

FIVE STAR REDEMPTION

Raptor Capture OPERATION MANUAL

April 22nd, 2002



Features

- Bright Attention Grabbing Graphics & Cabinet
- Hot looking Lights
- Exciting Super Fast Skill Stop
- Oversized Highly Reliability Buttons
- Operator Programmable

Specifications

Parameter	Value	Units
Voltage	115	VAC
Frequency	60	HZ
Weight	200	Pounds

Overview

Raptor Capture consists of a lighted Dinosaur panel with a gun. The player console has a gun for shooting, two numeric displays for game play, speakers for sound effects, two coin acceptors, and a ticket dispenser for winners. The objective is to skillfully shoot the ball into the colored dinosaur hoops or cups to obtain the highest point values.

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Game Play

Raptor Capture offers very fast and interesting play with many different strategies for maximizing points.

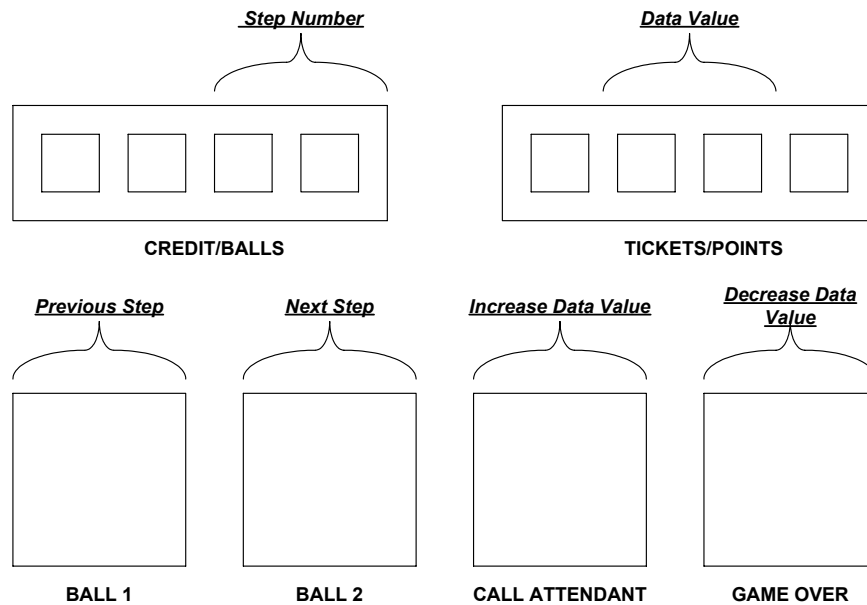
The objective is to skillfully shoot the ball into a cup, a stationary or swinging hoop to obtain points. The player can obtain jackpot points when they have landed or gone through a specific combination of dinosaur colors.

Tickets may be dispensed during or after game play, and Jackpots are only awarded at the game end.

Game Operator Options

Maintenance Mode allows the Game Operator the option of programming the Game by entering data through the Control Panel, which is located on the game's cabinet. This mode includes viewing the game's statistical data, running diagnostics, and changing game play values.

MAINTENANCE MODE BUTTONS



GOING INTO MAINTENANCE MODE

Pressing the *Maintenance Mode* button for ½ second or greater allows the operator to go into *Maintenance Mode*. The operator can view, run diagnostics or change games play values. Pressing this button a second time allows the operator to exit.

VIEWING THE STATISTICAL INFORMATION

Pressing the *Game 1 Button* will decrement the *Step Number*, and pressing the *Game 2 Button* will increase the *Step Number*.

STEP #	DESCRIPTION
0	Number of Coins Taken In (Lifetime)
1	Number of Coins Taken In (Since Last Reset)

CHANGING OR VIEWING MISCELLANEOUS SETTINGS

Press Call *Attendant* button to increase the value, or Press the *Game Over* button to decrease the value.

STEP #	DESCRIPTION
10	Number of Coins Required to Play Game 1
11	Number of Coins Required to play Game 2
12	Number of Coins Required to Play Game 3
13	Number of Balls for Game 1
14	Number of Balls for Game 2
15	Number of Balls for Game 3
16	Maximum Number of Balls Allowed Per Game
17	Number of Seconds Attraction Audio is On Per cycle
18	Number of Seconds Attraction Audio is Off per Cycle
19	Maximum Number of tickets that will dispense before calling Attendant
20	Ticket Dispensed After Last Ball or Dispense Tickets after Shooting Ball
21	Number of Seconds Before Returning to Attraction After Game Over
22	Number of Seconds Between Loading Balls During Attraction
23	The Spinner Speed in RPM's
24	The Spinner Percentage

RESETTING THE STATISTICS

Pressing the *Call Attendant* button will execute the reset.

STEP #	DESCRIPTION
30	Reset Statistics

RUNNING THE DIAGNOSTICS

Pressing the *Game 1 Button* will decrement the *Step Number*, and pressing the *Game 2 Button* will increase the *Step Number*.

STEP #	DESCRIPTION
31	Display the Value and Light Associated for the sensor that is blocked

Press the flashing Call Attendant button to execute each diagnostic.

32	Status of Ramp full, Gun loaded, Tickets lows, and tickets out sensors
33	Dispense Tickets
34	Load a ball by rotating the turntable.
35	Control Trough Gate Motor and Display Status of the Trough sensor.

CHANGING OR VIEWING THE PLAYING FIELD POINTS

Press Call *Attendant* button to increase the value, or Press the *Game Over* button to decrease the value.

STEP #	DESCRIPTION
40	Points for Green Paw (Y1)
41	Points for Pink Paw (P1)
42	Points for Orange Paw (O1)
43	Points for Yellow Paw (Y1)
44	Points for Red Paw (R1)
45	Points for Cave #1
46	Points for Hole #1
47	Points for Hole #2
48	Points for Cave #2
49	Points for Volcano

CHANGING OR VIEWING JACKPOT POINTS

Press Call *Attendant* button to increase the value, or Press the *Game Over* button to decrease the value.

STEP #	DESCRIPTION
50	Jackpot #1 Points
51	Jackpot #2 Points
52	Jackpot #3 Points
53	Jackpot #4 Points

CHANGING OR VIEWING HOOP POINTS

Press Call *Attendant* button to increase the value, or Press the *Game Over* button to decrease the value.

STEP #	DESCRIPTION
54	Points for Hoop #1
55	Points for Hoop #2
56	Points for Hoop #3
57	Points for Hoop #4
58	Points for Hoop #5

CHANGING OR VIEWING CLOCK FACE POINTS

Press *Call Attendant* button to increase the value, or Press the *Game Over* button to decrease the value.

STEP #	DESCRIPTION
60	Points for 01:00 O'clock Position
61	Points for 02:00 O'clock Position
62	Points for 03:00 O'clock Position
63	Points for 04:00 O'clock Position
64	Points for 05:00 O'clock Position
65	Points for 06:00 O'clock Position
66	Points for 07:00 O'clock Position
67	Points for 08:00 O'clock Position
68	Points for 09:00 O'clock Position
69	Points for 10:00 O'clock Position
70	Points for 11:00 O'clock Position
71	Points for 12:00 O'clock Position

Appendix A Input/Output Signals

CPU AUXILIARY INPUTS

W4 – VTMUX BOARD P2 TO PUSHBUTTONS & MISC SWITCHES

Control Panel Output	Wire #	Auxiliary Inputs	To VTMUX Board Location
NOT USED	1	V+	JP2 PIN 1
GROUND	2	GROUND	JP2 PIN 2
CONNECTOR KEY	3	KEY	JP2 PIN 3
CONNECTOR KEY	4	KEY	JP2 PIN 4
MAINTENANCE MODE BUTTON	5	IN 1	JP2 PIN 5
TILT SWITCH	6	IN 2	JP2 PIN 6
COIN ACCEPTOR	7	IN 3	JP2 PIN 7
NOT USED	8	IN 4	JP2 PIN 8
OPEN DOOR SWITCH	9	IN 5	JP2 PIN 9
NOT USED	10	IN 6	JP2 PIN 10
NOT USED	11	IN 7	JP2 PIN 11
NOT USED	12	IN 8	JP2 PIN 12

W7 – VTMUX BOARD P3 TO PUSHBUTTON SWITCHES

Control Panel Outputs	Wire #	Auxiliary Inputs	To VTMUX Board Location
NOT USED	1	V+	JP3 PIN 1
GROUND	2	GROUND	JP3 PIN 2
CONNECTOR KEY	3	KEY	JP3 PIN 3
START BUTTON #1	4	IN 9	JP3 PIN 4
CONNECTOR KEY	5	KEY	JP3 PIN 5
START BUTTON # 2	6	IN 10	JP3 PIN 6
START BUTTON # 3	7	IN 11	JP3 PIN 7
NOT USED	8	IN 12	JP3 PIN 8
NOT USED	9	IN 13	JP3 PIN 9
NOT USED	10	IN 14	JP3 PIN 10
GAME OVER BUTTON	11	IN 15	JP3 PIN 11
CALL ATTENDANT BUTTON	12	IN 16	JP3 PIN 12

W90 – VTMUX BOARD P4 TO OPTO BOARD #1 P9

Control Panel Outputs	Wire #	Auxiliary Inputs	To VTMUX Board Location
12V	1	V+	JP4 PIN 1
GROUND	2	GROUND	JP4 PIN 2
CONNECTOR KEY	3	KEY	JP4 PIN 3
SENSOR CUP # 1	4	IN 17	JP4 PIN 4
SENSOR CUP #2	5	IN 18	JP4 PIN 5
CONNECTOR KEY	6	KEY	JP4 PIN 6
SENSOR CUP #3	7	IN 19	JP4 PIN 7
SENSOR CUP #4	8	IN 20	JP4 PIN 8
SENSOR CUP #5	9	IN 21	JP4 PIN 9
SENSOR CUP #6	10	IN 22	JP4 PIN 10
SENSOR CUP #7	11	IN 23	JP4 PIN 11
SENSOR CUP #8	12	IN 24	JP4 PIN 12

W91 – VTMUX BOARD P5 TO OPTO BOARD #2 P9

Inputs	Wire #	Auxiliary Inputs	To VTMUX Board Location
12V	1	V+	JP5 PIN 1
GROUND	2	GROUND	JP5 PIN 2
CONNECTOR KEY	3	KEY	JP5 PIN 3
SENSOR CUP #9	4	IN 25	JP5 PIN 4
SENSOR CUP #10	5	IN 26	JP5 PIN 5
SENSOR CUP #11	6	IN 27	JP5 PIN 6
CONNECTOR KEY	7	KEY	JP5 PIN 7
SENSOR CUP #12	8	IN 28	JP5 PIN 8
SENSOR CUP #12	9	IN 29	JP5 PIN 9
SENSOR CUP #14	10	IN 30	JP5 PIN 10
SENSOR CUP #15	11	IN 31	JP5 PIN 11
SENSOR CUP #16	12	IN 32	JP5 PIN 12

W95 – VTMUX BOARD P11 TO OPTO BOARD #3 P9

Inputs	Wire #	Auxiliary Inputs	To VTMUX Board Location
12V	1	V+	JP11 PIN 1
GROUND	2	GROUND	JP11 PIN 2
CONNECTOR KEY	3	KEY	JP11 PIN 3
SENSOR HOOP #17	4	IN 57	JP11 PIN 4
SENSOR HOOP #18	5	IN 58	JP11 PIN 5
SENSOR HOOP #19	6	IN 59	JP11 PIN 6
SENSOR HOOP #20	7	IN 60	JP11 PIN 7
SENSOR HOOP #21	8	IN 61	JP11 PIN 8
SENSOR HOOP #22	9	IN 62	JP11 PIN 9
SENSOR HOOP #23	10	IN 63	JP11 PIN 10
CONNECTOR KEY	11	KEY	JP11 PIN 11
SENSOR HOOP #24	12	IN 64	JP11 PIN 12

