



Fuse List

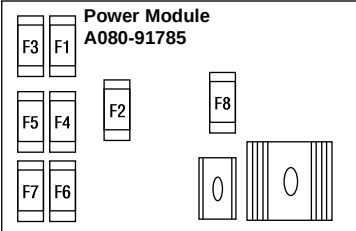
|                                     |                            |              |
|-------------------------------------|----------------------------|--------------|
| Power Module A080-91785             |                            |              |
| F1                                  | 43V Solenoids (5 flippers) | 7A, 250V     |
| F2                                  | 230V Display Power input   | 0.75A, 250V  |
| F3                                  | 5V & 12V Logic Power Input | 6A, 250V     |
| F4                                  | 20V Controlled lamps       | 8A, 250V     |
| F5                                  | 20V Controlled lamps       | 8A, 250V     |
| F6                                  | 6.3V General Illumination  | 15A, 250V    |
| F7                                  | 6.3V General Illumination  | 15A, 250V    |
| F8                                  | 190V Display Power output  | 0.25A, 250V  |
| Bright Lights Fuse Board A080-91901 |                            |              |
| F1                                  | Bright Lights              | 0.75A, 250V  |
| thru                                |                            | 0.75A, 250V  |
| F16                                 | Bright Lights              | 0.75A, 250V  |
| Back Box Fuse                       |                            |              |
| F1                                  | Light Bulb and Top Light   | 0.4A, 250V   |
| Under the Playfield fuses           |                            |              |
| F1                                  | Playfield Solenoids        | 1A, 250V, SB |
| Transformer Module                  |                            |              |
| F1                                  | Main fuse                  | 3A, 250V, SB |

