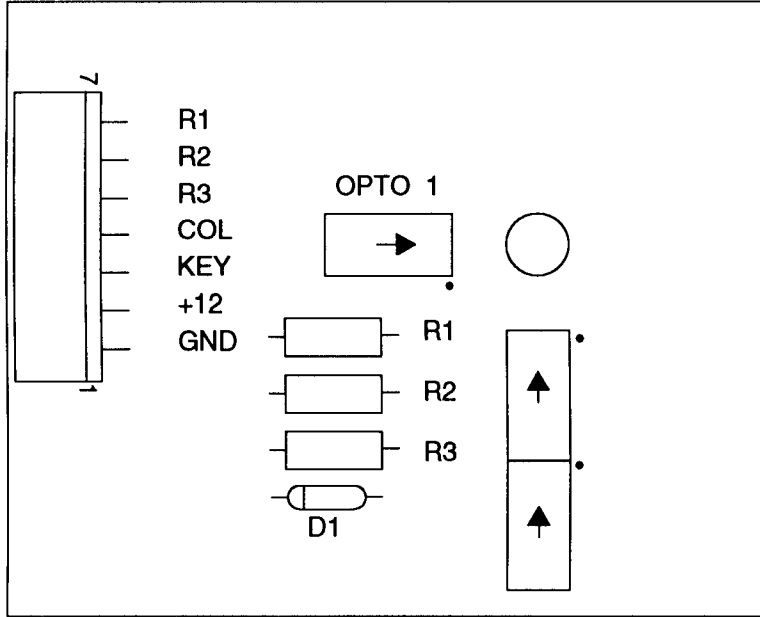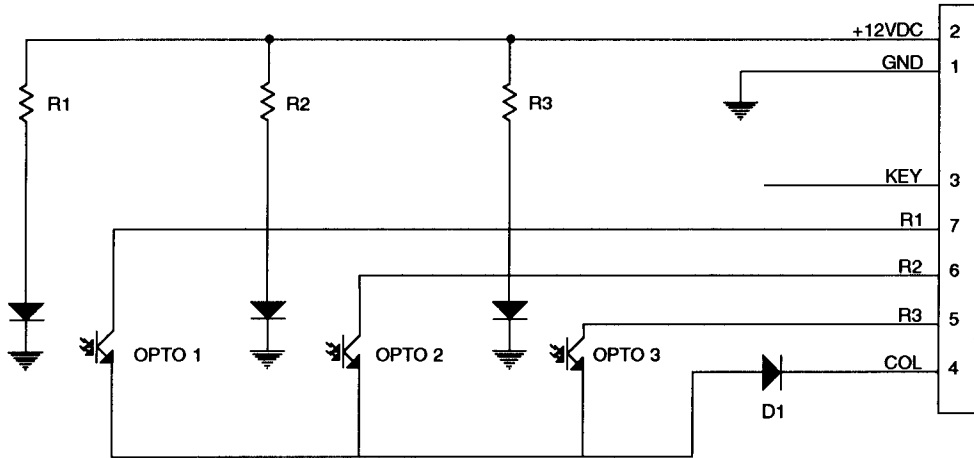
High Driver Assy.
A-14768
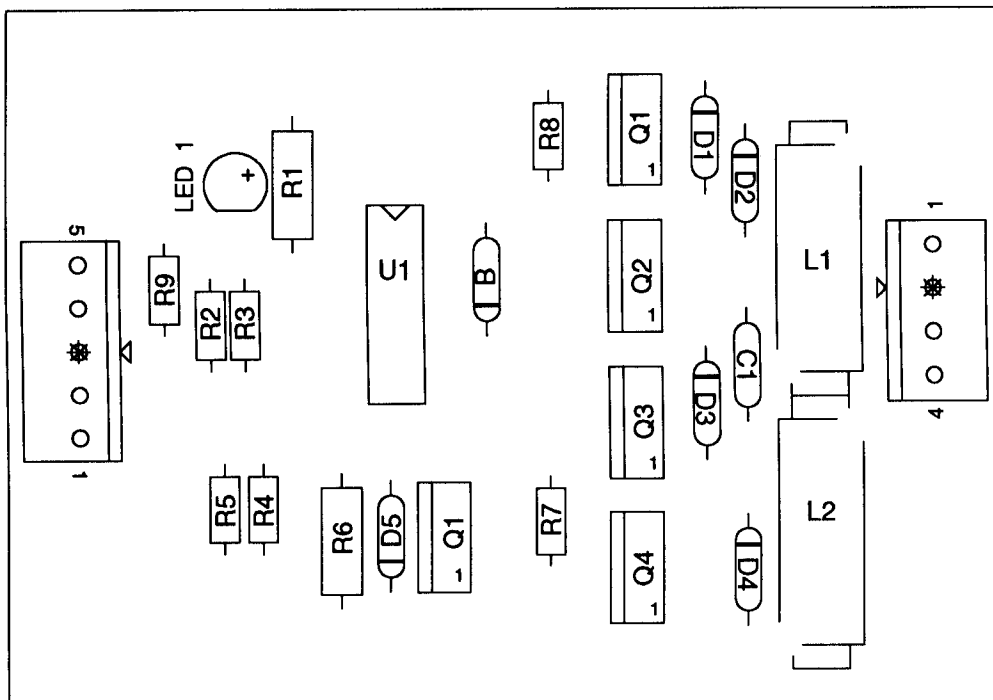