W96 – VTMUX BOARD P12 TO OPTO BOARD #4 P9

Inputs	Wire #	Auxiliary Inputs	To VTMUX Board Location
12V	1	V+	JP12 PIN 1
GROUND	2	GROUND	JP12 PIN 2
CONNECTOR KEY	3	KEY	JP12 PIN 3
BALL PRELOADED SENSOR	4	IN 65	JP12 PIN 4
GUN & TROUGH SENSOR	5	IN 66	JP12 PIN 5
TICKETS LOW SENSOR	6	IN 67	JP12 PIN 6
TICKETS OUT SENSOR	7	IN 68	JP12 PIN 7
RAMP FULL SENSOR	8	IN 69	JP12 PIN 8
NOT USED	6	IN 70	JP12 PIN 9
NOT USED	10	IN 71	JP12 PIN 10
NOT USED	11	IN 72	JP12 PIN 11
CONNECTOR KEY	12	KEY	JP12 PIN 12

CPU AUXILIARY OUTPUTS

W6 – VTMUX BOARD P16 TO MISC PANEL LIGHTS

Outputs	Wire #	Auxiliary Outputs	To VTMUX Board Location
CONNECTOR KEY	1	KEY	JP16 PIN 1
GROUND	2	GROUND	JP16 PIN 2
GROUND	3	GROUND	JP16 PIN 3
CONNECTOR KEY	4	KEY	JP16 PIN 4
START #1 BUTTON LIGHT	5	OUT 1	JP16 PIN 5
START #2 BUTTON LIGHT	6	OUT 2	JP16 PIN 6
START # 3 BUTTON LIGHT	7	OUT 3	JP16 PIN 7
NOT USED	8	OUT 4	JP16 PIN 8
NOT USED	6	OUT 5	JP16 PIN 9
NOT USED	10	OUT 6	JP16 PIN 10
GAME OVER LIGHT	11	OUT 7	JP16 PIN 11
CALL ATTENDANT LIGHT	12	OUT 8	JP16 PIN 12

W15 – VTMUX BOARD P17 CLOCKFACE LIGHTS 1 - 8

Outputs	Wire #	Auxiliary Outputs	To VTMUX Board Location
CONNECTOR KEY	1	KEY	JP17 PIN 1
GROUND	2	GROUND	JP17 PIN 2
GROUND	3	GROUND	JP17 PIN 3
CLOCKFACE #1	4	OUT 9	JP17 PIN 4
CONNECTOR KEY	5	KEY	JP17 PIN 5
CLOCKFACE #2	6	OUT 10	JP17 PIN 6
CLOCKFACE #3	7	OUT 11	JP17 PIN 7
CLOCKFACE #4	8	OUT 12	JP17 PIN 8
CLOCKFACE #5	6	OUT 13	JP17 PIN 9
CLOCKFACE #6	10	OUT 14	JP17PIN 10
CLOCKFACE #7	11	OUT 15	JP17 PIN 11
CLOCKFACE #8	12	OUT 16	JP17 PIN 12

W16 – VTMUX BOARD P18 CLOCKFACE LIGHTS 9 -12

Outputs	Wire #	Auxiliary Outputs	To VTMUX Board Location
CONNECTOR KEY	1	KEY	JP18 PIN 1
GROUND	2	GROUND	JP18 PIN 2
GROUND	3	GROUND	JP18 PIN 3
CLOCKFACE #9	4	OUT 17	JP18 PIN 4
CLOCKFACE #10	5	OUT 18	JP18 PIN 5
CONNECTOR KEY	6	KEY	JP18 PIN 6
CLOCKFACE #11	7	OUT 19	JP18 PIN 7
CLOCKFACE #12	8	OUT 20	JP18 PIN 8
NOT USED	6	OUT 21	JP18 PIN 9
NOT USED	10	OUT 22	JP18 PIN 10
NOT USED	11	OUT 23	JP18 PIN 11
NOT USED	12	OUT 24	JP18 PIN 12

W17 – VTMUX BOARD P22 HOOP LIGHTS

Outputs	Wire #	Auxiliary Outputs	To VTMUX Board Location
CONNECTOR KEY	1	KEY	JP22 PIN 1
GROUND	2	GROUND	JP22 PIN 2
GROUND	3	GROUND	JP22 PIN 3
HOOP #1	4	OUT 25	JP22 PIN 4
HOOP #2	5	OUT 26	JP22 PIN 5
HOOP #3	6	OUT 27	JP22 PIN 6
CONNECTOR KEY	7	KEY	JP22 PIN 7
HOOP #4	8	OUT 28	JP22 PIN 8
HOOP #5	6	OUT 29	JP22 PIN 9
HOOP #6	10	OUT 30	JP22 PIN 10
NOT USED	11	OUT 31	JP22 PIN 11
NOT USED	12	OUT 32	JP22 PIN 12

W18 – VTMUX BOARD P23 DINOSAUR LIGHTS WITH JACKPOT LIGHT

Outputs	Wire #	Auxiliary Outputs	To VTMUX Board Location
CONNECTOR KEY	1	KEY	JP23 PIN 1
GROUND	2	GROUND	JP23 PIN 2
GROUND	3	GROUND	JP23 PIN 3
DINO YELLOW	4	OUT 33	JP23 PIN 4
DINO ORANGE	5	OUT 34	JP23 PIN 5
DINO PINK	6	OUT 35	JP23 PIN 6
DINO GREEN	7	OUT 36	JP23 PIN 7
CONNECTOR KEY	8	KEY	JP23 PIN 8
DINO RED	6	OUT 37	JP23 PIN 9
NOT USED	10	OUT 38	JP23 PIN 10
NOT USED	11	OUT 39	JP23 PIN 11
SUPER JACKPOT	12	OUT 40	JP23 PIN 12

W19 – VTMUX BOARD P24 PLAYFIELD LIGHTS 1-8

Inputs	Wire #	Auxiliary Inputs	To VTMUX Board Location
CONNECTOR KEY	1	KEY	JP24 PIN 1
GROUND	2	GROUND	JP24 PIN 2
GROUND	3	GROUND	JP24 PIN 3
PLAYFIELD #1	4	OUT 41	JP24PIN 4
PLAYFIELD #2	5	OUT 42	JP24 PIN 5
PLAYFIELD #3	6	OUT 43	JP24 PIN 6
PLAYFIELD #4	7	OUT 44	JP24 PIN 7
PLAYFIELD #5	8	OUT 45	JP24 PIN 8
CONNECTOR KEY	9	KEY	JP24 PIN 9
PLAYFIELD #6	10	OUT 46	JP24 PIN 10
PLAYFIELD #7	11	OUT 47	JP24 PIN 11
PLAYFIELD #8	12	OUT 48	JP24 PIN 12

W20 – VTMUX BOARD P29 PLAYFIELD LIGHTS 9-10

Inputs	Wire #	Auxiliary Inputs	To VTMUX Board Location
CONNECTOR KEY	1	KEY	JP29 PIN 1
GROUND	2	GROUND	JP29 PIN 2
GROUND	3	GROUND	JP29 PIN 3
PLAYFIELD #9	4	OUT 49	JP29PIN 4
PLAYFIELD #10	5	OUT 50	JP29 PIN 5
NOT USED	6	OUT 51	JP29 PIN 6
NOT USED	7	OUT 52	JP29 PIN 7
NOT USED	8	OUT 53	JP29 PIN 8
NOT USED	9	OUT 54	JP29 PIN 9
CONNECTOR KEY	10	KEY	JP29 PIN 10
NOT USED	11	OUT 55	JP29 PIN 11
NOT USED	12	OUT 56	JP29 PIN 12

W26 – VTMUX BOARD P29 PLAYFIELD LIGHTS 9-10

Inputs	Wire #	Auxiliary Inputs	To VTMUX Board Location
CONNECTOR KEY	1	KEY	JP29 PIN 1
GROUND	2	GROUND	JP29 PIN 2
GROUND	3	GROUND	JP29 PIN 3
PLAYFIELD #9	4	OUT 49	JP29PIN 4
PLAYFIELD #10	5	OUT 50	JP29 PIN 5
NOT USED	6	OUT 51	JP29 PIN 6
NOT USED	7	OUT 52	JP29 PIN 7
NOT USED	8	OUT 53	JP29 PIN 8
NOT USED	9	OUT 54	JP29 PIN 9
CONNECTOR KEY	10	KEY	JP29 PIN 10
NOT USED	11	OUT 55	JP29 PIN 11
NOT USED	12	OUT 56	JP29 PIN 12

W24 - VTMUX BOARD P25 TO SMALL DISPLAY

Outputs	Display Outputs	From CPU Board Location
NOT CONNECTED	GROUND	JP25-1
SMALL DISPLAY ENABLE	DISP 0E1	JP25-2
SMALL DISPLAY CLK	DISP CLK	JP25-3
SMALL DISPLAY NOT CONNECTED	V+	JP25-4
SMALL DISPLAY VPP & VLED	VCC	JP25-5
SMALL DISPLAY NOT CONNECTED	DISP STB1	JP25-6
SMALL DISPLAY DATA	DISP DATA1	JP25-7
GROUND	GROUND	JP25-8

W25 - VTMUX BOARD P26 TO SMALL DISPLAY

NOT CONNECTED	GROUND	JP26-1
SMALL DISPLAY ENABLE	DISP 0E2	JP26-2
SMALL DISPLAY CLK	DISP CLK	JP26-3
SMALL DISPLAY NOT CONNECTED	V+	JP26-4
SMALL DISPLAY VPP & VLED	VCC	JP26-5
SMALL DISPLAY NOT CONNECTED	DISP STB2	JP26-6
SMALL DISPLAY DATA	DISP DATA2	JP26-7
GROUND	GROUND	JP26-8

