

*Bally*

MARCH 1997  
16-10488

# **NBA<sup>®</sup>**

# **FASTBREAK<sup>™</sup>**

The manufacturer intends that this game is to be operated for amusement purposes only and not in contravention of any federal, state or local law or regulation of the United States or any foreign country governing gaming devices. All operators of this game are responsible for its operation in accordance with such laws and regulations. The manufacturer's factory settings for this game may require adjustment in order to comply with laws applicable in an operator's specific jurisdiction. It is the operator's responsibility to determine whether adjustments are necessary and, if they are, to make the appropriate adjustments prior to operating the amusement game.



## OPERATIONS HANDBOOK

Williams Electronics Games, Inc., 3401 N. California Avenue, Chicago, IL 60618

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## MENU SYSTEM OPERATION

The Main Menu allows you to choose from several options, which in turn lead to other menus to choose from. To access the Main Menu open the coin door, press the Begin Test button, then the Enter button. Press the Up and Down buttons to scroll through the Main Menu. To access a menu, (Bookkeeping, Printouts, etc.), from the Main Menu, press the Enter button. To return to the Main Menu (from Bookkeeping, Printouts, etc.) press the Escape button. Press the Start button for HELP.

### MAIN MENU

#### B. BOOKKEEPING MENU

B.1 Main Audits	Press Escape
B.2 Earning Audits	To move out of a menu selection.
B.3 Standard Audits	
B.4 Feature Audits	Press Enter
B.5 Histograms	To get into a menu selection.
B.6 Time-Stamp	*

#### P. PRINTOUTS MENU

P.1 Earnings Data	Press Up
P.2 Main Audits	Increases sequence; Example A.1, A.2, A.3, A.4.
P.3 Standard Audits	Press Down
P.4 Feature Audits	Decreases sequence; Example A.4, A.3, A.2, A.1.
P.5 Score Histograms	
P.6 Time Histograms	Use Up or Down to cycle through the selections in a menu.
P.7 Time-Stamp	
P.8 All Data	

#### T. TEST MENU

T.1 Switch Edges Test	Use Escape and Enter to move into and out of the selected menu.
T.2 Switch Levels Test	
T.3 Single Switches Test	
T.4 Solenoid Test	
T.5 Flasher Test	
T.6 General Illumination Test	
T.7 Sound and Music Test	
T.8 Single Lamp Test	
T.9 All Lamps Test	
T.10 Lamp and Flasher Test	
T.11 Display Test	
T.12 Flipper Coil Test	
T.13 Ordered Lamps Test	
T.14 Lamp Row-Col.	
T.15 DIP Switch Test	
T.16 Motor Test	
T.17 Backbox Test	
T.18 Empty Balls Test	

#### U. UTILITIES MENU

U.1 Clear Audits
U.2 Clear Coins
U.3 Reset H.S.T.D.
U.4 Set Time and 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

#### A. ADJUSTMENT MENU

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

## Lamp Locations

Item No.	Lamp Assembly Part Number	Bulb Part Number	Socket Part Number	Description
11	A-21547	24-8768	24-8767	20 POINTS
12	A-21547	24-8768	24-8767	FREE THROW
13	A-21547	24-8768	24-8767	3 POINTS
14	A-21547	24-8768	24-8767	2 POINTS
15	A-21547	24-8768	24-8767	FIELD GOALS
16	A-21547	24-8768	24-8767	MULTIBALLS
17	A-21547	24-8768	24-8767	SHOOT AROUND
18	A-21547	24-8768	24-8767	AROUND THE WORLD
21	A-21547	24-8768	24-8767	POWER HOOPS
22	A-21547	24-8768	24-8767	FASTBREAK COMBO
23	A-21547	24-8768	24-8767	ALLEY OOP COMBO
24	A-21547	24-8768	24-8767	SLAM DUNK COMBO
25	A-21547	24-8768	24-8767	COMBOS
26	A-21547	24-8768	24-8767	TROPHY
27	A-21547	24-8768	24-8767	TIP-OFF COMBO
28	A-21547	24-8768	24-8767	STADIUM GOODIES
31	A-21548	24-8768	24-8767	MULTIBALL HOOPS
32	A-21548	24-8768	24-8767	RUN & SHOOT HOOPS
33	A-21548	24-8768	24-8767	HOOK SHOT HOOPS
34	A-21548	24-8768	24-8767	HALF COURT HOOPS
35	A-21548	24-8768	24-8767	LIGHT TIP-OFF
36	A-21548	24-8768	24-8767	RIGHT "IN THE PAINT"
37	A-21548	24-8768	24-8767	SHOO(T)
38	A-17835*	24-8549	----	LEFT RETURN LANE
41	A-21548	24-8768	24-8767	CHAMPION RING 1
42	A-21548	24-8768	24-8767	CHAMPION RING 2
43	A-21548	24-8768	24-8767	RIGHT RETURN LANE
44	A-21548	24-8768	24-8767	CHAMPION RING 4
45	A-21548	24-8768	24-8767	CHAMPION RING 3
46	A-21548	24-8768	24-8767	LOWER RIGHT STANDUP
47	A-21548	24-8768	24-8767	UPPER RIGHT STANDUP
48	A-17835*	24-8549	----	LEFT OUTLANE
51	A-21549	24-8768	24-8767	SODA
52	A-21549	24-8768	24-8767	QUESTION
53	A-21549	24-8768	24-8767	HOT DOG
54	A-21549	24-8768	24-8767	PIZZA
55	A-21549	24-8768	24-8767	CRAZY BOB'S
56	A-21549	24-8768	24-8767	EXTRA BALL
57	A-17807	24-8549	A-17806	RIGHT OUTLANE
58	A-17807	24-8549	A-17806	SHOOT AGAIN
61**	A-21551	24-8768	24-8767	RAMPS: 3 POINTS (1 OF 2)
61**	A-21549	24-8768	24-8767	RAMPS: 3 POINTS (2 OF 2)
62	A-21549	24-8768	24-8767	TIP-OFF
63	A-21549	24-8768	24-8767	FASTBREAK
64	A-21549	24-8768	24-8767	ALLEY OOP
65	A-21549	24-8768	24-8767	FREE THROW
66	A-21549	24-8768	24-8767	SH(O)T
67	A-21582*	24-8768	----	IN THE PAINT 4
68	A-21581*	24-8768	----	IN THE PAINT 3
71	A-21551	24-8768	24-8767	LEFT LIGHT FASTBREAK
72	A-21551	24-8768	24-8767	SLAM DUNK
73	A-21551	24-8768	24-8767	S(H)OOT
74	A-21322	24-8768	24-8767	RIGHT LIGHT FASTBREAK
75	A-21322	24-8768	24-8767	LIGHT SLAM DUNK
76	A-21322	24-8768	24-8767	SHO(O)T
77	A-21579*	24-8768	----	IN THE PAINT 1
78	A-21580*	24-8768	----	IN THE PAINT 2
81	A-21322	24-8768	24-8767	LIGHT ALLEY OOP
82	A-21322	24-8768	24-8767	LEFT "IN THE PAINT"
83	A-21322	24-8768	24-8767	(S)HOOT
84	A-17835*	24-8768	----	(3) PT.
85	A-17835*	24-8768	----	3 (P)T.
86	A-17835*	24-8768	----	3 P(T)
87	20-10327-4	SOLD AS ASSEMBLY ONLY		BALL LAUNCH
88	20-9663-16	SOLD AS ASSEMBLY ONLY		START BUTTON