Board Assy.
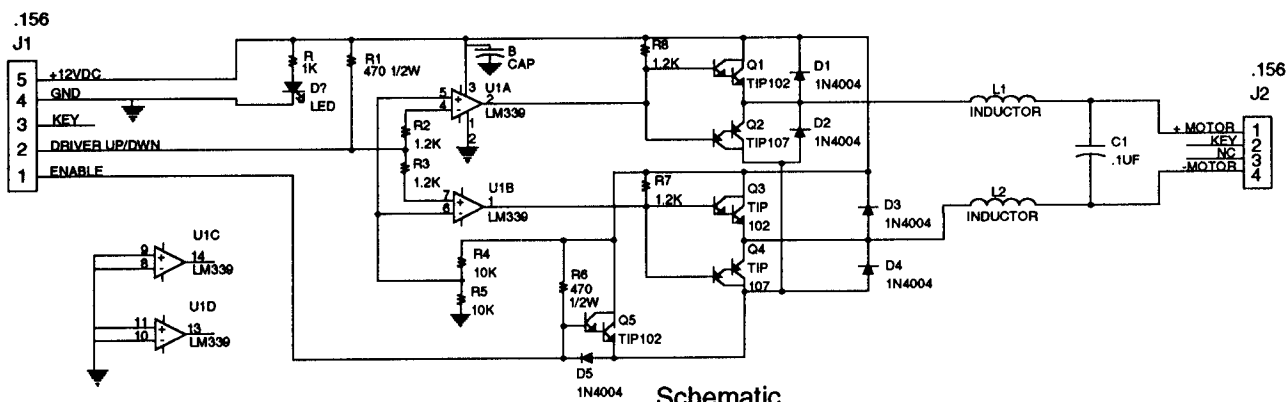
Schematic
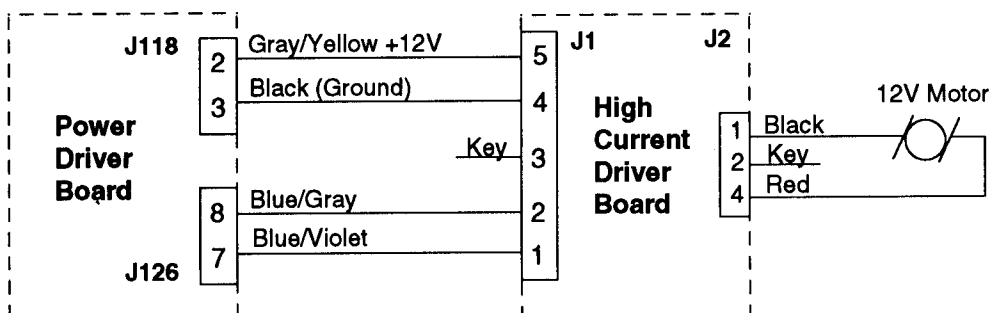
Circuit Diagram