Appendix B Wiring Diagrams

to LV over

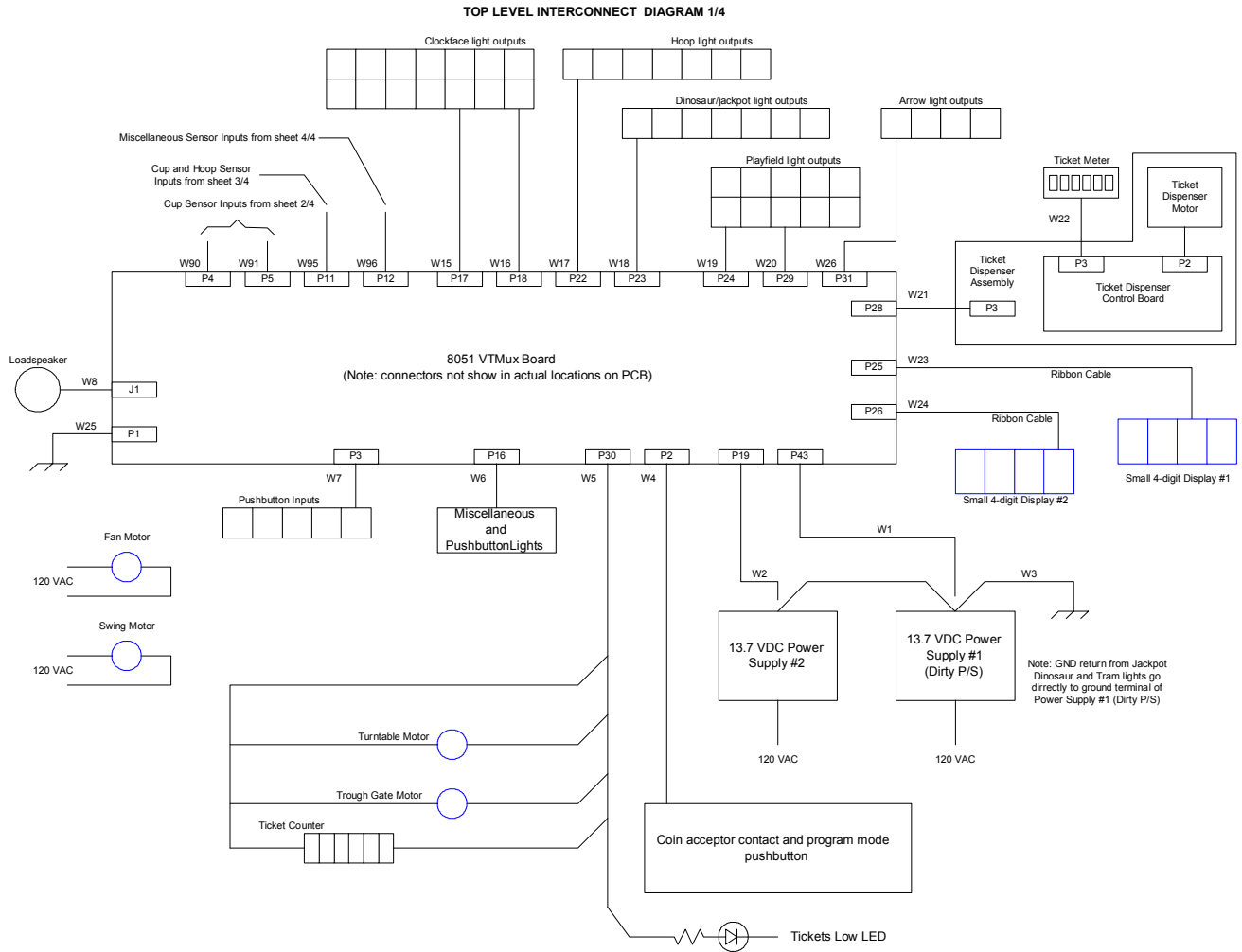


DIAGRAM 1 – TOP LEVEL INTERCONNECT DIAGRAM

APPENDIX B WIRING DIAGRAMS

TOP LEVEL INTERCONNECT DIAGRAM 2/4

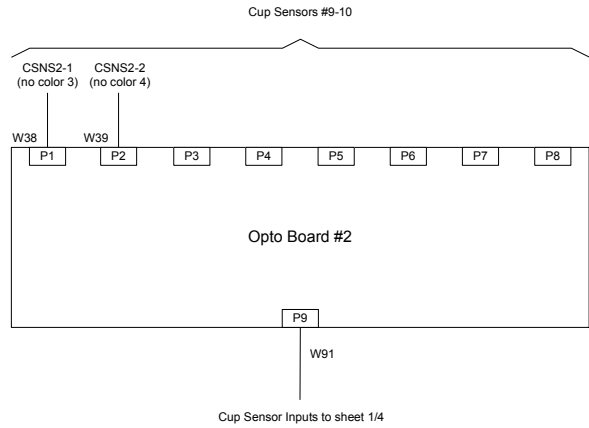
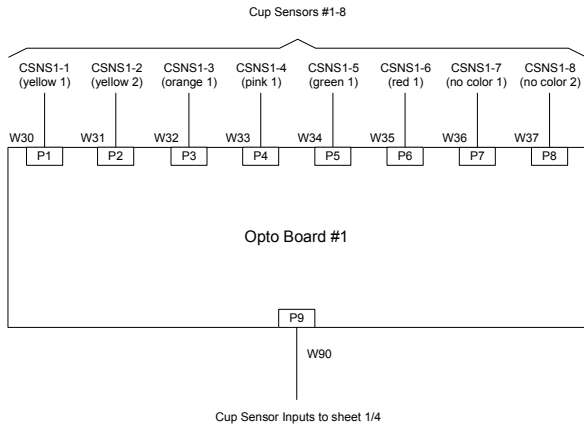


DIAGRAM 2 – TOP LEVEL INTERCONNECT DIAGRAM 2/4

TOP LEVEL INTERCONNECT DIAGRAM 3/4

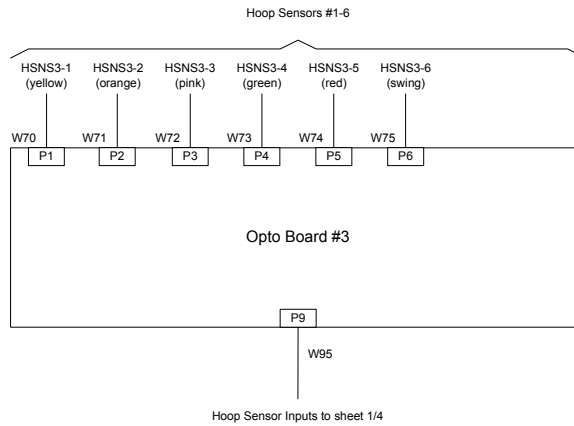


DIAGRAM 3 – TOP LEVEL INTERCONNECT DIAGRAM 3/4

WIRING DIAGRAMS APPENDIX B

TOP LEVEL INTERCONNECT DIAGRAM 4/4

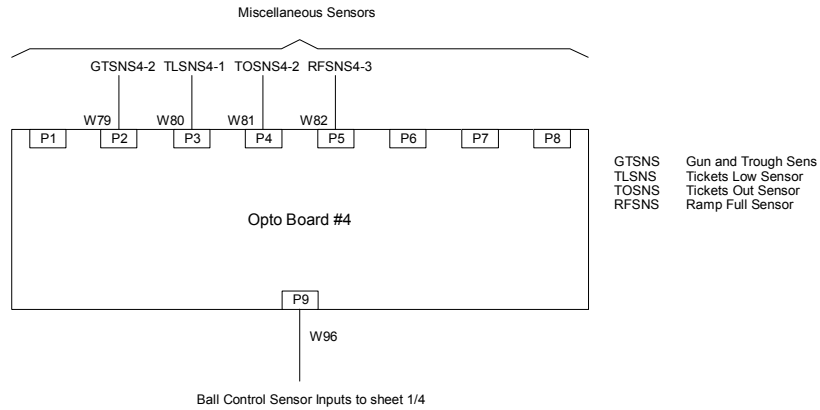


DIAGRAM 4 – TOP LEVEL INTERCONNECT DIAGRAM 4/4

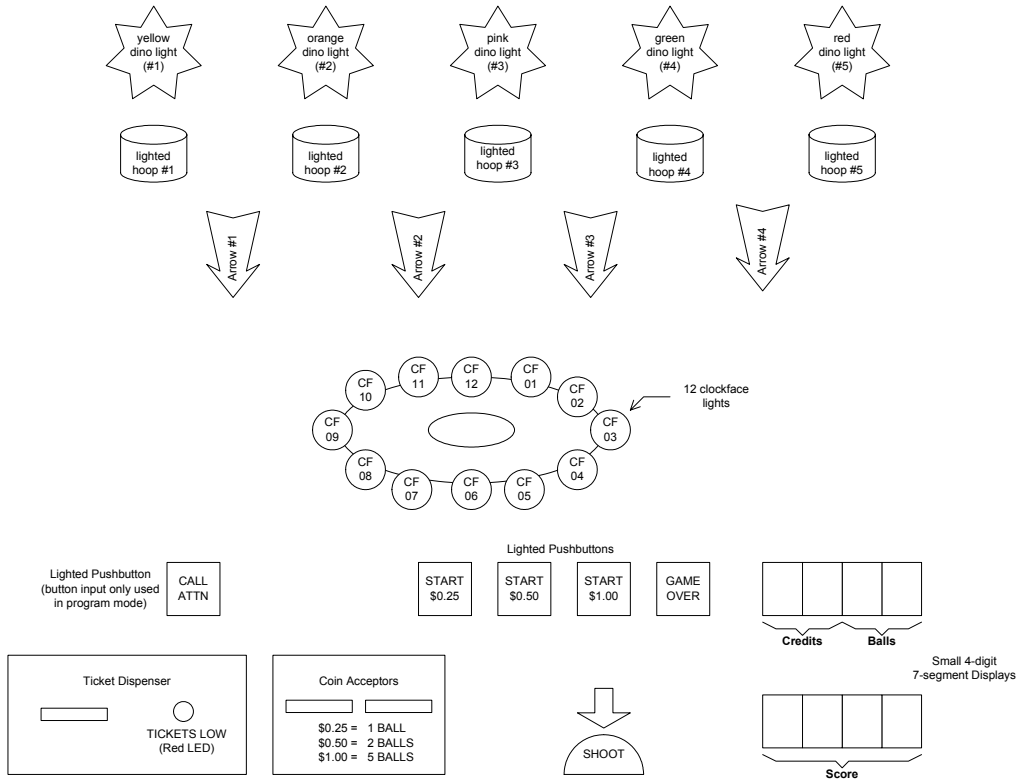


DIAGRAM 5 – FUNCTIONAL COMPONENTS

WIRING DIAGRAMS APPENDIX B

PLAYING FIELD

Legend:

- GREEN PAW opto board #1 P1
- PINK PAW opto board #1 P2
- ORANGE PAW opto board #1 P3
- YELLOW PAW opto board #1 P4
- RED PAW opto board #1 P5
- CAVE #1 opto board #1 P6
- HOLE #1 opto board #1 P7
- HOLE #2 opto board #1 P8
- CAVE #2 opto board #2 P1
- VOLCANO opto board #2 P2

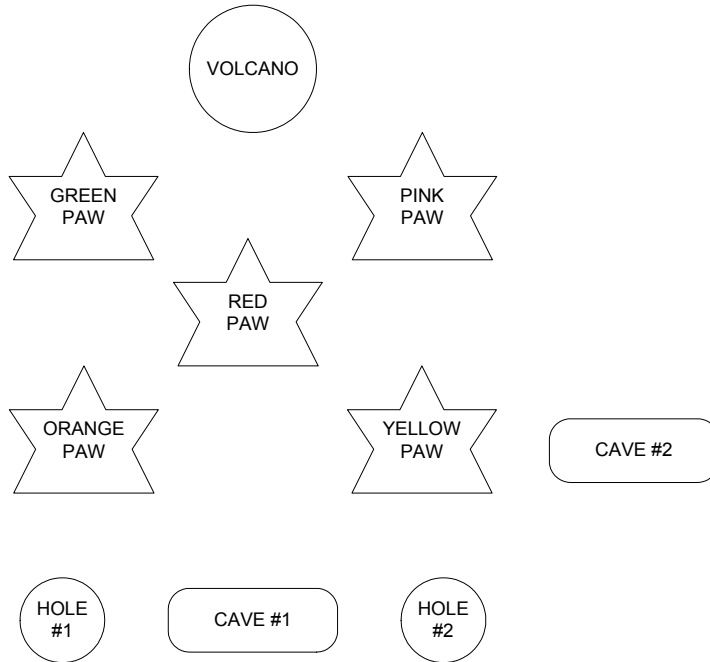


DIAGRAM 6 - PLAYFIELD LAYOUT

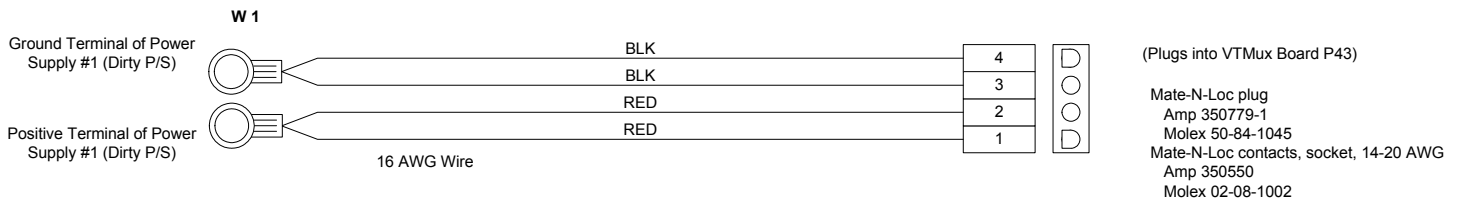


FIGURE 1 – W1 (13.7 VDC POWER SUPPLY TO 8051 VTMUX BOARD P43)