\* SOCKET IS NOT SOLD SEPARATELY.

\*\* ITEM #61 LIGHTS TWO BULBS WHICH ARE LOCATED ON SEPARATE LAMP BOARDS.

24-8549 = #44 Bulb    24-8768 = #555

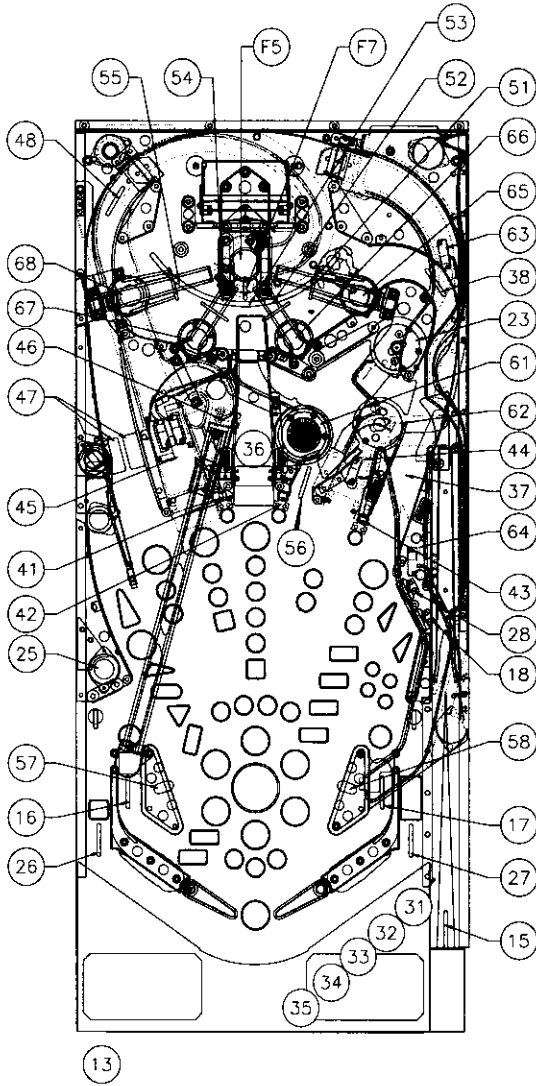


## Switch Locations

Item No.	Switch Assembly Part Number <i>OR</i> Opto Assembly Part Number	Switch Part Number	Description
F1	----	SW-1A-194	LOWER RIGHT FLIPPER E.O.S.
F2	A-17316	----	LOWER RIGHT FLIPPER CABINET
F3	----	SW-1A-194	LOWER LEFT FLIPPER E.O.S.
F4	A-17316	----	LOWER LEFT FLIPPER CABINET
F5	A-16908 (LED)	----	BASKET MADE
	A-16909 (PHOTO TRANS)	----	
F6	NOT USED	----	UPPER RIGHT FLIPPER CABINET
F7	----	5647-12693-04	BASKET HOLD
F8	NOT USED	----	UPPER LEFT FLIPPER CABINET
11	20-10327-4	----	BALL LAUNCH
12	A-21710	5647-12693-19	BACKBOX BASKET
13	20-9683-16	----	START BUTTON
14	----	04-10346	PLUMB BOB TILT
15	A-17791	5647-12693-32	SHOOTER LANE
16	A-17813	5647-12693-19	LEFT RETURN LANE
17	A-17813	5647-12693-19	RIGHT RETURN LANE
18	A-18019-6	----	LOWER RIGHT STANDUP TARGET
21	A-17238	----	SLAM TILT
22	----	5643-09269-00	COIN DOOR CLOSED
23	A-16443-1	SW-11A-37-1	RIGHT-JET BUMPER
24	----	5643-15190-00	ALWAYS CLOSED
25	----	5647-12693-66	EJECT HOLE
26	A-17813	5647-12693-19	LEFT OUTLANE
27	A-17813	5647-12693-19	RIGHT OUTLANE
28	A-18019-6	----	UPPER RIGHT STANDUP TARGET
31	A-18617-1 (LED)	----	TROUGH ELECT
	A-18618-1 (PHOTO TRANS)	----	
32	A-18617-1 (LED)	----	TROUGH BALL 1
	A-18618-1 (PHOTO TRANS)	----	
33	A-18617-1 (LED)	----	TROUGH BALL 2
	A-18618-1 (PHOTO TRANS)	----	
34	A-18617-1 (LED)	----	TROUGH BALL 3
	A-18618-1 (PHOTO TRANS)	----	
35	A-18617-1 (LED)	----	TROUGH BALL 4
	A-18618-1 (PHOTO TRANS)	----	
36	A-16908 (LED)	----	CENTER RAMP OPTO
	A-16909 (PHOTO TRANS)	----	
37	A-16908 (LED)	----	RIGHT LOOP ENTER OPTO
	A-16909 (PHOTO TRANS)	----	
38	A-17813	5647-12693-19	RIGHT LOOP EXIT
41	A-17799-3	----	STANDUP TARGET '3'
42	A-18530-3	----	STANDUP TARGET 'P'
43	A-18530-3	----	STANDUP TARGET 'T'
44	----	20-10293	RIGHT RAMP ENTER
45	----	20-10448	LEFT RAMP ENTER
46	A-21729	5647-12693-21	LEFT RAMP MADE
47	----	20-10293	LEFT LOOP ENTER
48	A-17813	5647-12693-19	LEFT LOOP MADE
51	A-21402	----	DEFENDER POSITION 4
52	A-21402	----	DEFENDER POSITION 3
53	A-21402	----	DEFENDER LOCK POSITION
54	A-21402	----	DEFENDER POSITION 2
55	A-21402	----	DEFENDER POSITION 1
56	A-19289	5647-12693-33	JET BALL DRAIN
57	A-17800 (KICK)	SW-1A-114	LEFT SLINGSHOT
	A-17794 (**SCORE)	SW-1A-120	