Solenoid Wiring

Power Driver Board
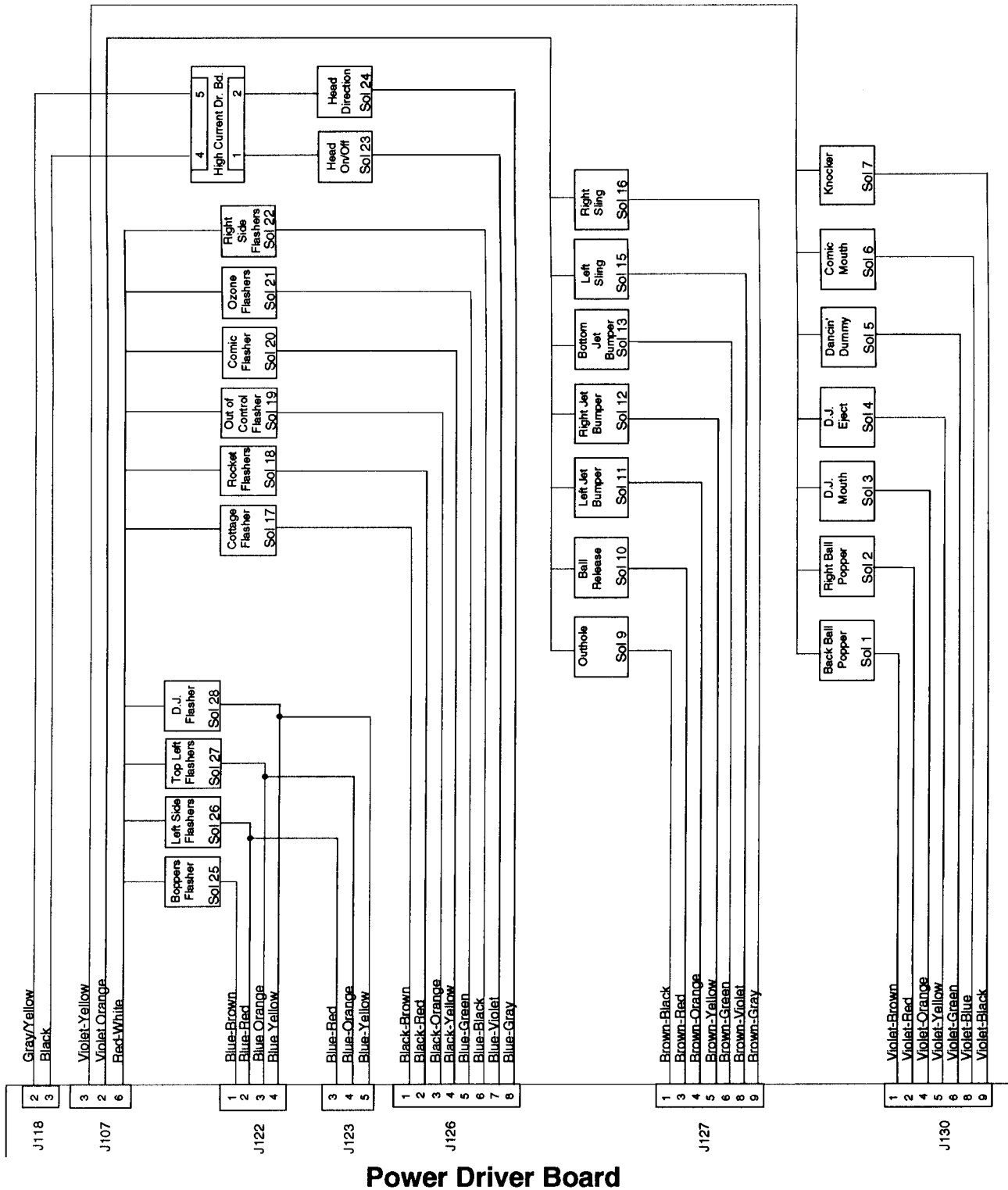
Switch Circuits

Connector From CPU:

Wire Color	Function		To Playfield	To Cabinet	I.C.'s
Green/Brown	Column 1		J206-1	J212-1	U20-18
Green/Red	Column 2		J206-2	J212-2	U20-17
Green/Orange	Column 3		J206-3		U20-16
Green/Yellow	Column 4		J206-4		U20-15
Green/Black	Column 5		J206-5		U20-14
Green/Blue	Column 6		J206-6		U20-13
Green/Violet	Column 7		J206-7		U20-12
Green/Gray	Column 8		J206-9		U20-11
White/Brown	Row 1		J208-1	J212-4	U18-11
White/Red	Row 2		J208-2	J212-6	U18-9
White/Orange	Row 3		J208-3	J212-7	U18-5
White/Yellow	Row 4		J208-4	J212-8	U18-7
White/Green	Row 5		J208-5		U19-11
White/Blue	Row 6		J208-7		U19-9
White/Violet	Row 7		J208-8		U19-5
White/Gray	Row 8		J208-9		U19-7
Orange/Brown	Direct 1	Left Coin		J205-1	U17-5
Orange/Red	Direct 2	Center Coin		J205-2	U17-7
Orange/Black	Direct 3	Right Coin		J205-3	U17-11
Orange/Yellow	Direct 4	4th Coin		J205-4	U17-9