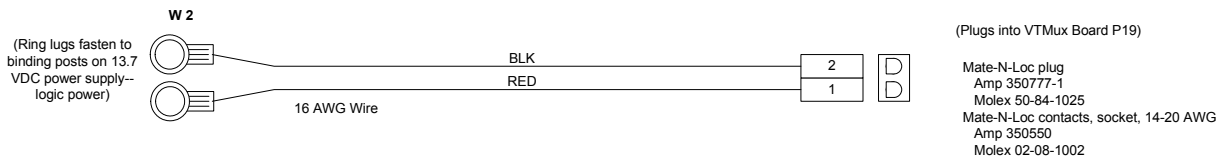


FIGURE 2 – W2 (13.7 VDC POWER SUPPLY TO 8051 VTMUX BOARD P19)

WIRING DIAGRAMS APPENDIX B

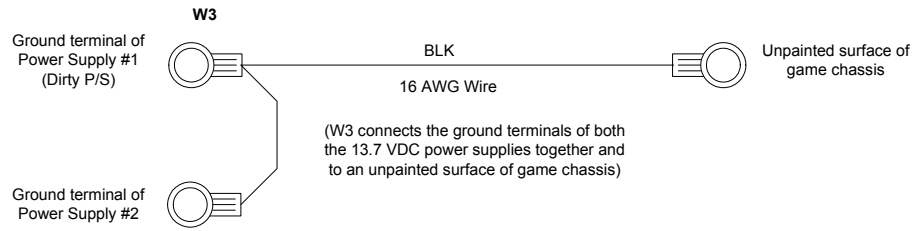


FIGURE 3 -W3 (13.7 VDC POWER SUPPLY AND CHASSIS GROUND)

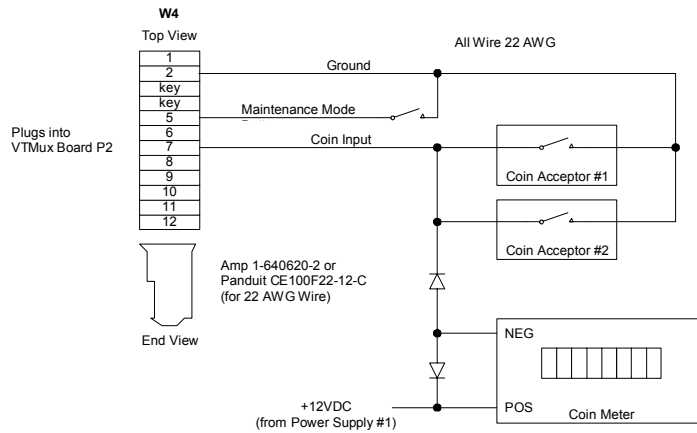


FIGURE 4 - W4 (TO MAINTENANCE MODE AND COIN ACCEPTOR SWITCHES)

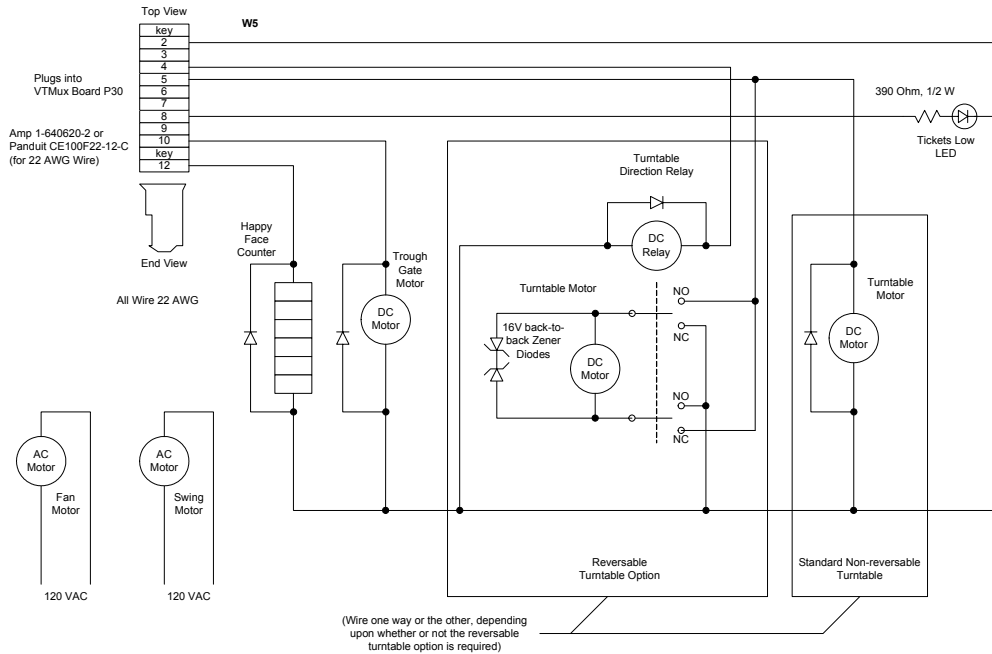


FIGURE 5 - W5 (VTMUX BOARD P30 TO AC RELAYS AND TICKETS LOW LED)

WIRING DIAGRAMS APPENDIX B

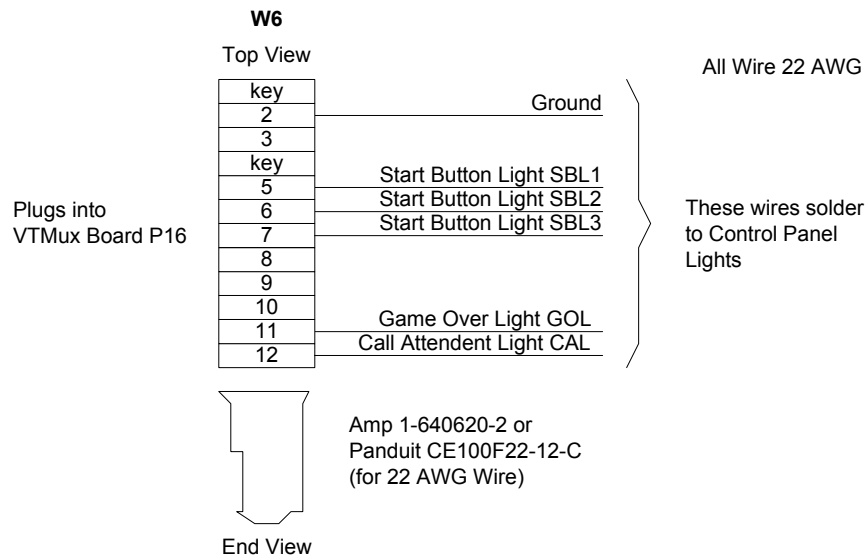


FIGURE 6 - W6 - (VTMUX BOARD P16 TO MISCELLANEOUS PANEL LIGHTS)

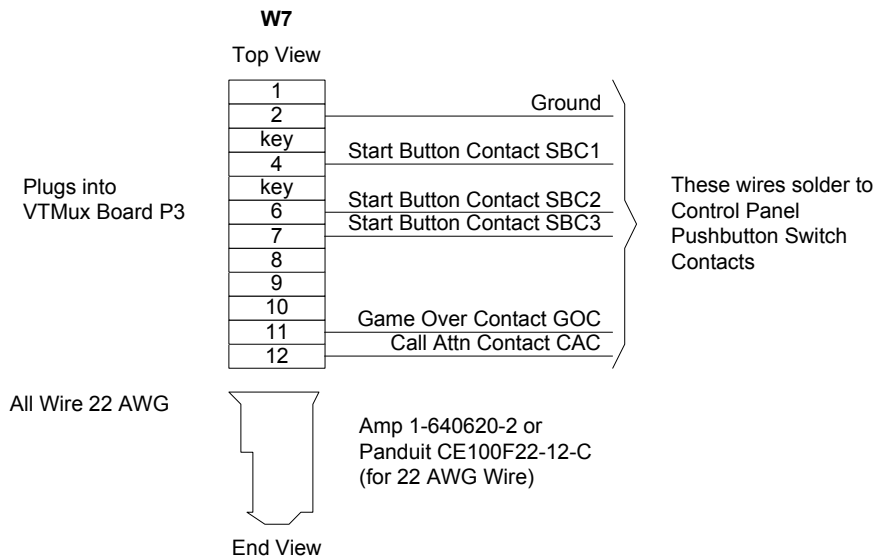


FIGURE 7 – W7 (MISCELLANEOUS PANEL INPUTS TO VTMUX P3)

WIRING DIAGRAMS APPENDIX B

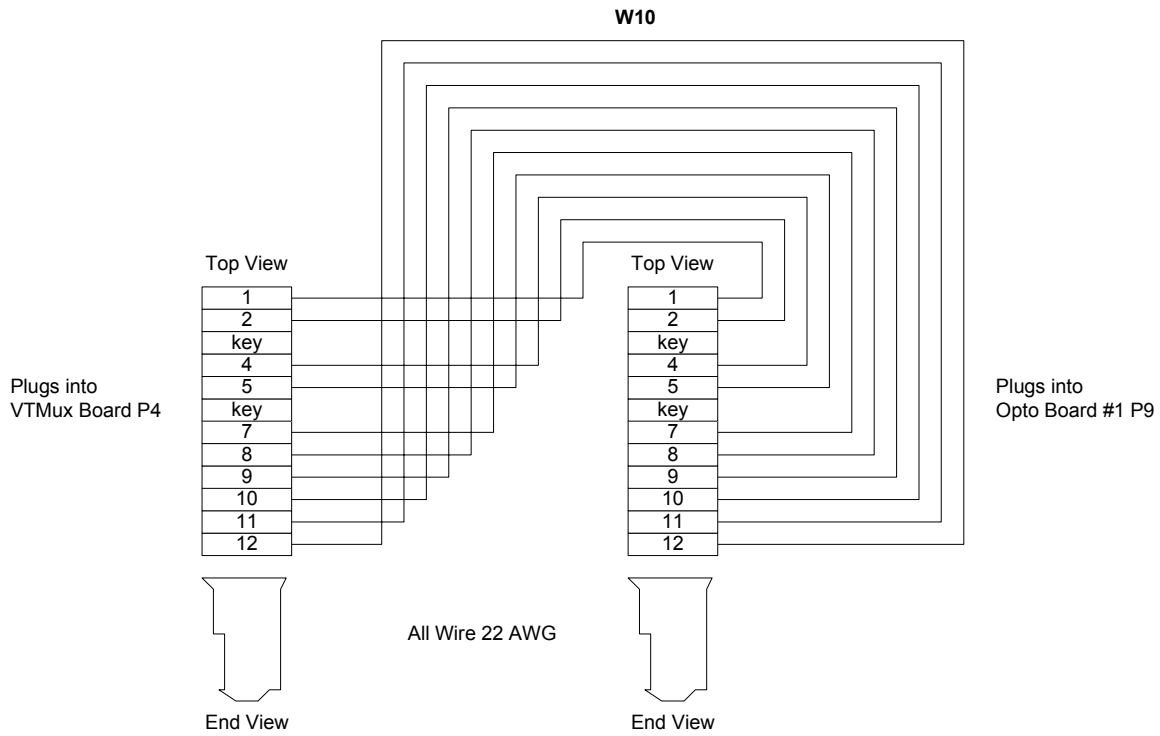


FIGURE 8 - W10 (VTMUX BOARD P4 TO OPTO BOARD #1 P9)