58	A-17800 (KICK)	SW-1A-114	RIGHT SLINGSHOT
	A-17794 (**SCORE)	SW-1A-120	
61	A-16443-1	SW-11A-37-1	LEFT JET BUMPER
62	A-16443-1	SW-11A-37-1	MIDDLE JET BUMPER
63	----	20-10293	LEFT LOOP RAMP EXIT
64	----	20-10293	RIGHT RAMP MADE
65	----	5467-12693-66	IN THE PAINT 4
66	----	5467-12693-66	IN THE PAINT 3
67	----	5467-12693-66	IN THE PAINT 2
68	----	5467-12693-66	IN THE PAINT 1

71 to 88 NOT USED  
 \*NOT SHOWN. \*\*SCORE SWITCHES HAVE DIODES ATTACHED.

## Switch Locations



## Solenoid/Flashlamp Locations

Item No.	Coil or Flasher Assembly Part Number	Coil or Flasher Part Number	Description
01	A-21553	AE-24-900	Auto Plunger
02	NOT USED		
03	A-21531	AE-26-1500	Left Ramp Diverter
04	A-21530	AE-26-1500	Right Loop Diverter
05	A-21405-1	AE-30-2000	Eject
06	A-17796	A-14406	Loop Gate
07	A-21717	FL-11753	Backbox Flipper*
08	A-21520	B-13522	Bell Catch Magnet
09	A-19963-1	AE-28-1500	Trough Eject
10	B-6362-R-3	AE-26-1200	Left Slingshot
11	B-6362-R-3	AE-26-1200	Right Slingshot
12	A-9415-3	AE-28-1200	Left Jet Bumper
13	A-9415-2	AE-26-1200	Middle Jet Bumper
14	A-9415-2	AE-26-1200	Right Jet Bumper
15	A-21411-2	AE-29-2000	Pass Right 2
16	A-21411-2	AE-29-2000	Pass Left 2
17	----	#906	Eject Kickout Flasher
18	----	#906	Left Jet Bumper Flasher
19	----	#906	Upper Left Flasher
	----	#906	Insert Panel Flasher*
20	----	#906	Upper Right Flasher
	----	#906	Insert Panel Flasher*
21	NOT USED		
22	C-13375	#906	Trophy Insert Flasher
23	NOT USED		
24	----	#906	Lower Right & Left Flashers
25	A-21411-1	AE-29-2000	Pass Right 1
26	A-21411-3	AE-29-2000	Pass Left 3
27	A-21411-3	AE-29-2000	Pass Right 3
28	A-21411-4	AE-29-2000	Pass Left 4

### Flippers

Item No.	Coil or Flasher Assembly Part Number	Coil or Flasher Part Number	Description
29-30	A-14876-F	FL-11630	Lower Right Flipper
31-32	A-15849-L	FL-11630	Lower Left Flipper
33	A-21411-1	AE-23-800	Shoot 1
34	A-21411-2	AE-23-800	Shoot 2
35	A-21411-3	AE-23-800	Shoot 3
36	A-21411-4	AE-23-800	Shoot 3

### Motor and Shot Clock

Item No.	Assembly Part Number	PC Board Part Number	Device Part Number	Description
37	A-21413	C-13963-1	14-8034	Motor Enable
38	A-21413	C-13963-1	14-8043	Motor Direction
39	A-21393	A-21399	A-21380	Shot Clock Enable
40	A-21393	A-21399	A-21380	Shot Clock Count

### General Illumination

Item No.	Bulb Number	Description
01	#44 / #555	String 1
02	#44 / #555	String 2
03	#44 / #555	String 3
04	#44	String 4
05	#44 / #555	String 5