Orange/Green	Direct 5	Escape/Service		J205-6	U16-9
Orange/Blue	Direct 6	Down/Vol. Down		J205-7	U16-11
Orange/Violet	Direct 7	Up/Vol. Up		J205-8	U16-7
Orange/Gray	Direct 8	Enter/Test		J205-9	U16-5
Black		Ground		J205-10	
Orange/White		Enable		J205-12	

Lamp Circuits

Connectors From Power Driver Board:

Wire Color	Function	To Playfield	To Cabinet	Transistor
Yellow/Brown	Column 1	J137-1		Q98
Yellow/Red	Column 2	J137-2		Q97
Yellow/Orange	Column 3	J137-3		Q96
Yellow/Black	Column 4	J137-4		Q95
Yellow/Green	Column 5	J137-5		Q94
Yelow/Blue	Column 6	J137-6		Q93
Yellow/Violet	Column 7	J137-7	J136-2	Q92
Yellow/Gray	Column 8	J137-9		Q91
Red/Brown	Row 1	J133-1		Q90
Red/Black	Row 2	J133-2		Q89
Red /Orange	Row 3	J133-4		Q88
Red/Yellow	Row 4	J133-5		Q87
Red/Green	Row 5	J133-6		Q86
Red/Blue	Row 6	J133-7		Q85
Red/Violet	Row 7	J133-8		Q84
Red/Gray	Row 8	J133-9	J134-9	Q83

Solenoid Circuits

Connectors From Power Driver Board:

Wire Color	Function	To Backbox	To Playfield	Transistor
Violet/Brown	Solenoid 1, High Power		J130-1	Q82
Violet/Red	Solenoid 2, High Power		J130-2	Q80
Violet/Orange	Solenoid 3, High Power		J130-4	Q78
Violet/Yellow	Solenoid 4, High Power		J130-5	Q76
Violet/Green	Solenoid 5, High Power		J130-6	Q64
Violet/Blue	Solenoid 6, High Power		J130-7	Q66
Violet/Black	Solenoid 7, High Power		J130-8	Q68
Brown/Black	Solenoid 9, Low Power		J127-1	Q58
Brown/Red	Solenoid 10, Low Power		J127-3	Q56
Brown/Orange	Solenoid 11, Low Power		J127-4	Q54
Brown/Yellow	Solenoid 12, Low Power		J127-5	Q52
Brown/Green	Solenoid 13, Low Power		J127-6	Q50
Brown/Violet	Solenoid 15, Low Power		J127-8	Q46
Brown/Gray	Solenoid 16, Low Power		J127-9	Q44
Black/Brown	Sol. 17, Flasher 1, No Diode	J126-1	J125-1	Q42
Black/Red	Sol. 18, Flasher 2, No Diode	J126-2	J125-2	Q40
Black/Orange	Sol. 19, Flasher 3, No Diode	J126-3		Q38
Black/Yellow	Sol. 20, Flasher 4, No Diode	J126-4	J125-5	Q36
Blue/Green	Sol. 21, Special 1 Drive	J126-5	J125-6	Q28
Blue/Black	Sol. 22, Special 2 Drive	J126-6	J125-7	Q30
Blue/Violet	Sol. 23, Special 3 Drive	J126-7		Q34
Blue/Gray	Sol. 24, Special 4 Drive	J126-8		Q32
Blue/Brown	Sol. 25, Special 5 Drive		J122-1	Q26
Blue/Red	Sol. 26, Special 6 Drive	J123-3	J122-2	Q24
Blue/Orange	Sol. 27, Special 7 Drive	J123-4	J122-3	Q22
Blue/Yellow	Sol. 28, Special 8 Drive	J123-5	J122-4	Q20

Flipper Circuits

Connectors From Power Driver Board:

Wire Color	Function	To Playfield
Gray/Yellow	Left Flipper Power	J109-5
Blue/Yellow	Right Flipper Power	J109-7
Blue/Gray	Lower Left Flipper	J109-3
Blue/Violet	Lower Right Flipper	J109-4
Blue/Gray	Lower Left Flipper	J110-7
Blue/Violet	Lower Right Flipper	J110-6
Orange/Gray	Left Flipper Ground	J110-2,1
Orange/Violet	Right Flipper Ground	J110-4, 3

General Illumination Circuits

Connectors From Power Driver Board:

Wire Color	Function	To Playfield	To Cabinet	To Insert	Triac
Brown	Illum. String 1	J120-1			Q18
Orange	Illum. String 2	J120-2			Q10
Yellow	Illum. String 3	J120-3			Q14
Green	Illum. String 4			J121-5	Q16
Violet	Illum. String 5		J-119-3	J121-6	Q12
					Fuses
White/Brown	Return 1	J120-7			F110
White/Orange	Return 2	J120-8			F109
White/Yellow	Return 3	J120-9			F108
White/Green	Return 4			J121-10	F107
White/Violet	Return 5		J-119-1	J120-11	F106

Power Circuits

Connectorrs From Power Driver Board:

Wire Color	Function	To Cabinet	To Dot Matrix Controller	To Playfield	To CPU Board
Gray	Digital +5VDC		J117-4		J114-3,4
Gray/Green	Switch +12VDC				J114-1,2
Gray/Yellow	Analog +12VDC	J116-2	J117-2	J118-2	
Black	Ground	J116-3	J117-3	J118-3	J114-5,7

Power Circuits

Connectors From Power Driver Board

Wire Color	Function	To Playfield	To Insert
Violet/Yellow	High Power 50V	J107-3	
Violet/Orange	Low Power 50V	J107-2	
Violet/Green	Continuous Duty	Not Used	
Red	Flasher 20V	Not Used	
Red/White	Flasher 20V	J107-6	
White/Blue	50VAC	Not Used	
White/Blue	50VAC	Not Used	
Black	Ground	Not Used	