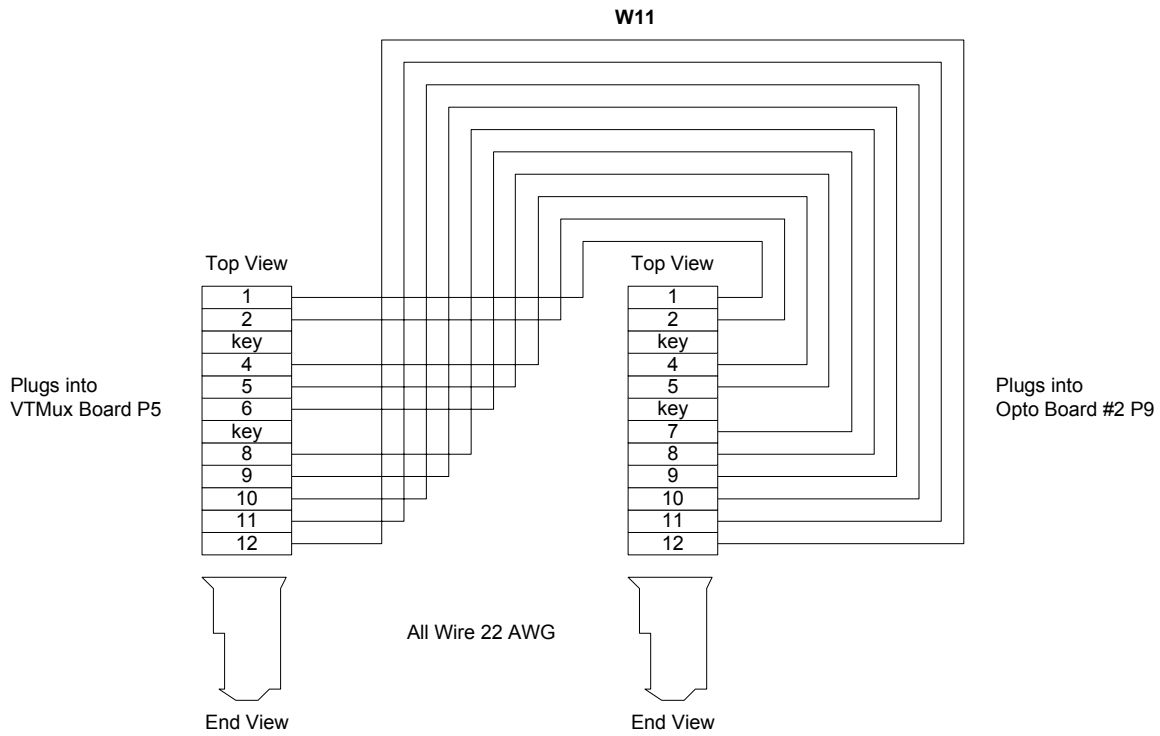


FIGURE 9 - W11 (VTMUX BOARD P4 TO OPTO BOARD #2 P9)

WIRING DIAGRAMS APPENDIX B

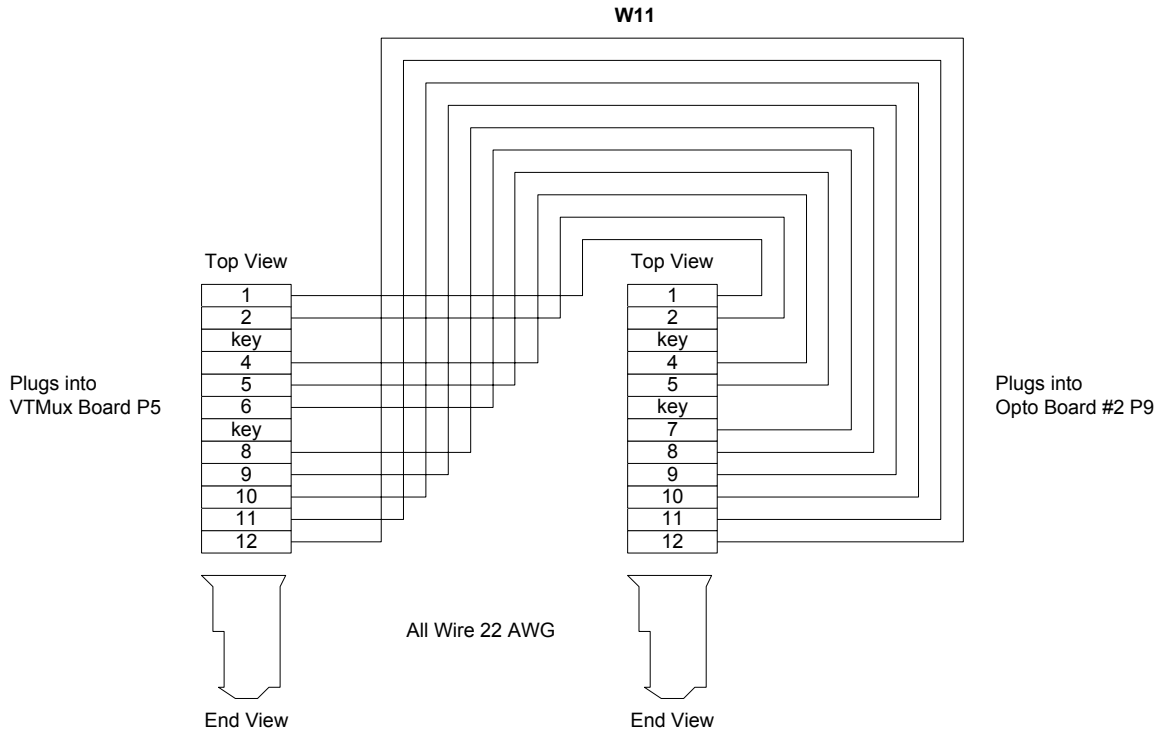


FIGURE 10 - W12 (VTMUX BOARD P5 TO OPTO BOARD #2 P9)

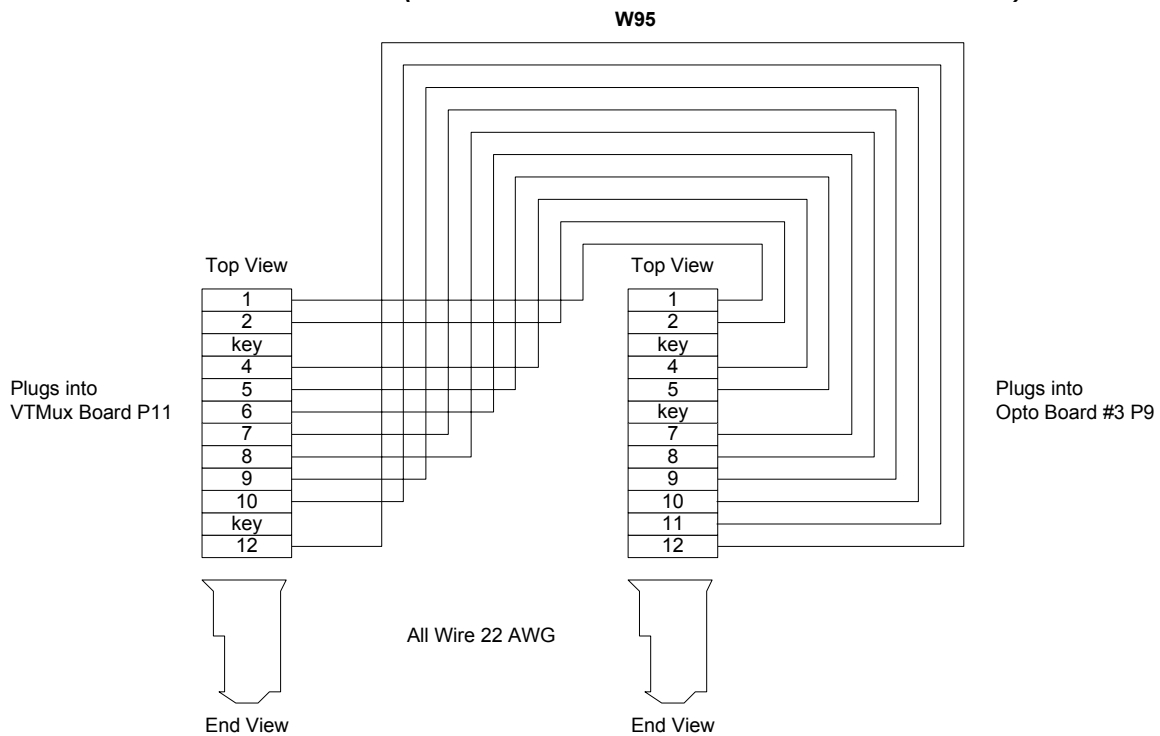


FIGURE 11 - W11 (VTMUX BOARD P11 TO OPTO BOARD #3 P9)

WIRING DIAGRAMS APPENDIX B

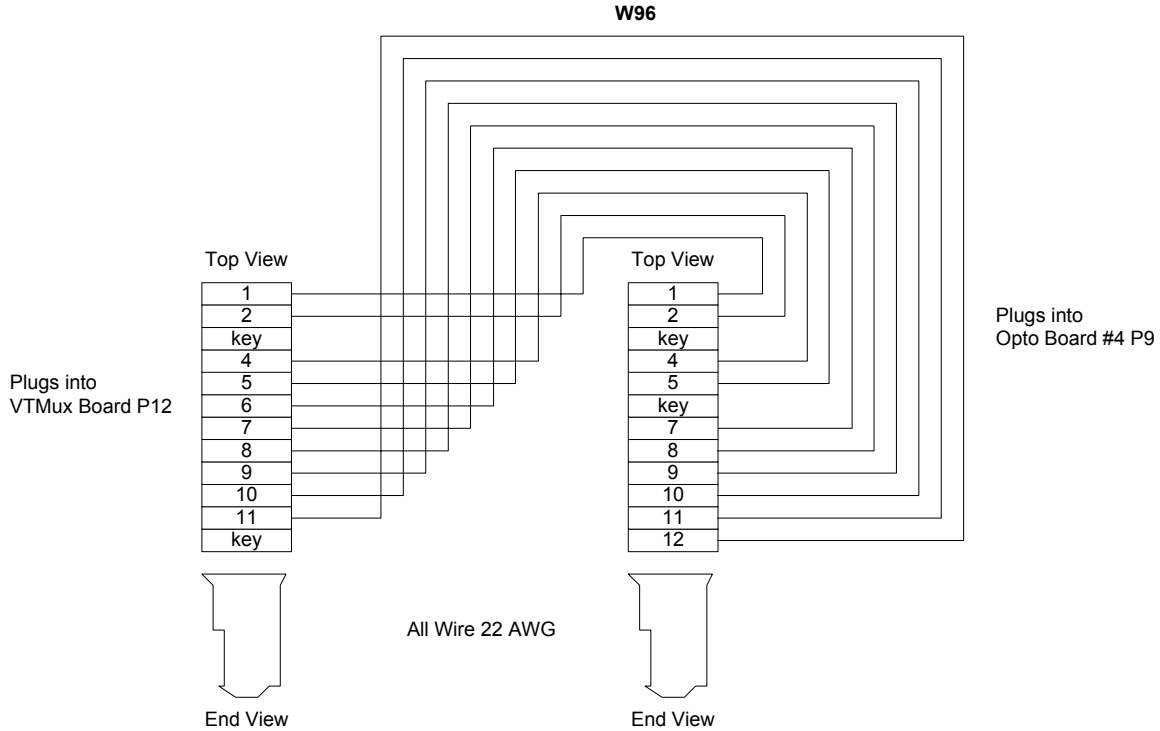


FIGURE 12 - W13 (VTMUX BOARD P6 TO OPTO BOARD #4 P9)