Bright  
Lights  
Fuse  
Board

A080-  
91901

Sound  
Deluxe  
Module  
A084-91864

6803 Controller Module  
A-084-91786



Controlled Lamps Chart

| SCR | connector     | lamp description        | code | wire color | phase | tr type | SCR | connector     | lamp description         | code | wire color | phase | tr type |
|-----|---------------|-------------------------|------|------------|-------|---------|-----|---------------|--------------------------|------|------------|-------|---------|
| Q59 | J10-14        | Bad                     | 37   | Yel-Orn    | A     | 2N5060  | Q31 | J11-13/J12-13 | Lap 3                    | 73   | Orn-Yel    | A     | 2N5060  |
| Q44 | J10-12        | Big                     | 32   | Yel-Blu    | A     | 2N5060  | Q68 | J13-10        | Loop Top Left            | 94   | Gry-Grn    | B     | MCR-106 |
| Q43 | J10-11        | Bike                    | 31   | Yel-Red    | A     | 2N5060  | Q53 | J13-12        | Loop Top Right           | 96   | Gry-Brn    | B     | MCR-106 |
| Q28 | J10-6         | Bogs                    | 21   | Blu-Red    | A     | 2N5060  | Q42 | J10-9         | Mean                     | 26   | Blu-Brn    | A     | 2N5060  |
| Q63 | J11-3/J12-2   | Bogs Section            | 59   | Wht-Gry    | B     | 2N5060  | Q25 | J10-3         | Moon                     | 14   | Red-Grn    | A     | 2N5060  |
| Q29 | J11-8         | Bonus Multiplier 2X     | 64   | Brn-Grn    | A     | 2N5060  | Q27 | J10-5         | Never                    | 18   | Red-Blk    | A     | 2N5060  |
| Q60 | J10-13        | Bonus Multiplier 3X     | 36   | Yel-Brn    | A     | 2N5060  | Q58 | J10-19        | Outlane Left             | 45   | Grn-Wht    | B     | 2N5060  |
| Q45 | J10-10        | Bonus Multiplier 4X     | 28   | Blu-Blk    | A     | 2N5060  | Q43 | J10-11        | Outlane Right            | 31   | Yel-Red    | B     | 2N5060  |
| Q34 | J12-17/J13-1  | Bright, Backbox Left    | 81   | Blk-Red    | C     | MCR-106 | Q46 | J11-16        | Rain "R"                 | 78   | Orn-Blk    | B     | 2N5060  |
| Q35 | J13-2         | Bright, Backbox Right   | 83   | Blk-Yel    | C     | MCR-106 | Q29 | J11-8         | Rain "A"                 | 64   | Brn-Grn    | B     | 2N5060  |
| Q66 | J12-16/J13-6  | Bright, Bogs            | 87   | Blk-Orn    | D     | MCR-106 | Q60 | J10-13        | Rain "I"                 | 36   | Yel-Brn    | B     | 2N5060  |
| Q36 | J13-3         | Bright, Downhill        | 84   | Blk-Grn    | C     | MCR-106 | Q45 | J10-10        | Rain "N"                 | 28   | Blu-Blk    | B     | 2N5060  |
| Q52 | J13-13        | Bright, Fast Line       | 97   | Gry-Orn    | C     | MCR-106 | Q69 | J13-7         | Rain 2X                  | 91   | Gry-Red    | B     | 2N5060  |
| Q67 | J13-5         | Bright, Flipper Bottom  | 86   | Blk-Brn    | C     | MCR-106 | Q54 | J13-11        | Rain 3X                  | 95   | Gry-Wht    | B     | 2N5060  |
| Q65 | J11-1/J12-4   | Bright, Highway 93      | 48   | Grn-Blk    | C     | MCR-106 | Q37 | J13-4         | Rain 4X                  | 85   | Blk-Wht    | B     | 2N5060  |
| Q36 | J13-3         | Bright, Hill Climb      | 84   | Blk-Grn    | D     | MCR-106 | Q24 | J10-2         | Rapids                   | 13   | Red-Yel    | A     | 2N5060  |
| Q51 | J12-15/J13-8  | Bright, Rapids          | 93   | Gry-Yel    | C     | MCR-106 | Q49 | J11-9/J12-8   | Rapids Section           | 67   | Brn-Orn    | B     | 2N5060  |
| Q67 | J13-5         | Bright, Rock            | 86   | Blk-Brn    | D     | MCR-106 | Q26 | J10-4         | Return Lane Left         | 15   | Red-Wht    | B     | 2N5060  |
| Q51 | J12-15/J13-8  | Bright, Saucer Right    | 93   | Gry-Yel    | D     | MCR-106 | Q57 | J10-18        | Return Lane Right        | 43   | Grn-Yel    | B     | 2N5060  |
| Q66 | J12-16/J13-6  | Bright, Shooter         | 87   | Blk-Orn    | C     | MCR-106 | Q56 | J10-17        | Rocks                    | 41   | Grn-Red    | A     | 2N5060  |
| Q52 | J13-13        | Bright, Slingshot Left  | 97   | Gry-Orn    | D     | MCR-106 | Q50 | J11-7/J12-9   | Rocks Section            | 63   | Brn-Yel    | B     | 2N5060  |