24-6548 = #44 BULB

24-6768 = #555 BULB

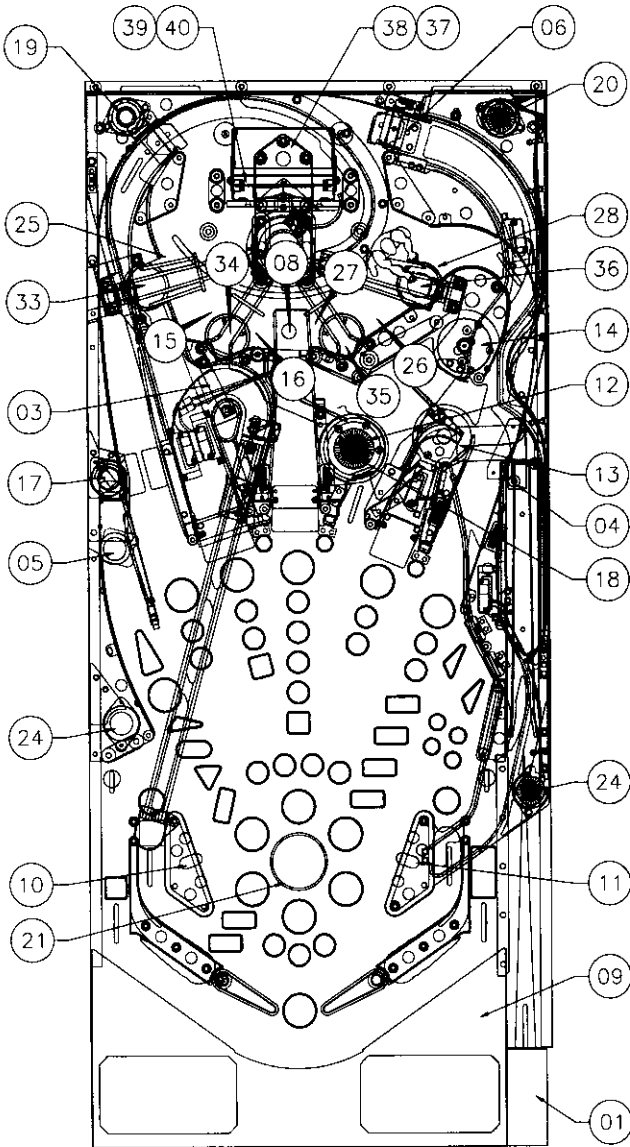
24-6802 = #906 BULB

\*IN BACKBOX

\*\* NOT SHOWN



### Solenoid/Flashlamp Locations



## Upper Playfield Parts

Item No.	Description	Not Shown:	
1	A-21553 Auto Fire Assembly	A-14265-13	Receptacle & Skirt - clear
2	20-10110-15 Flipper Bat & Shaft	03-8633	Level Mount
3	A-17811 Kicker Assembly	03-9678-1	*Full Playfield Mylar
	A-17801 Kicker Switch Assembly	03-9678-2 to -9	Drop Area Mylars
4	A-18019-6 Yellow Standup Target	20-6500	Steel Balls (4)
5	A-18530-3 Purple Oblong Standup Target	20-9691	Level
6	A-21696 Ball Guide #6	31-1357-50053	Backglass Translite
7	04-10750 Ball Guide #7	31-2815	Screened Bottom Arch
8	A-13123-1 Jet Bumper - no bulb	31-2816.1	Basket Ball
9	A-21530 Loop Diverter Assembly	36-50053	Screened Hardcoat Playfield
	01-14625 Diverter Blade		
10	12-7367 Ball Guide #4		
11	A-20432-3 Jet Bumper - #906 bulb		
12	12-7369.2 Ball Guide #8		
13	12-7373-3 Wire Basket		
14	B-91414-3 Jet Bumper - #555 bulb		
15	04-10695 Ball Guide #2		
16	12-7373-1 Wire Basket		
17	A-21529 Basket Assembly		
	A-21691 Switch Assembly		
18	A-21408 Right Ramp		
	20-10293 Reed Switch		
19	A-21584 Back Panel Assembly		
20	A-21393 Backboard Assembly		
	A-21399 LED Driver Assembly		
	A-21380 LED Display Assembly		
21	A-21407 Hook Assembly		
22	12-7372 Ball Guide #12		
23	12-7373-1 Wire Basket		
24	12-7373-2 Wire Basket		
25	04-10730 Ball Guide #9		
26	12-7371 Ball Guide #10		
27	A-21680 Ball Guide #5		
28	A-21531 Left Ramp Diverter Assembly		
	04-10725 Diverter Blade		
29	20-10293 Reed Switch		
30	12-7374.1 Crazy Bob's Wireform		
31	04-10701 Ball Guide #11		
32	A-21570 Plastic Assembly		
33	A-21532 Rolled Ramp Assembly		
34	20-10110-5 Flipper Bat & Shaft		
35	A-17811 Kicker Assembly		
	A-17801 Kicker Switch Assembly		
36	A-17793-3 Purple Round Standup Target		
37	A-21406 Center Ramp		
	A-21555 Opto Switch Assembly		
38	A-21556 Right Loop Opto Assembly		

\*The NBA FASTBREAK hardcoat playfield does not require a full mylar. However, mylars can be purchased through your local Bally Distributor.

### PLAYER ONE CONSISTS OF:

A-21411-1	Pass Assembly #1
A-21579	Player #1 Assembly
12-7373-1	Wire Basket

### PLAYER TWO CONSISTS OF:

A-21411-2	Pass Assembly #2
A-21580	Player #2 Assembly
12-7373-2	Wire Basket

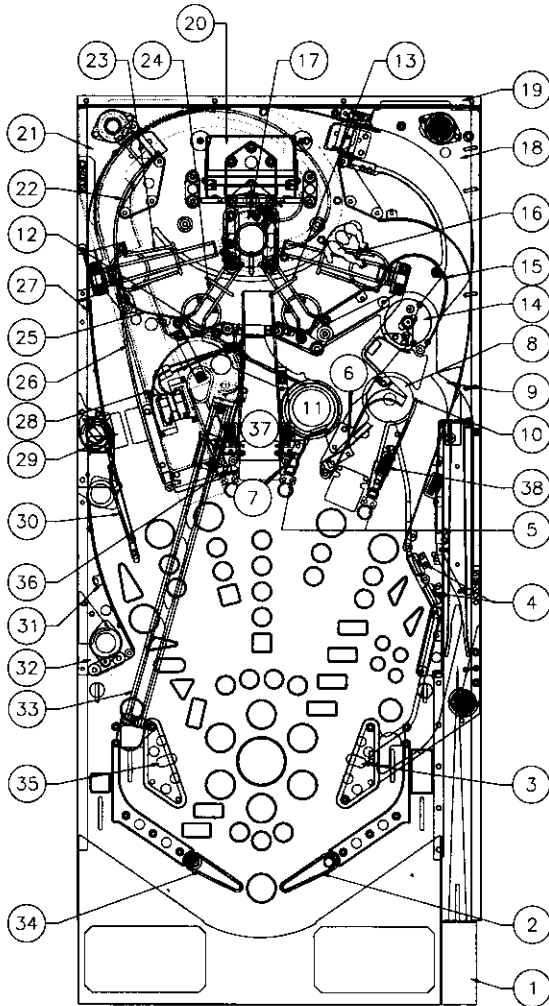
### PLAYER THREE CONSISTS OF:

A-21411-3	Pass Assembly #3
A-21581	Player Assembly #3
12-7373-3	Wire Basket

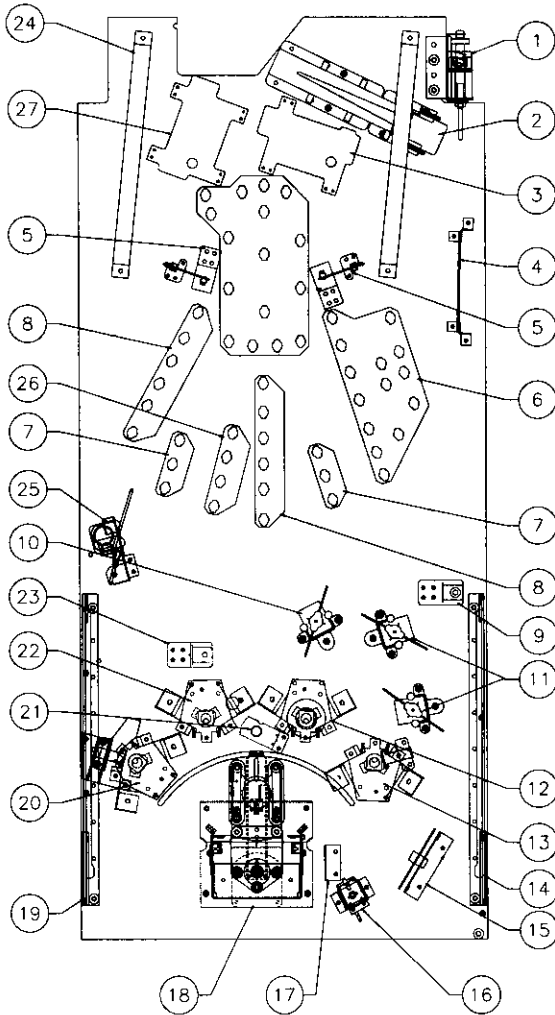
### PLAYER FOUR CONSISTS OF:

A-21411-4	Pass Assembly #4
A-21582	Player Assembly #4
12-7373-1	Wire Basket

## Upper Playfield Parts Locations



## Lower Playfield Parts Locations

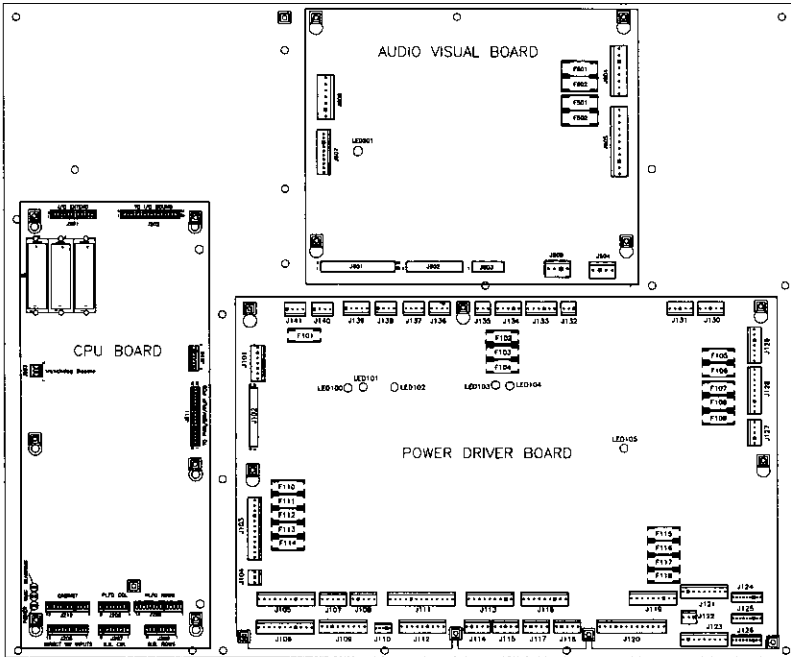


*(Underside of Playfield, Viewed in Raised Position)*

## Lower Playfield Parts

Item	Part Number	Description
1	A-21553	Auto Fire Assembly
2	A-19963-1	Ball Trough Assembly Complete
3	A-14876-R	Flipper Assembly
4	A-15595	7-Opto PCB w/Bracket
5	B-9362-R-3	Coil & Bracket Assembly (2)
6	A-21548	14-Lamp PCB Assembly
7	A-21322	3-Lamp PCB Assembly (2)
8	A-21549	6-Lamp PCB Assembly
9	A-21530	Loop Diverter Assembly
10	A-9415-3	Jet Bumper Coil Assembly
11	A-9415-2	Jet Bumper Coil Assembly(2)
12	A-21411-3	Pass Assembly #3
13	A-21411-4	Pass Assembly #4
14	A-17749.1-2	Playfield Slide Assy., Right
15	A-21691	Basket Switch Assembly
16	A-17796	Ball Gate Actuator Assembly
17	A-21568	High Driver PCB Assembly
18	A-21413	Defender Assembly
19	A-17749.1-1	Playfield Slide Assy., Left
20	A-21411-1	Pass Assembly #1
21	A-21520	Magnet Assembly
22	A-21411-2	Pass Assembly #2
23	A-21531	Hook Diverter Assembly
24	01-11781	Support Bracket Assembly
25	A-21405-1	NBA Eject Assembly
26	A-21551	4-Lamp PCB Assembly
27	A-15849-L	Flipper Assembly

## LED LIST



### CPU BOARD

- LED 201 Blanking
- LED 202 Power
- LED 203 Diagnostics

At game turn-on, LED 201 and LED 202 are on, LED 203 is off. During normal operation LED 201 is off, LED 202 is on, and LED 203 is flashing.