Logic Circuits

Wire Color	Function	
Ribbon Cable	Data	J201 To/From Dot Matrix Controller
Ribbon Cable	Data	J202 To/From Sound Board & Dot Matrix Controller
Ribbon Cable	Data	J204 Not Used

		Connectors From Power Driver Board
Black	Ground	J210-1
Black	Ground	J210-3
Gray	+5VDC	J210-4
Gray	+5VDC	J210-5
Gray/Green	+12VDC	J210-6
Gray/Green	+12VDC	J210-7
Ribbon Cable	Data	J211

INTERBOARD WIRING

Display Circuits

Wire Color	Function	To:	From: CPU Bd.	From: Sound Bd.
Ribbon Cable	Data	J601	J202	J506
Ribbon Cable	Data	J602	201	
Ribbon Cable	Data	J603 To/From Dot Matrix Display/Driver Board		

		Connector to Dot Matrix Display/Driver		
Orange	-125V	J604-1		
Blue	-113V	J604-2		
Black	Ground	J604-4		
Black	Ground	J604-5		
Gray	+5V	J604-6		
Gray/Yellow	+12V	J604-7		
Brown	+62V	J604-8		

		Connector to Transformer (AC)		
White	80VAC	J605-1		
White	80VAC	J605-2		
Violet	100VAC	J605-3		
Violet	100VAC	J605-5		

		Connector From Power Driver Board		
Black	Ground	J606-1		
Black	Ground	J606-3		
Gray	+5V	J606-4		
Gray	+5V	J606-5		
Gray/Yellow	+12V	J606-6		
Gray/Yellow	+12V	J606-7		

Sound Circuits

Wire Color	Function		
Ribbon Cable	Data	J506 To/From CPU Board & Dot Matrix Controller	

		Connector From Transformer Secondary	
Gray/Green	+12VDC	J501-1	
Gray/Green	+12VDC	J501-2	
Gray	+5VDC	J501-4	
Gray	+5VDC	J501-5	
Gray/White	-12VDC	J501-6	
Gray/White	-12VDC	J501-7	

		Power From CPU/Power Driver Board	
Gray	+5VDC	J502-1	
Gray	+5VDC	J502-3	
Black	Ground	J502-4	
Black	Ground	J502-5	

		Cabinet Speaker Connection	
Black/Yellow	Speaker	J504-2	

		Backbox Speaker Connection	
Black/Yellow	Speaker	J505-3	

Lamp Matrix

Yellow (B+) — ⊗ —►|— Red

Column / Row	1 Yellow-Brown J138-1 Q98	2 Yellow-Red J138-2 Q97	3 Yellow-Orange J138-3 Q96	4 Yellow-Black J138-4 Q95	5 Yellow-Green J138-5 Q94	6 Yellow-Blue J138-6 Q93	7 Yellow-Violet J138-7 Q92	8 Yellow-Gray J138-9 Q91
1 Red-Brown J133-1 Q90	End Zone 11	5 Million 21	Party Animals 31	Big Bang 41	Dance Contest 51	Request 61	Right Fuel 1 71	Left End Zone 81
2 Red-Black J133-2 Q89	Extra Ball 12	Boppers 1 Million 22	Party Monster 32	Fuel 1 42	Left Fuel 1 52	Time 62	Right Fuel 2 72	Right End Zone 82
3 Red-Orange J133-4 Q88	Shoot Again 13	10X Playfield 23	Party Dudes 33	Fuel 2 43	Left Fuel 2 53	Make A Request 63	Right Fuel 3 73	Comic 1 83
4 Red-Yellow J133-5 Q87	Ramp Eat 14	Special 24	EDM Qual. 1 34	Fuel 3 44	Left Fuel 3 54	Be Merry 64	Drink 74	Comic 2 84
5 Red-Green J133-6 Q86	2X Playfield 15	Jet Equal Million 25	EDM Qual. 2 35	Fuel 4 45	Way 55	Bonus 5X 65	Left Bopper 75	Comic 3 85
6 Red-Blue J133-7 Q85	HA 1 16	Bop B 26	EDM Qual. 3 36	Fuel 5 46	Out 56	Bonus 10X 66	Right Bopper 76	D.J. Eject 86
7 Red-Violet J133-8 Q84	HA 2 17	Bop O 27	EDM Qual. 4 37	Fuel 6 47	Of 57	Bonus 15X 67	Bottom Bopper 77	Not Used 87
8 Red-Gray J133-9 Q83	HA 3 18	Bop P 28	EDM Qual. 5 38	Fuel 7 48	Control 58	Bonus 20X 68	Credit Button 78	Not Used 88