| Q35 | J13-2         | Bright, Slingshot Right | 83   | Blk-Yel    | D     | MCR-106 | Q55 | J10-16        | Rocky                    | 38   | Yel-Blk    | A     | 2N5060  |
| Q34 | J12-17/J13-1  | Bright, Swamp Left      | 81   | Blk-Red    | D     | MCR-106 | Q28 | J10-6         | Same Player Shoots Again | 21   | Blu-Red    | B     | 2N5060  |
| Q65 | J11-1/J12-4   | Bright, Swamp Right     | 48   | Grn-Blk    | D     | MCR-106 | Q41 | J10-8         | Saucer Right 1           | 25   | Blu-Wht    | B     | 2N5060  |
| Q69 | J13-7         | Cliff 1                 | 91   | Gry-Red    | A     | 2N5060  | Q24 | J10-2         | Saucer Right 2           | 13   | Red-Yel    | B     | 2N5060  |
| Q54 | J13-11        | Cliff 2                 | 95   | Gry-Wht    | A     | 2N5060  | Q55 | J10-16        | Saucer Top 1             | 38   | Yel-Blk    | B     | 2N5060  |
| Q37 | J13-4         | Cliff 3                 | 85   | Blk-Wht    | A     | 2N5060  | Q70 | J10-7         | Saucer Top 2             | 24   | Blu-Grn    | B     | 2N5060  |
| Q31 | J11-13/J12-13 | Cliff Section           | 73   | Orn-Yel    | B     | 2N5060  | Q68 | J13-10        | Saucer Top Left          | 94   | Gry-Grn    | A     | MCR-106 |
| Q32 | J11-14/J12-12 | Cliff-Hanger            | 74   | Orn-Grn    | A     | 2N5060  | Q53 | J13-12        | Saucer Top Right         | 96   | Gry-Brn    | A     | MCR-106 |
| Q23 | J10-1         | Cold                    | 12   | Red-Blu    | A     | 2N5060  | Q23 | J10-1         | Special Test             | 12   | Red-Blu    | B     | 2N5060  |
| Q47 | J11-11/J12-6  | Downhill 1              | 71   | Orn-Red    | A     | 2N5060  | Q59 | J10-14        | Start Green              | 37   | Yel-Orn    | B     | 2N5060  |
| Q30 | J11-12/J12-14 | Downhill 2              | 72   | Orn-Blu    | A     | 2N5060  | Q27 | J10-5         | Start Red                | 18   | Red-Blk    | B     | 2N5060  |
| Q61 | J11-6/J12-10  | Downhill 3              | 62   | Brn-Blu    | A     | 2N5060  | Q44 | J10-12        | Start Yellow             | 32   | Yel-Blu    | B     | 2N5060  |
| Q46 | J11-16        | Downhill 4              | 78   | Orn-Blk    | A     | 2N5060  | Q26 | J10-4         | Suckin                   | 15   | Red-Wht    | A     | 2N5060  |
| Q42 | J10-9         | Downhill 5              | 26   | Blu-Brn    | B     | 2N5060  | Q57 | J10-18        | Swamp                    | 43   | Grn-Yel    | A     | 2N5060  |
| Q25 | J10-3         | Downhill 6              | 14   | Red-Grn    | B     | 2N5060  | Q33 | J11-15/J12-11 | Swamp Section            | 75   | Orn-Wht    | B     | 2N5060  |
| Q56 | J10-17        | Downhill 7              | 41   | Grn-Red    | B     | 2N5060  | Q50 | J11-7/J12-9   | Tunnel Left 1            | 63   | Brn-Yel    | A     | 2N5060  |
| Q48 | J11-10/J12-7  | Downhill Section        | 68   | Brn-Blk    | B     | 2N5060  | Q33 | J11-15/J12-11 | Tunnel Left 2            | 75   | Orn-Wht    | A     | 2N5060  |
| Q58 | J10-19        | Ending                  | 45   | Grn-Wht    | A     | 2N5060  | Q64 | J11-2/J12-3   | Tunnel Left 3            | 58   | Wht-Blk    | A     | 2N5060  |
| Q41 | J10-8         | Highway 93 Jump         | 25   | Blu-Wht    | A     | 2N5060  | Q49 | J11-9/J12-8   | Tunnel Left 4            | 67   | Brn-Orn    | A     | 2N5060  |
| Q64 | J11-2/J12-3   | Highway 93 Section      | 58   | Wht-Blk    | B     | 2N5060  | Q62 | J11-4/J12-1   | Tunnel Right 1           | 61   | Brn-Red    | B     | 2N5060  |
| Q62 | J11-4/J12-1   | Hill Climb              | 61   | Brn-Red    | A     | 2N5060  | Q47 | J11-11/J12-6  | Tunnel Right 2           | 71   | Orn-Red    | B     | 2N5060  |
| Q32 | J11-14/J12-12 | Hill Climb Section      | 74   | Orn-Grn    | B     | 2N5060  | Q30 | J11-12/J12-14 | Tunnel Right 3           | 72   | Orn-Blu    | B     | 2N5060  |
| Q63 | J11-3/J12-2   | Lap 1                   | 59   | Wht-Gry    | A     | 2N5060  | Q61 | J11-6/J12-10  | Tunnel Right 4           | 62   | Brn-Blu    | B     | 2N5060  |
| Q48 | J11-10/J12-7  | Lap 2                   | 68   | Brn-Blk    | A     | 2N5060  | Q70 | J10-7         | Wet                      | 24   | Blu-Grn    | A     | 2N5060  |