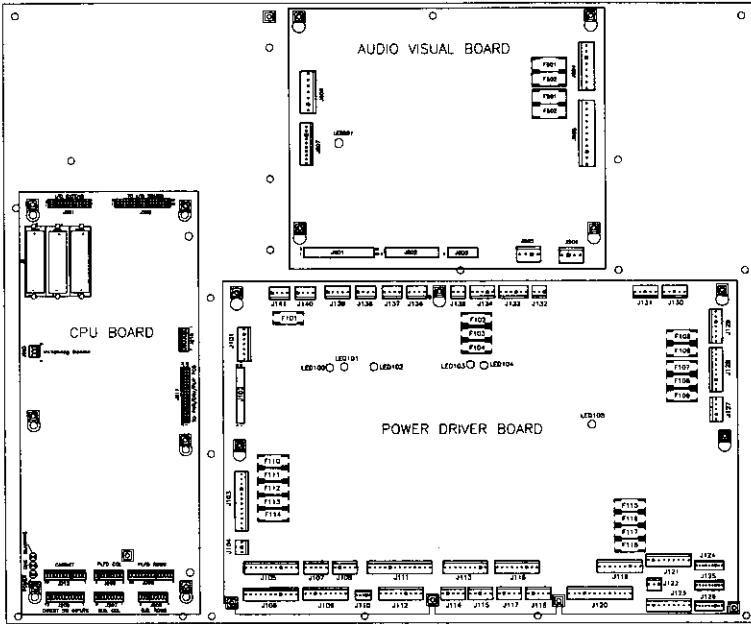
### AUDIO VISUAL BOARD

- LED 501 +5VDC, Normally flashing, but at a slower rate than LED 203.

### POWER DRIVER BOARD

- LED 100 +12VDC Regulated, Normally On
- LED 101 +5VDC Digital, Normally On
- LED 102 +18VDC Lamps, Normally On
- LED 103 +12VDC Unregulated, Normally On
- LED 104 +20VDC Flashlamps, Normally On
- LED 105 +50VDC Coils, Normally On

## FUSE LIST



### AUDIO VIDEO BOARD

Loc.	Description	Part Number	Value
F501	-25V	5731-14532-00	T2.5A, 250V
F502	+25V	5731-14532-00	T2.5A, 250V
F601	+62V	5731-14533-00	T0.25A, 250V
F602	-113V & -125V	5731-14533-00	T0.25A, 250V

### CPU BOARD

There are no fuses on the CPU board.

### POWER DRIVER BOARD

Loc.	Description	Part Number	Value	Loc.	Description	Part Number	Value
F101	Regulated 12V	5731-14531-00	T0.63A, 250V	F110	G.I. #5 WHT-VIO	5731-14530-00	T4.0A, 250V
F102	Solenoid #25 to #28	5731-14530-00	T4.0A, 250V	F111	G.I. #4 WHT-GRN	5731-14530-00	T4.0A, 250V
F103	Solenoid #1-#8	5731-14530-00	T4.0A, 250V	F112	G.I. #3 WHT-YEL	5731-14530-00	T4.0A, 250V
F104	Solenoid #9 to #16	5731-14530-00	T4.0A, 250V	F113	G.I. #2 WHT-ORG	5731-14530-00	T4.0A, 250V
F105	+5V Logic	5731-14530-00	T4.0A, 250V	F114	G.I. #1 WHT-BRN	5731-14530-00	T4.0A, 250V
F106	+18V Lamp Matrix	5731-14046-00	T5.0A, 250V	F115	+50V Flippers	5731-14530-00	T4.0A, 250V
F107	Flasher Secondary	5731-14530-00	T4.0A, 250V	F116	+50V Flippers	5731-14530-00	T4.0A, 250V
F108	Solenoid Secondary	5731-14529-00	T6.3A, 250	F117	+50V Flippers	5731-14530-00	T4.0A, 250V
F109	Unregulated 12V	5731-14530-00	T4.0A, 250V	F118	+50V Flippers	5731-14530-00	T4.0A, 250V

### LINE FILTER

Loc.	Part Number	Value
Foreign	5731-14530-00	T4.0A, 250V
Domestic	5731-14046-00	T5.0A, 250V