Switch Matrix

White ——►|—✓•— Green

Dedicated Grounded Switches

Orange-Brown (1) J205-1 Left Coin Chute D1	
Orange-Red (2) J205-2 Center Coin Chute D2	
Orange-Black (3) J205-3 Right Coin Chute D3	
Orange-Yellow (4) J205-4 4th Coin Chute D4	
Orange-Green (5) J205-6 Normal Function / Test Function, Service Credits / Escape D5	
Orange-Blue (6) J205-7 Normal Function / Test Function, Volume Down / Down D6	
Orange-Violet (7) J205-8 Normal Function / Test Function, Volume Up / Up D7	
Orange-Gray (8) J205-9 Normal Function / Test Function, Begin Test / Enter D8	

Column / Row	1 Green-Brown J206-1 U20-18	2 Green-Red J206-2 U20-17	3 Green-Orange J206-3 U20-16	4 Green-Yellow J206-4 U20-15	5 Green-Black J206-5 U20-14	6 Green-Blue J206-6 U20-13	7 Green-Violet J206-7 U20-12	8 Green-Gray J206-8 U20-11
1 White-Brown J206-1 U18-11	Right Flipper 11	Slam Tilt 21	Back Ramp Switch 31	Back Ball Popper 41	Head Opto 1 51	Shooter Lane 61	Cottage Entrance 71	Way 81
2 White-Red J206-2 U18-9	Left Flipper 12	Coin Door Closed 22	Not Used 32	Right Ball Popper 42	Head Opto 2 52	Lane To Top 62	Enter Left Ramp 72	Out 82
3 White-Orange J206-3 U18-5	Start Button 13	Ticket Opto 23	Not Used 33	Left Jet Bumper 43	Head Opto 3 53	Out Of Control 63	Left Ozone 73	Of 83
4 White-Yellow J206-4 U18-7	Plumb Bob Tilt 14	Always Closed 24	EDM Qual. 1 34	Right Jet Bumper 44	Left Return Lane 54	Top Rebound 64	Right Ozone 74	Control 84
5 White-Green J206-5 U19-11	Not Used 15	Not Used 25	EDM Qual. 2 35	Bottom Jet Bumper 45	Left Drain 55	Skill Shot 65	Outhole 75	2nd Cottage Switch 85
6 White-Blue J206-7 U19-9	HA 1 16	Bop B 26	EDM Qual. 3 36	Not Used 46	End Zone Target 56	Request 66	Trough 1 76	Not Used 86
7 White-Violet J206-8 U19-5	HA 2 17	Bop O 27	EDM Qual. 4 37	Not Used 47	Right Return Lane 57	D.J. Eject 67	Trough 2 77	Not Used 87
8 White-Gray J206-9 U19-7	HA 3 18	Bop P 28	EDM Qual. 5 38	Not Used 48	Right Drain 58	Time 68	Trough 3 78	Not Used 88

WARNINGS & NOTICES

CAUTION: Transport this game ONLY with hinged backbox DOWN!