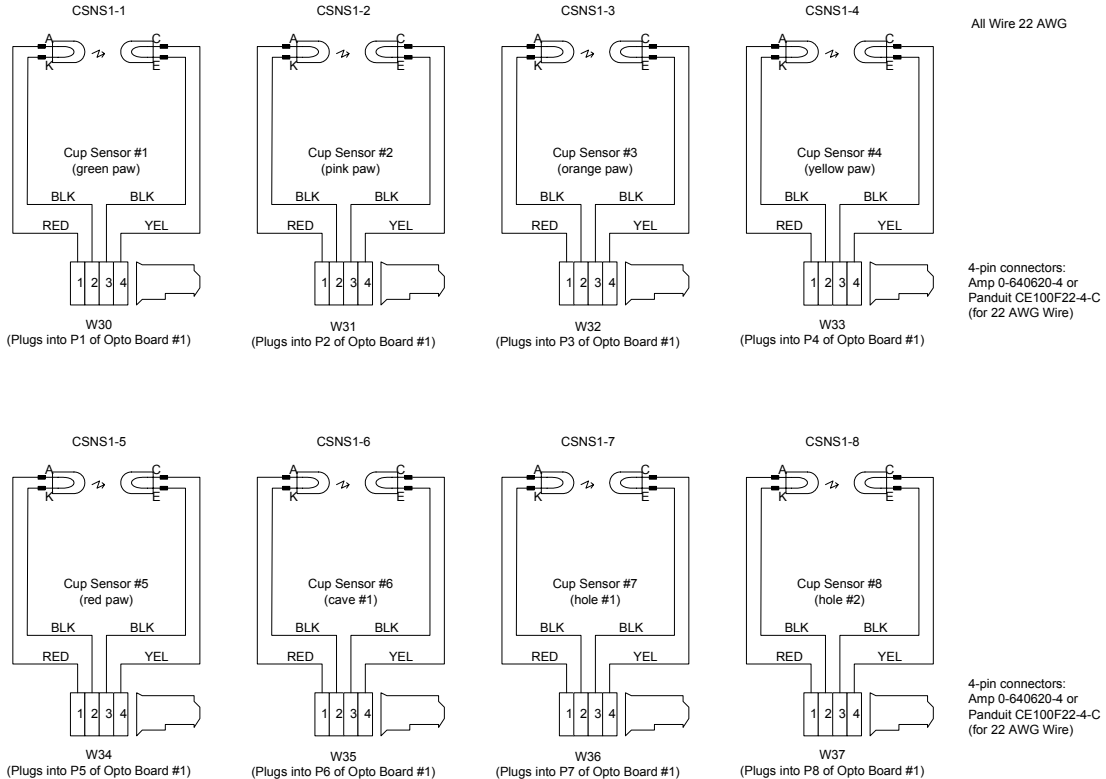


FIGURE 13 - TARGET SENSORS 1-8

WIRING DIAGRAMS APPENDIX B

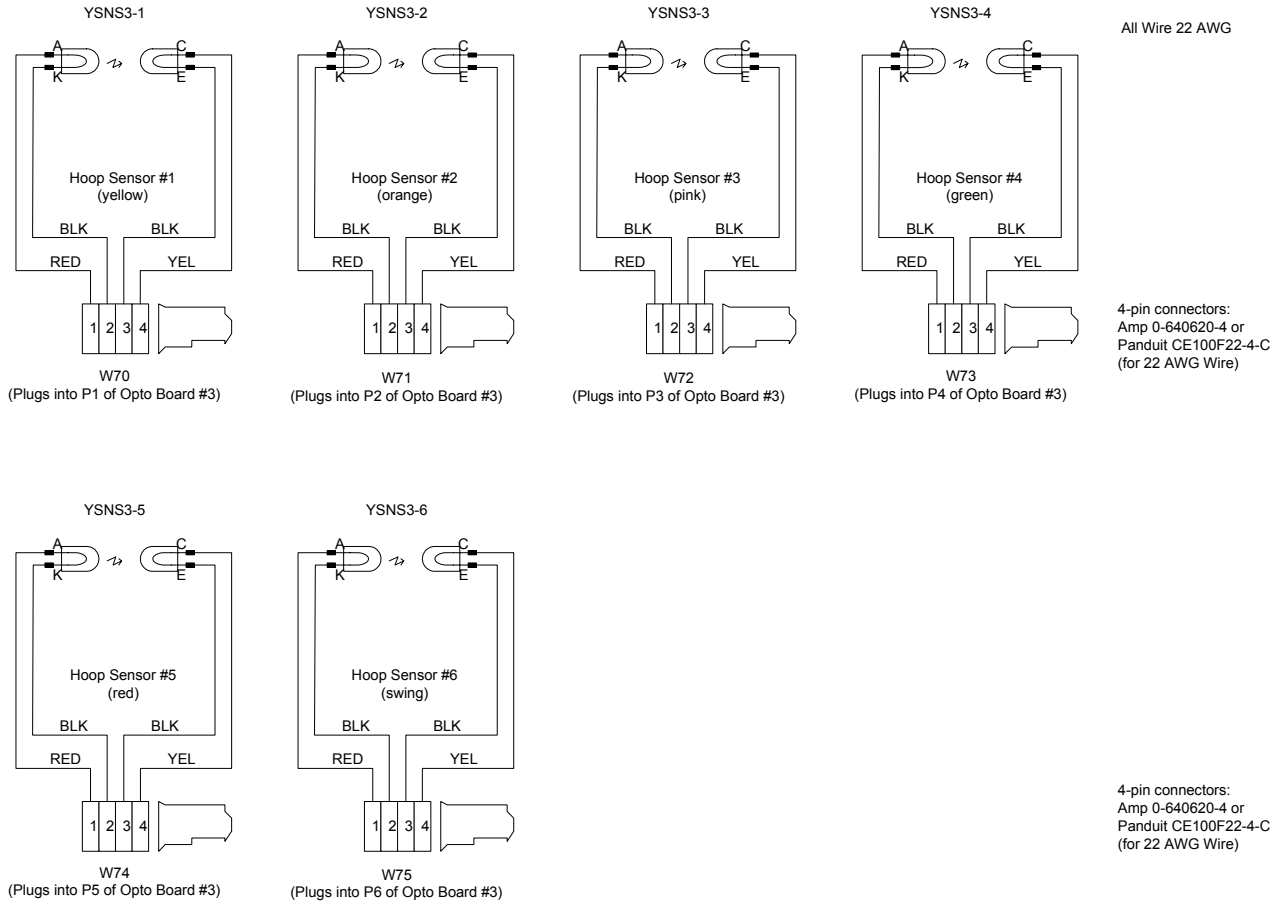


FIGURE 14 – TARGET SENSOR 9 –10

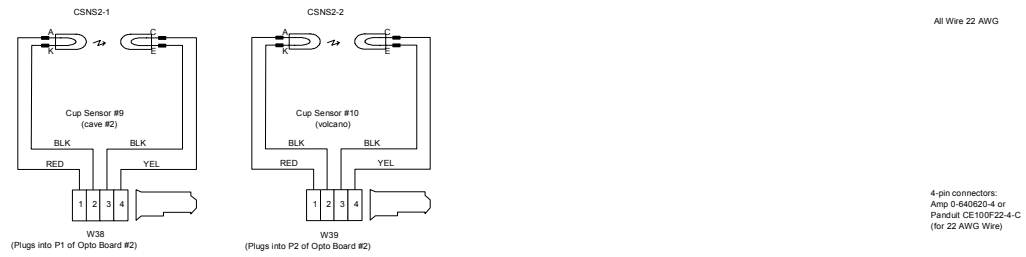
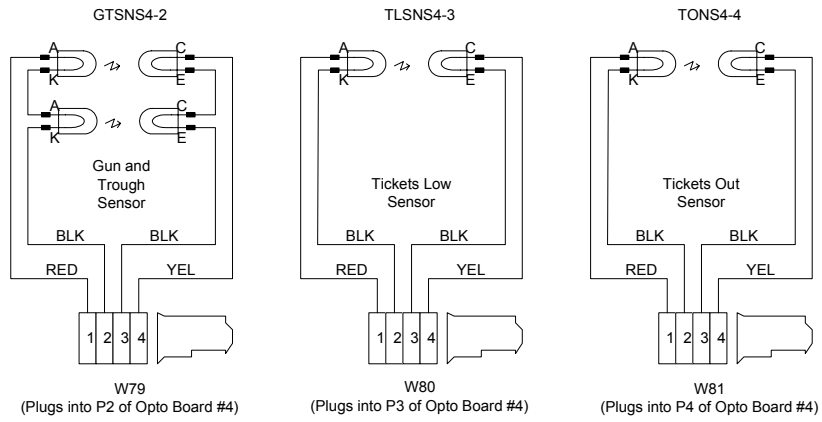


FIGURE 15 – TARGET SENSOR 17 - 24

WIRING DIAGRAMS APPENDIX B



All Wire 22 AWG

4-pin connectors:
Amp 0-640620-4 or
Panduit CE100F22-4-C
(for 22 AWG Wire)