# LAMP MATRIX

Yellow (B+)  Red

Column \ Row	1 Red-Brown J125-1 Q104	2 Yellow-Red J121-2 Q100	3 Yellow-Orange J121-3 Q95	4 Yellow-Black J121-4 Q93	5 Yellow-Green J121-5 Q94	6 Yellow-Blue J121-6 Q96	7 Yellow-Violet J121-7 Q93	8 Yellow-Gray J121-9 Q97
1 Red-Brown J125-1 Q104	20 POINTS 11	POWER HOOPS 21	MULTIBALL HOOPS 31	CHAMPION RING 1 41	SODA 51	RAMPS: 3 POINTS (2) 61	LEFT LIGHT FASTBREAK 71	LIGHT ALLEY OOP 81
2 Red-Black J125-2 Q108	FREE THROW 12	FASTBREAK COMBO 22	RUN & SHOOT HOOPS 32	CHAMPION RING 2 42	QUESTION 52	TIP-OFF 62	SLAM DUNK 72	LEFT "IN THE PAINT" 82
3 Red-Orange J125-4 Q103	3 POINTS 19	ALLEY OOP COMBO 23	HOOK SHOT HOOPS 33	RIGHT RETURN LANE 43	HOT DOG 53	FASTBREAK 63	S(H)OOT 73	(S)HOOT 83
4 Red-Yellow J125-5 Q107	2 POINTS 14	SLAM DUNK COMBO 24	HALF COURT HOOPS 34	CHAMPION RING 4 44	PIZZA 54	ALLEY OOP 64	RIGHT LIGHT FASTBREAK 74	(3)PT 84
5 Red-Green J125-6 Q102	FIELD GOALS 15	COMBOS 25	LIGHT TIP-OFF 35	CHAMPION RING 3 45	CRAZY BOB'S 55	FREE THROW 65	LIGHT SLAM DUNK 75	3(P)T 85
6 Red-Blue J125-7 Q106	MULTIBALLS 16	TROPHY 26	RIGHT "IN THE PAINT" 36	LOWER RIGHT STANDUP 46	EXTRA BALL 56	SH(O)OT 66	SHO(O)T 76	3P(T) 86
7 Red-Violet J125-8 Q101	SHOOT AROUND 17	TIP-OFF COMBO 27	SHOO(T) 37	UPPER RIGHT STANDUP 47	RIGHT OUTLANE 57	IN THE PAINT 4 67	IN THE PAINT 1 77	BALL LAUNCH 87
8 Red-Gray J125-9 Q105	AROUND THE WORLD 18	STADIUM GOODIES 28	LEFT RETURN LANE 38	LEFT OUTLANE 48	SHOOT AGAIN 58	IN THE PAINT 3 68	IN THE PAINT 2 78	START BUTTON 88

J1XX = Power Driver Board



# 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-Gray J206-8 U20-11	Flipper Grounded Switches
Orange-Brown J206-1 Left Coin Chute U17-3	D1	1 White-Brown J206-1 U18-11	BALL LAUNCH	SLAM TILT	STANDUP TARGET 'V'	STANDUP TARGET 'P'	LEFT JET BUMPER	NOT USED	NOT USED	Black-Green J206-13 Lower Right Flipper E.O.S.
Orange-Red J206-2 Center Coin Chute U17-7	D2	2 White-Red J206-2 U18-9	BACKBOX BASKET	COIN DOOR CLOSED	STANDUP TARGET 'P'	STANDUP TARGET 'V'	MIDDLE JET BUMPER	NOT USED	NOT USED	Black-Blue J206-12 Lower Left Flipper E.O.S.
Orange-Black J206-3 Right Coin Chute U17-11	D3	3 White-Orange J206-3 U18-5	START BUTTON	RIGHT JET BUMPER	STANDUP TARGET 'T'	STANDUP TARGET 'V'	LEFT LOOP RAMP EXIT	NOT USED	NOT USED	Black-Blue J206-12 Lower Left Flipper E.O.S.
Orange-Yellow J206-4 Left Coin Chute U17-9	D4	4 White-Yellow J206-4 U18-7	PLUMB TILT	ALWAYS CLOSED	RIGHT RAMP ENTER	RIGHT RAMP ENTER	RIGHT RAMP MADE	NOT USED	NOT USED	Black-Blue J206-12 Lower Left Flipper E.O.S.
Orange-Green J206-5 Normal Function Test Function Set Coin	D5	5 White-Green J206-5 U19-11	SHOOTER LANE	EJECT HOLE	LEFT RAMP ENTER	LEFT RAMP ENTER	IN THE PAINT 4	NOT USED	NOT USED	Black-Blue J206-12 Lower Left Flipper E.O.S.
Orange-Blue J206-6 Normal Function Test Function Vulcanize Disc	D6	6 White-Blue J206-6 U19-9	LEFT RETURN LANE	LEFT OUTLANE	LEFT RAMP MADE	JETS BALL DRAIN	IN THE PAINT 3	NOT USED	NOT USED	Black-Blue J206-12 Lower Left Flipper E.O.S.
Orange-Violet J206-7 Normal Function Test Function Antenna Up	D7	7 White-Violet J206-7 U19-5	RIGHT RETURN LANE	RIGHT OUTLANE	LEFT LOOP ENTER	LEFT SLINGSHOT	IN THE PAINT 2	NOT USED	NOT USED	Black-Gray J206-11 Basket Hold
Orange-Gray J206-8 Normal Function Test Function Right Test	D8	8 White-Gray J206-8 U19-7	LOWER RIGHT STANDUP TARGET	UPPER RIGHT STANDUP TARGET	RIGHT LOOP EXIT	LEFT LOOP MADE	RIGHT SLINGSHOT	IN THE PAINT 1	NOT USED	Black-Gray J206-11 Basket Hold