Lamps #555 are used in phase A (10) Red wire and phase B (80) Blk wire.  
Lamps #912 are used in phase C (81) Blk-Red wire and phase D (82) Blk-Blu wire.

Coil Table

| Sol. No          | Solenoid description   | Solenoid Type | Wire Code   | Wire Color | Connector                | Driver Transistor | Solenoid Coil Type   |
|------------------|------------------------|---------------|-------------|------------|--------------------------|-------------------|----------------------|
| 1                | Saucer Right           | Momentary     | 31          | Yel-Red    | J6-1, J8-5               | Q11               | AO-26-1200           |
| 2                | Saucer Top             | Momentary     | 32          | Yel-Blu    | J6-2, J8-4               | Q12               | AO-26-1200           |
| 3                | Gate Down              | Momentary     | 34          | Yel-Grn    | J6-3                     | Q13               | G-31-1800            |
| 4                | Gate Raise             | Momentary     | 35          | Yel-Wht    | J6-4                     | Q14               | AN-26-1200           |
| 5                | Left Slingshot         | Momentary     | 25          | Blu-Wht    | J8-6                     | Q15               | AO-26-1200           |
| 6                | Right Slingshot        | Momentary     | 27          | Blu-Orn    | J8-7, J7-1               | Q16               | AO-26-1200           |
| 7                | Drop Target Reset      | Momentary     | 51          | Wht-Red    | J9-1                     | Q18               | AO-27-1300           |
| 8                | Eject to Shooter       | Momentary     | 56          | Wht-Brn    | J9-6                     | Q22               | AN-26-1200           |
| 9                | Outhole                | Momentary     | 58          | Wht-Blk    | J9-8                     | Q39               | AN-26-1200           |
| 10               | Knocker                | Momentary     | 59          | Wht-Gry    | J7-2, J8-2, J9-11        | Q40               | AO-26-1200           |
| 11               | G.I. Relay             | Momentary     | 311         | Yel-Vio    | J6-7, J7-4               | Q10               | Aux. Coil Driver Bd. |
| 12               | Flipper enabling relay | Continuous    | --          | --         | --                       | Q7                | 48V Relay            |
| 13               | Back Box Lights        | Continuous    | 24          | Blu-Grn    | J7-3, J8-1, J9-10        | Q8                | Solid State Relay    |
|                  | Not Used               | Continuous    | 511         | Wht-Vio    | J9-9                     | Q9                | --                   |
|                  | Not Used               | Momentary     | 36          | Yel-Brn    | J6-5                     | Q17               | --                   |
|                  | Not Used               | Momentary     | 52          | Wht-Blu    | J9-2                     | Q19               | --                   |
|                  | Not Used               | Momentary     | 53          | Wht-Yel    | J9-3                     | Q20               | --                   |
|                  | Not Used               | Momentary     | 54          | Wht-Grn    | J9-4                     | Q21               | --                   |
|                  | (German games)         | Momentary     | 57          | Wht-Orn    | J9-7                     | Q38               | --                   |
|                  |                        |               |             |            |                          |                   |                      |
| Flipper Circuits |                        | Power Wire    | Return Wire |            | Connector                |                   | Coil                 |
|                  | Left Flipper           | Brn (60)      | 90          | Gry        | J6-8                     |                   | A-24-570/34-3600     |
|                  | Right Flipper          | Brn (60)      | 95          | Gry-Wht    | J6-9                     |                   | A-24-570/34-3600     |
|                  | Upper Left Flipper     | Brn (60)      | 63          | Brn-Yel    | (to lower left flipper)  |                   | A-24-570/34-3600     |
|                  | Upper Right Flipper    | Brn (60)      | 98          | Gry-Blk    | (to lower right flipper) |                   | A-24-570/34-3600     |
|                  | Lower Left Flipper     | Brn (60)      | 63          | Brn-Yel    | (to lower left flipper)  |                   | A-24-570/34-3600     |

Coil info needed to verify.