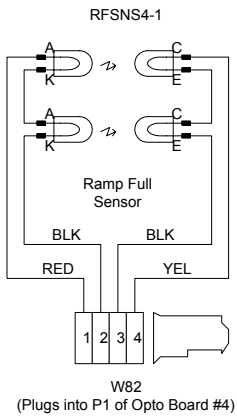


FIGURE 16 – MISCELLANEOUS SENSOR INPUTS

WIRING DIAGRAMS APPENDIX B

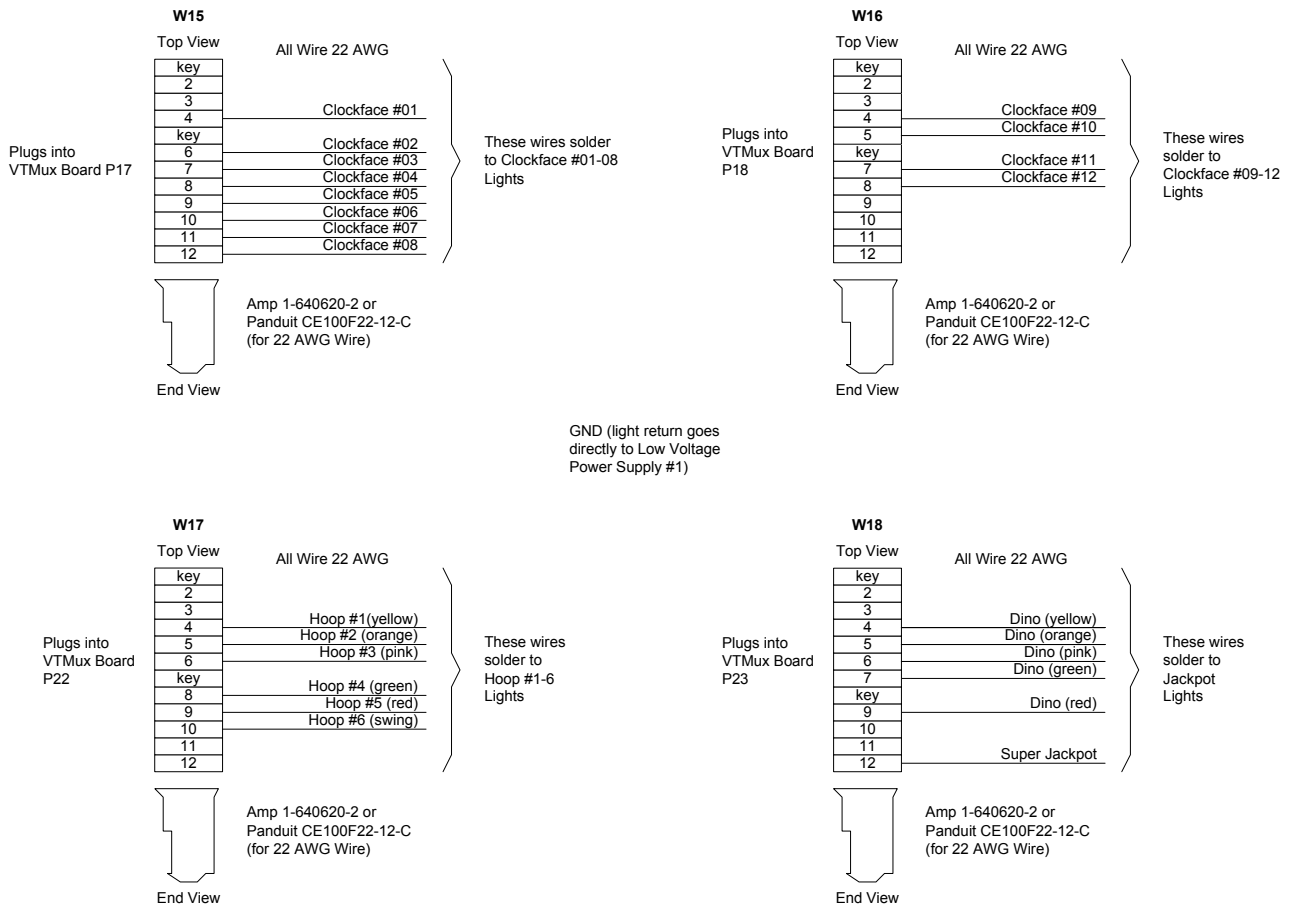


FIGURE 17 - W15, W16, W17, W18 (VTMUX BOARD P17, P18, P22, P23 TO CLOCKFACE AND DINOSAUR JACKPOT LIGHTS)

WIRING DIAGRAMS APPENDIX B

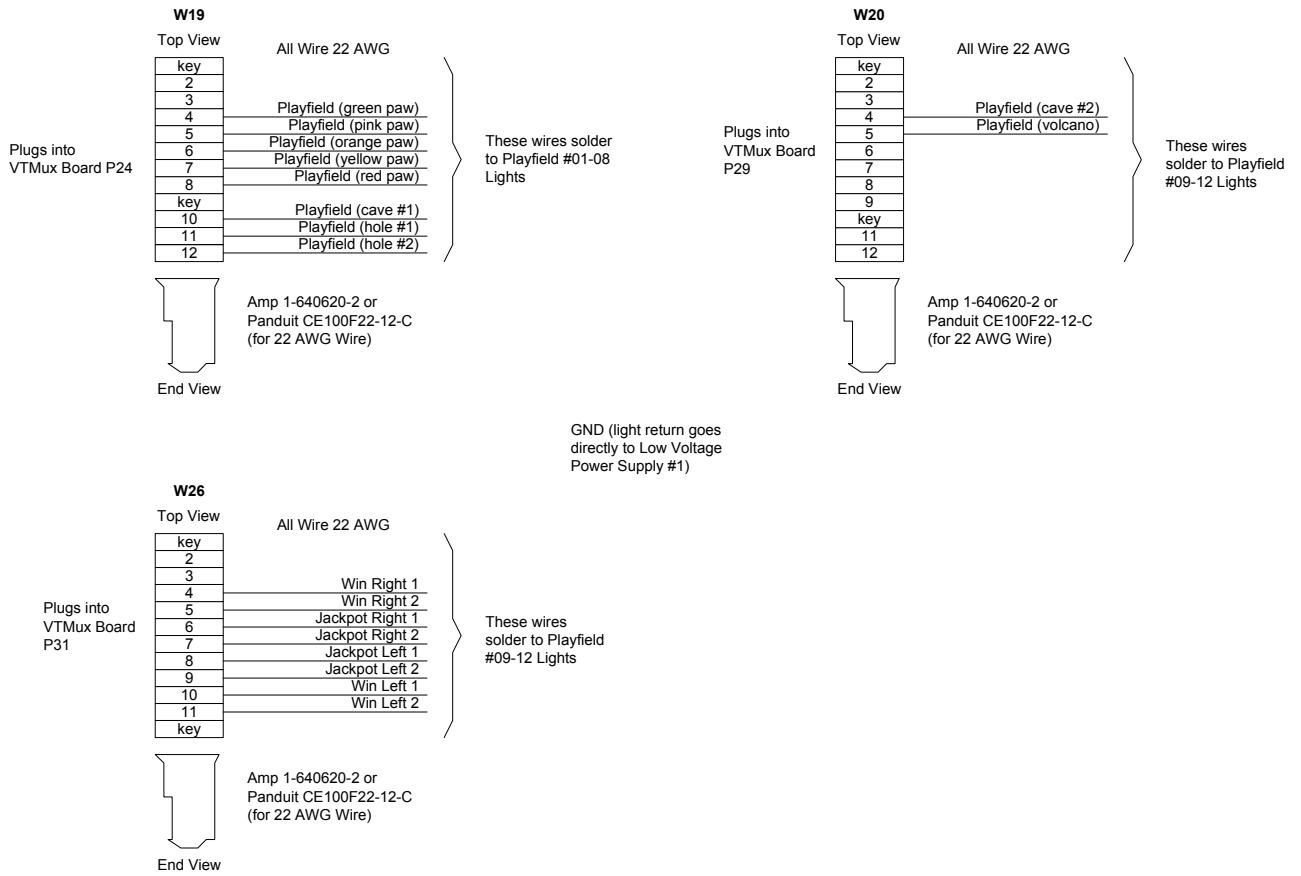


FIGURE 18 - W19, W20, 26 (VTMUX BOARD P24, P29, P31 TO PLAYFIELD AND ARROW LIGHTS)

WIRING DIAGRAMS APPENDIX B

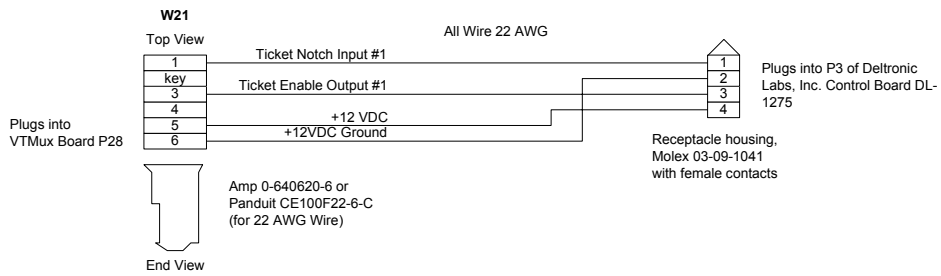
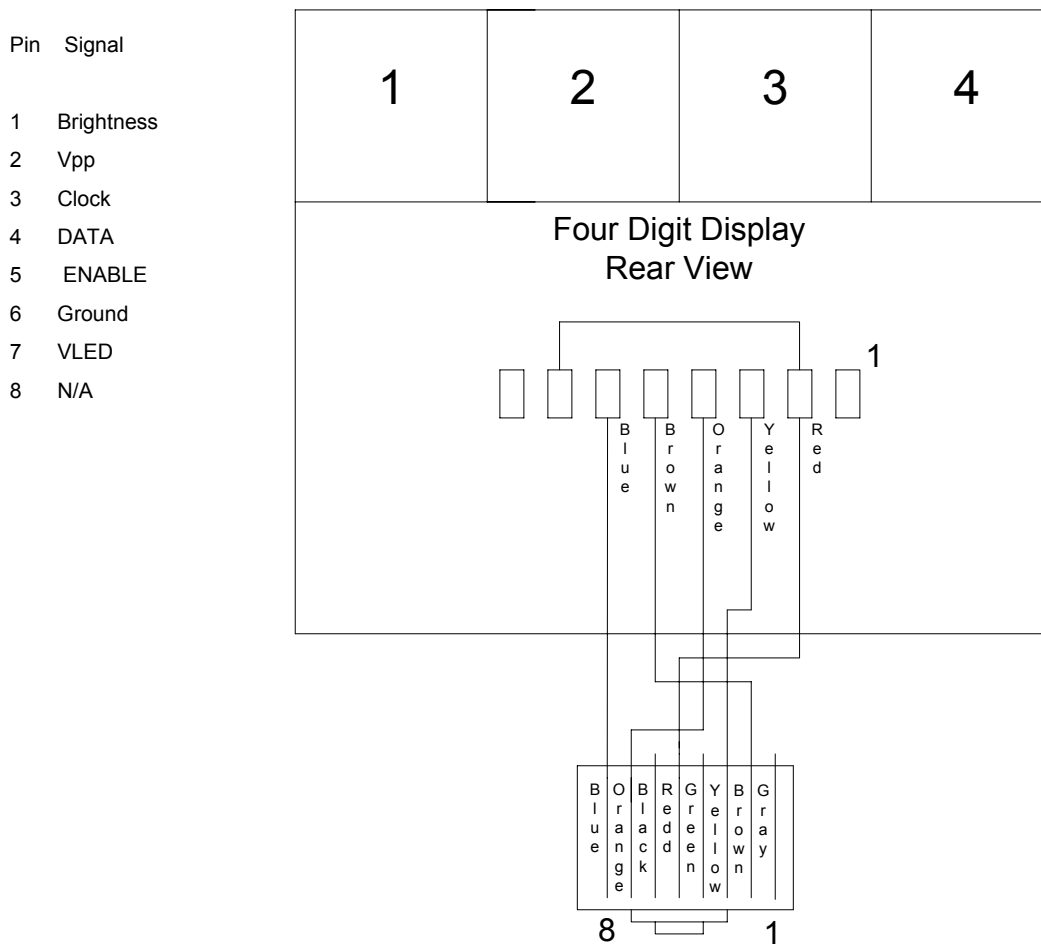


FIGURE 19 - W21 (VTMUX BOARD P28 TO TICKET DISPENSER)



**FIGURE 20 - W23 (VTMUX BOARD P25 TO SMALL 4-DIGIT DISPLAY #1)
W24 (VTMUX BOARD P26 TO SMALL 4-DIGIT DISPLAY #2)**

APPENDIX B WIRING DIAGRAMS

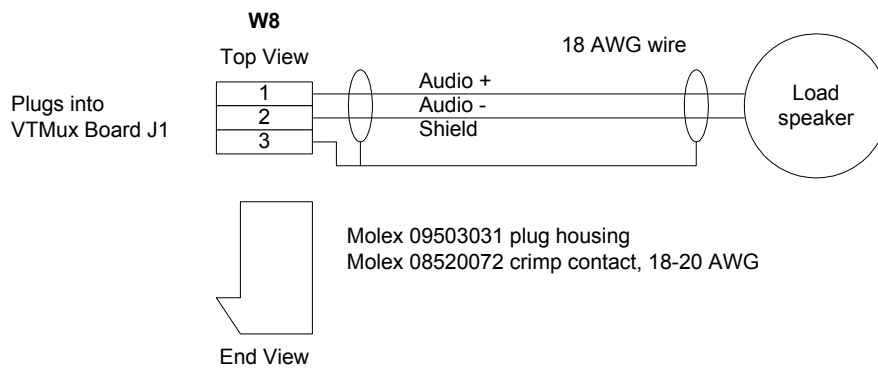


FIGURE 21 - W8 (VTMUX BOARD J1 TO LOUDSPEAKER)