J2XX = CPU BOARD      [Symbol] = OPTO, TYPICALLY CLOSED

## SOLENOID/FLASHER TABLE

Sol. No.	Function	Solenoid Type	Voltage Connections		Drive Xistor	Drive Connections		Drive Wire Color	Solenoid Part Number			
			Playfield	Backbox Cabinet		Playfield	Backbox Cabinet		Flashlamp Type	Playfield Backbox		
01	AUTO PLUNGER	High Power	J133-2		Q72	J116-1		VIO-BRN	AE-24-900			
02	NOT USED	High Power			Q88			VIO-RED				
03	LEFT RAMP DIVERTER	High Power	J133-2		Q71	J118-4		VIO-ORG	AE-28-1500			
04	RIGHT LOOP DIVERTER	High Power	J133-2		Q87	J118-5		VIO-YEL	AE-28-1500			
05	EJECT	High Power	J133-2		Q70	J116-6		VIO-GRN	AE-30-2000			
06	LOOP GATE	High Power	J133-2		Q86	J116-7		VIO-BLU	A-14406			
07	BACKBOX FLIPPER	High Power		J133-2	Q89		J117-3	VIO-BLK		FL-11753		
08	BALL CATCH MAGNET	High Power	J133-2		Q85	J118-9		VIO-GRY	B-13522			
09	TROUGH EJECT	Low Power	J133-3		Q44	J113-1		BRN-BLK	AE-28-1500			
10	LEFT SLINGSHOT	Low Power	J133-3		Q48	J113-3		BRN-RED	AE-28-1200			
11	RIGHT SLINGSHOT	Low Power	J133-3		Q43	J113-4		BRN-ORG	AE-28-1200			
12	LEFT JET BUMPER	Low Power	J133-3		Q47	J113-5		BRN-YEL	AE-28-1200			
13	MIDDLE JET BUMPER	Low Power	J133-3		Q42	J113-6		BRN-GRN	AE-28-1200			
14	RIGHT JET BUMPER	Low Power	J133-3		Q46	J113-7		BRN-BLU	AE-28-1200			
15	PASS RIGHT 2	Low Power	J133-3		Q41	J113-8		BRN-VIO	AE-29-2000			
16	PASS LEFT 2	Low Power	J133-3		Q45	J113-9		BRN-GRY	AE-29-2000			
17	EJECT KICKOUT FLSHR	Flasher	J133-6		Q28	J111-1		BLK-BRN	#906 (1)			
18	LEFT JET BUMPER FLSHR	Flasher	J133-6		Q32	J111-2		BLK-RED	#906 (1)			
19	UPPER LEFT FLASHER	Flasher	J133-6	J134-5	Q27	J111-3	J112-3	BLK-ORG	#906 (1)	#906 (1)		
20	UPPER RIGHT FLASHER	Flasher	J133-6	J134-5	Q31	J111-4	J112-5	BLK-YEL	#906 (1)	#906 (1)		
21	NOT USED	Flasher			Q26			BLK-GRN				
22	TROPHY INSERT FLSHR	Flasher	J133-6		Q30	J111-6		BLU-BLK	#906 (1)			
23	NOT USED	Flasher			Q25			BLU-VIO				
24	LOWER RIGHT/LEFT FLSH	Flasher	J133-6		Q29	J111-8		BLU-GRY	#906 (2)			
25	*PASS RIGHT 1	Gen. Purpose	J133-1		Q16	J109-1		BLU-BRN	AE-29-2000			
26	*PASS LEFT 3	Gen. Purpose	J133-1		Q15	J109-2		BLU-RED	AE-29-2000			
27	*PASS RIGHT 3	Gen. Purpose	J133-1		Q14	J109-3		BLU-ORG	AE-29-2000			
28	*PASS LEFT 4	Gen. Purpose	J133-1		Q13	J109-4		BLU-YEL	AE-29-2000			
<b>General Illumination</b>												
01	STRING 1	G.I.	J106-1	J105-1	Q5	J108-7	J105-7	WHT-BRN	#44	#555		
02	STRING 2	G.I.	J106-2	J105-2	Q4	J108-8	J105-8	WHT-ORG	#44	#555		
03	STRING 3	G.I.	J106-3	J105-3	Q3	J108-9	J105-9	WHT-YEL	#44	#555		
04	*STRING 4	G.I.	J106-5		Q2	J108-10		WHT-GRN	#44			
05	*STRING 5	G.I.	J106-6	J105-6	J104-3	Q1	J108-11	J105-11	J104-1	WHT-VIO	#44	#555
<b>Flipper Circuits</b>												
		Solenoid Type	Voltage Connection	Playfield	Drive Xistors Power Hold	Drive Connections Playfield	Drive Wire Colors Power Hold	Coil Part No.	Coil Colors			
29	LOWER RIGHT FLIPPER	Lwr. Rt. Power	J119-1 (RED-GRN)	Q90	Q92	J120-13	YEL-GRN	ORG-GRN	FL-11630	RED		
30	LOWER LEFT FLIPPER	Lwr. Rt. Hold	J119-1 (RED-GRN)	Q87	Q89	J120-9	YEL-BLU	ORG-BLU	FL-11630	RED		
31	LOWER LEFT FLIPPER	Lwr. Lt. Hold	J119-4 (RED-BLU)	Q89	Q89	J120-7	ORG-BLU					
33	SHOOT 1	Upr. Rt. Power	J119-6 (RED-VIO)	Q84	Q86	J120-5	YEL-VIO		AE-23-900			
34	SHOOT 2	Upr. Rt. Hold	J119-6 (RED-VIO)	Q86	Q86	J120-4	ORG-VIO		AE-23-900			
35	SHOOT 3	Upr. Lt. Power	J119-8 (RED-GRY)	Q81		J120-3	YEL-GRY		AE-23-900			
36	SHOOT 4	Upr. Lt. Hold	J119-8 (RED-GRY)	Q83	Q83	J120-1	ORG-GRY		AE-23-900			
<b>Motor &amp; Shot Clock Circuits</b>												
		Solenoid Type	Voltage Connections	Playfield	Drive Gates	Drive Connections	Playfield	Drive Wire Color	Device Part Number	Playfield		
37	MOTOR ENABLE	Low Power	J139-2		U3A, U3B	J110-1		BRN-WHT	14-8034			
38	MOTOR DIRECTION	Low Power	J139-2		U3C, U3D	J110-3		ORG-WHT	14-8034			
39	SHOT CLOCK ENABLE	Low Power	J139-2		U3G, U3H	J110-4		YEL-WHT	A-21380			
40	SHOT CLOCK COUNT	Low Power	J139-2		U3E, U3F	J110-5		BLU-WHT	A-21380			

J1XX = POWER DRIVER BOARD

24-6549 = #44 BULB; 24-8704 = #89 BULB; 24-8768 = #555 BULB; 24-8802 = #906 BULB

\*TIEBACK DIODES FOR SOLENOIDS 25 THROUGH 28 ARE AT J109-5, J109-6, J109-8, AND J109-9 RESPECTIVELY.

\*\*THESE G.I. STRINGS DO NOT BRIGHTEN AND DIM, THEY ARE ALWAYS ON.



## WARNINGS & NOTICES

### WARNING

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This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

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**CAUTION: Transport this Game ONLY  
With the Hinged Backbox DOWN!**