Switch Matrix

strobe (ST)  return (I)

| Column<br>Row                                        |                                                      |                                                      |                                                      |                                                      |                                                    |                                |
|------------------------------------------------------|------------------------------------------------------|------------------------------------------------------|------------------------------------------------------|------------------------------------------------------|----------------------------------------------------|--------------------------------|
|                                                      | STROBE 0<br>J4-15 Wht-Red (51)<br>J3-15 Red-Yel (13) | STROBE 1<br>J4-14 Wht-Blu (52)<br>J3-14 Red-Grn (14) | STROBE 2<br>J4-13 Wht-Yel (53)<br>J3-13 Orn-Grn (74) | STROBE 3<br>J4-12 Wht-Grn (54)<br>J3-12 Yel-Wht (35) | STROBE 4<br>J4-11 Wht-Brn (56)<br>J3-11 (not used) | STROBE 5<br>J4-1 Wht-Vio (511) |
| RETURN I 0<br>CJ4-10 Red (10)<br>CJ3-10 Red-Wht (15) | Blue Target "Cold" 01                                | Coin Chute III (Right) 09                            | Right Saucer 17                                      | Drop Target #5 (Right) 25                            | RAIN "N" 33                                        | Ball Though #3 (Right) 41      |
| RETURN I 1<br>CJ4-9 Blu (20)<br>CJ3-9 Brn-Wht (65)   | Blue Target "Wet" 02                                 | Coin Chute I (Left) 10                               | Top Saucer 18                                        | Drop Target #4 26                                    | RAIN "I" 34                                        | Ball Though #2 (Middle) 42     |
| RETURN I 2<br>CJ4-8 Yel (30)<br>CJ3-8 Blu (20)       | Blue Target "Rocky" 03                               | Coin Chute II (Middle) 11                            | Gate 1 19                                            | Drop Target #3 27                                    | RAIN "A" 35                                        | Ball Though #1 (Left) 43       |
| RETURN I 3<br>CJ4-7 Grn (40)<br>CJ3-7 Blu-Red (21)   | Blue Target "Rapids" 04                              | Fastlane 12                                          | Highway 93 20                                        | Drop Target #2 28                                    | RAIN "R" 36                                        | Cliffhanger 44                 |
| RETURN I 4<br>CJ4-6 Wht (50)<br>CJ3-6 Gry-Orn (97)   | Left Cabinet Button 05                               | Left & Right Return Lane 13                          | Left Slingshot 21                                    | Drop Target #1 (Left) 29                             | Downhill 37                                        | Top Right Loop 45              |
| RETURN I 5<br>CJ4-4 Brn (60)<br>CJ3-5 Yel (30)       | Credit Button 06                                     | Green Target "Bad" 14                                | Right Slingshot 22                                   | Yellow Target "Rocks" 30                             | Green Target "Big" 38                              | Top Left Loop 46               |
| RETURN I 6<br>CJ4-3 Orn (70)<br>CJ3-4 Blu-Orn (27)   | Right Cabinet Button 07                              | Tilt 15                                              | Right Outlane 23                                     | Yellow Target "Moon" 31                              | Ramp Up Left 39                                    | Right Tunnel 47                |
| RETURN I 7<br>CJ4-2 Blk (80)<br>CJ3-2 (not used)     | Outhole 08                                           | Shooter Lane 16                                      | Left Outlane 24                                      | Yellow Target "Mean" 32                              | Green Target "Bogs" 40                             | Left Tunnel 48                 |