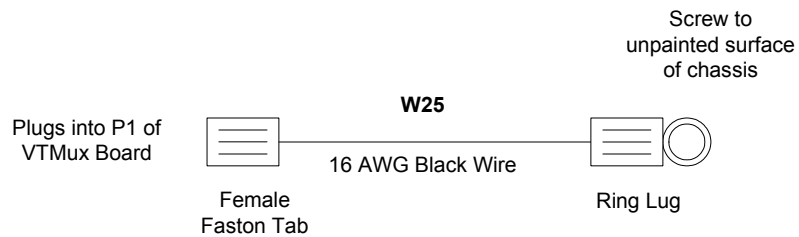
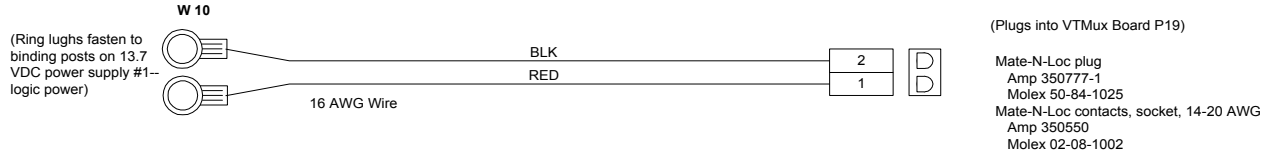


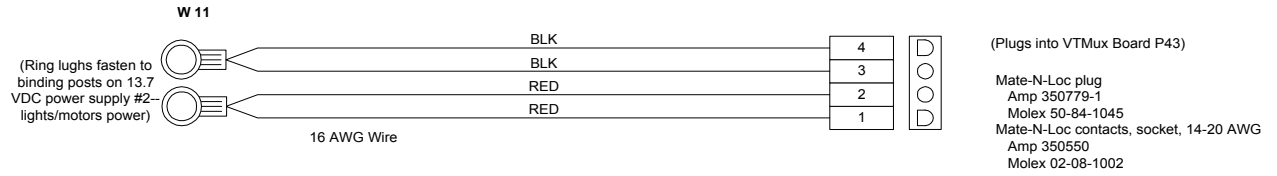
FIGURE 22 - W25 (VTMUX BOARD P1 TO CHASSIS GROUND)

Appendix C Power Supplies Connection

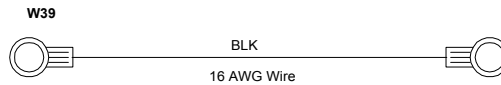
W10 (13.7 VDC POWER SUPPLY #1 TO 8051 VTMUX BOARD P19)



W11 (13.7 VDC POWER SUPPLY #2 TO 8051 VTMUX BOARD P43)



W13 (13.7 VDC POWER SUPPLIES GROUND INTERCONNECT)



(W39 connects the two ground terminals of the two 13.7 VDC power supplies together)

Appendix D Programmable Options with Defaults

GAME PLAY PROGRAMMING TABLE

STEP#	PROGRAM OPTION	TYPE	PROGRAMMABLE	VALUE
0	NUMBER OF COINS TAKEN IN (LIFETIME)	COINS	NO	N/A
1	NUMBER OF COINS TAKEN IN (SINCE RESET)	COINS	NO	N/A
10	COINS REQUIRED TO PLAY GAME 1	COINS	YES	1
11	COINS REQUIRED TO PLAY GAME 2	COINS	YES	2
12	COINS REQUIRED TO PLAY GAME 3	COINS	YES	4
13	NUMBER OF BALLS FOR GAME 1	BALLS	YES	1
14	NUMBER OF BALLS FOR GAME 2	BALLS	YES	2
15	NUMBER OF BALLS FOR GAME 3	BALLS	YES	5
16	MAXIMUM NUMBER OF BALLS PER GAME	BALLS	YES	5
17	AUDIO ATTRACTION ON TIME	SECONDS	YES	30
18	AUDIO ATTRACTION OFF TIME	SECONDS	YES	10
19	MAXIMUM TICKETS WITHOUT ATTENDANT	TICKETS	YES	500
20	DISPENSE TICKET AFTER OR DURING GAME	BOOL	YES	1
21	NUMBER OF SECONDS BEFORE LEAVING GAME	SECONDS	YES	20
22	NUMBER OF SECONDS BETWEEN BALL LOADING	SECONDS	YES	15
23	SPINNER SPEED	RPM'S	YES	60
24	SPINNER PERCENTAGE	PERCENT	YES	5
30	RESET ALL RESETABLE STATISTICS	N/A	NO	N/A
31	DISPLAY NUMBER OF SENSOR THAT IS BLOCKED	N/A	N/A	N/A
32	DISPLAY MISC OPTO SENSOR STATUS	N/A	N/A	N/A
33	DISPENSE TICKETS	N/A	N/A	N/A
34	TEST TURNTABLE MOTOR	N/A	N/A	N/A
35	TEST GUN TROUGH MOTOR	N/A	N/A	N/A
40	POINTS FOR GREEN PAW (G1)	POINTS	YES	10
41	POINTS FOR PINK PAW (P1)	POINTS	YES	10
42	POINTS FOR ORANGE PAW (O1)	POINTS	YES	5
43	POINTS FOR YELLOW PAW (Y1)	POINTS	YES	5
44	POINTS FOR RED PAW (R1)	POINTS	YES	15
45	POINTS FOR CAVE #1	POINTS	YES	10
46	POINTS FOR HOLE #1	POINTS	YES	1
47	POINTS FOR HOLE #2	POINTS	YES	1
48	POINTS FOR CAVE #2	POINTS	YES	15
49	POINTS FOR VOLCANO	POINTS	YES	100

GAME PLAY PROGRAMMING TABLE (CONTINUED)

50	JACKPOT #1 POINTS	POINTS	YES	20
51	JACKPOT #2 POINTS	POINTS	YES	50
52	JACKPOT #3 POINTS	POINTS	YES	100
53	JACKPOT #4 POINTS	POINTS	YES	1000
54	POINTS FOR HOOP #1	POINTS	YES	100
55	POINTS FOR HOOP #2	POINTS	YES	15
56	POINTS FOR HOOP #3	POINTS	YES	500
57	POINTS FOR HOOP #4	POINTS	YES	25
58	POINTS FOR HOOP #5	POINTS	YES	250
60	CLOCKFACE POINTS FOR 1:00 POSITION	POINTS	YES	10
61	CLOCKFACE POINTS FOR 2:00 POSITION	POINTS	YES	25
62	CLOCKFACE POINTS FOR 3:00 POSITION	POINTS	YES	10
63	CLOCKFACE POINTS FOR 4:00 POSITION	POINTS	YES	5
64	CLOCKFACE POINTS FOR 5:00 POSITION	POINTS	YES	10
65	CLOCKFACE POINTS FOR 6:00 POSITION	POINTS	YES	50
66	CLOCKFACE POINTS FOR 7:00 POSITION	POINTS	YES	10
67	CLOCKFACE POINTS FOR 8:00 POSITION	POINTS	YES	5
68	CLOCKFACE POINTS FOR 9:00 POSITION	POINTS	YES	10
69	CLOCKFACE POINTS FOR 10:00 POSITION	POINTS	YES	25
70	CLOCKFACE POINTS FOR 11:00 POSITION	POINTS	YES	5
71	CLOCKFACE POINTS FOR 12:00 POSITION	POINTS	YES	250



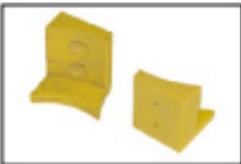

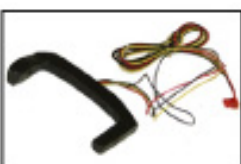


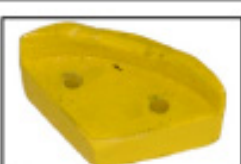
Appendix E Replacement Parts

	Power Supply	CA1-0046-RC
	Bladder Ring	MA2-0111-R
	Display Board	PC1-1007-RC
	Opto Board	PC1-1025-RC
	Coin Switch	TB4-2004
	Shooter Flapper and Pin	HH9-0042
	Play Field PAW Sensor Large	HH6-0018-Y
	Play Field PAW Sensor Small (Red)	HH6-0018-R

APPENDIX E REPLACEMENT PARTS CONTINUED

	Ticket Board	TT1-0008-RC
	Ramp Sensor	PC1-1025-R
	Spindle (Plastic)	MA2-0023-RC
	Ball	MA2-0111-B
	Front Of Shooter Assembly	GU3-0000
	Shooter Handle	GU2-0012-R
	Shooter Handle Full Assembly	GU3-0012-RC
	Bladder	MA2-0111

APPENDIX E REPLACEMENT PARTS CONTINUED

	Turntable Assembly	TB6-X044-RC
	Turntable Motor	MA2-0041-RC
	Door Extension Block	GU3-0066
	Blower	BE1-0002
	Sensor Cave 1	PC1-1055-1
	Sensor Cave 2	PC1-1055-2
	Trough Sensor	BU2-0006
	Shooter Pivot Stop	GU3-0066

APPENDIX E REPLACEMENT PARTS CONTINUED



Claw Sensor

CA4-0094-S



Control Panel

TB4-1001-R/C



Control Panel

TB4-1001-RC



Claw (Bck & Frnt)

TB1-0005-RC



Cup Assembly #1

CA4-0080-Y



Cup Assembly #2

CA4-0080-G



Cup Assembly #3

CA4-0080-P



Cup Assembly #4

CA4-0080-O



Cup Assembly #5

CA4-0080-R

Appendix F

TECHNICAL ASSISTANCE

Problems and Possible Resolutions

Symptom	Resolution
Game is not running properly. 1 display is blank, and the other has zeros.	Check the power supply connected to P41 or P43, insure that the red LED is illuminated in the back of Power Supply # 1. If not illuminated replace the power supply.
Both displays are blank or have erroneous characters constantly being displayed.	1. Check the VTMUX Board and see if the green LED is blinking on & off. If Not blinking: a) Check Power Supply #1 insure that the red LED is illuminating or verify that it is outputting 12volts.
NO Sound	Turn the POT R50 on the VTMUX board Clockwise until sound comes on.
	Make sure that the speaker cable assembly P1 is properly connected to J1.

Contacting Customer Service

Most distributors provide technical assistance for the products they sell. If your distributor cannot solve your problem, assistance can be obtained through Five Star Redemption. Call (818) 773-6056 extension 232 between the hours of 8:00 AM and 4:00 PM Pacific time, Monday through Friday, and ask for the service department.

Please have the following information available:

1. Type of Game
2. Serial Number
3. Distributor's Name
4. Description of Problem

The service technician may ask you to perform some tests on your machine, so it is preferable to call from the game's location if possible.

Five Star Redemption ADDRESS AND TELEPHONE NUMBERS

**8835 Shirley Avenue
Northridge, CA 91324
(818) 773-6057 Fax (818) 773-6064
Sales extension 1
Technical Support extension 2**