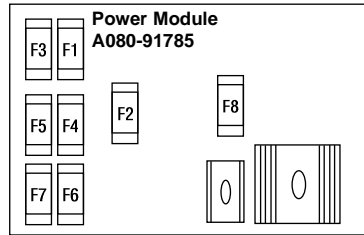
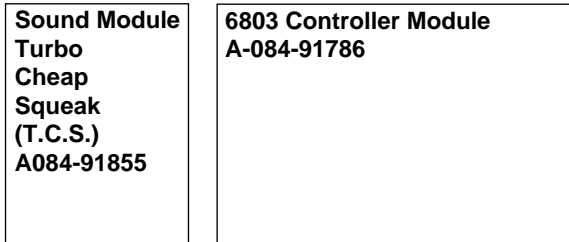


Bally/MIDWAY

STRANGE SCIENCE

Fuse List

| Power Module A080-91785-C000 | | |
|------------------------------|----------------------------|--------------|
| F1 | 43V Solenoids (3 flippers) | 6A, 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 |
| Under the Playfield fuses | | |
| F1 | Solenoids | 1A, 250V, SB |
| F2 | Bright Lights C-Phase | 1A, 250V |
| F3 | Bright Lights D-Phase | 1A, 250V |
| Transformer Module | | |
| F1 | Main fuse | 3A, 250V, SB |



Coil Table

| Sol. No. | Solenoid description | Solenoid Type | Wire Code | Wire Color | Connections | Driver Transistor | Solenoid Coil Type |
|---------------------|------------------------|---------------|-------------|------------|--------------------------|-------------------|-----------------------|
| 1 | Not Used | Momentary | 31 | Yel-Red | J6-1, J8-5 | Q11 | -- |
| 2 | Middle Thumper Bumper | Momentary | 32 | Yel-Blu | J6-2, J8-4 | Q12 | A-26-1200 |
| 3 | Left Thumper Bumper | Momentary | 34 | Yel-Grn | J6-3 | Q13 | A-26-1200 |
| 4 | Right Thumper Bumper | Momentary | 35 | Yel-Wht | J6-4 | Q14 | A-26-1200 |
| 5 | Left Slingshot | Momentary | 27 | Blu-Orn | J8-7, J7-1 | Q16 | A-26-1200 |
| 6 | Right Slingshot | Momentary | 25 | Blu-Wht | J8-6 | Q15 | A-26-1200 |
| 7 | Ball Save | Momentary | 36 | Yel-Brn | J6-5 | Q17 | A-26-1200 |
| 8 | Not Used | Momentary | 51 | Wht-Red | J9-1 | Q18 | -- |
| 9 | Saucer | Momentary | 52 | Wht-Blu | J9-2 | Q19 | A-27-1300 |
| 10 | Open Atom Smasher | Momentary | 53 | Wht-Yel | J9-3 | Q20 | A-26-1200 |
| 11 | Close Atom Smasher | Momentary | 54 | Wht-Grn | J9-4 | Q21 | G-31-1800 |
| 12 | Kicker | Momentary | 56 | Wht-Brn | J9-6 | Q22 | A-27-1300 |
| 13 | (German games) | Momentary | 57 | Wht-Orn | J9-7 | Q38 | -- |
| 14 | Outhole | Momentary | 58 | Wht-Blk | J9-8 | Q39 | A-26-1200 |
| 15 | Knocker | Momentary | 59 | Wht-Gry | J7-2, J8-2, J9-11 | Q40 | A-26-1200 |
| 16 | Not Used | Continuous | 511 | Wht-Vio | J9-9 | Q9 | -- |
| 17 | Neon Display | Momentary | 311 | Yel-Vio | J6-7, J7-4 | Q10 | Solid State Relay Bd. |
| 18 | Back Box Lights | Continuous | 24 | Blu-Grn | J7-3, J8-1, J9-10 | Q8 | Solid State Relay Bd. |
| 19 | Flipper enabling relay | Continuous | -- | -- | -- | Q7 | 48V Relay |
| Flipper Circuits | | Power Wire | Return Wire | Connector | Coil | | |
| Left Flipper | | Brn (60) | 90 | Gry | J6-9 | A-24-570/34-3600 | |
| Right Flipper | | Brn (60) | 95 | Gry-Wht | J6-8 | A-24-570/34-3600 | |
| Upper Right Flipper | | Brn (60) | 98 | Gry-Blk | (to lower right flipper) | A-24-570/34-3600 | |

Controlled Lamps Chart

| SCR | connector | lamp description | code | wire color | phase | tr type | SCR | connector | lamp description | code | wire color | phase | tr type |
|-----|---------------|-----------------------------------|------|------------|-------|---------|-----|---------------|--------------------------|------|------------|-------|---------|
| Q30 | J11-12/J12-14 | Anti Gravity | 72 | Orn-Blu | A | 2N5060 | Q54 | J13-11 | Bubble 25K (Right) | 95 | Gry-Wht | B | 2N5060 |
| Q29 | J11-8 | Atom Small Arrow | 64 | Brn-Grn | A | 2N5060 | Q60 | J10-13 | Collect Bonus | 36 | Yel-Brn | A | 2N5060 |
| Q69 | J13-7 | Ball Kicker | 91 | Gry-Red | A | 2N5060 | Q69 | J13-7 | Extra Ball | 91 | Gry-Red | B | 2N5060 |
| Q57 | J10-18 | Bonus 1K | 43 | Grn-Yel | B | 2N5060 | Q62 | J11-4/J12-1 | Hole Bonus | 61 | Brn-Red | A | 2N5060 |
| Q26 | J10-4 | Bonus 2K | 15 | Red-Wht | B | 2N5060 | Q64 | J11-2/J12-3 | LAB "L" | 58 | Wht-Blk | B | 2N5060 |
| Q43 | J10-11 | Bonus 3K | 31 | Yel-Red | B | 2N5060 | Q33 | J11-15/J12-11 | LAB "A" | 75 | Orn-Wht | B | 2N5060 |
| Q58 | J10-19 | Bonus 4K | 45 | Grn-Wht | B | 2N5060 | Q50 | J11-7/J12-9 | LAB "B" | 63 | Brn-Yel | B | 2N5060 |
| Q27 | J10-5 | Bonus 5K | 18 | Red-Blk | B | 2N5060 | Q31 | J11-13/J12-13 | Load Atoms (Left) | 73 | Orn-Yel | A | 2N5060 |
| Q44 | J10-12 | Bonus 6K | 32 | Yel-Blu | B | 2N5060 | Q61 | J11-6/J12-10 | Load Atoms (Right) | 62 | Brn-Blu | A | 2N5060 |
| Q59 | J10-14 | Bonus 7K | 37 | Yel-Orn | B | 2N5060 | Q65 | J11-1/J12-4 | Matter Trans. | 48 | Grn-Blk | B | MCR-106 |
| Q28 | J10-6 | Bonus 8K | 21 | Blu-Red | B | 2N5060 | Q65 | J11-1/J12-4 | Particle Sep. | 48 | Grn-Blk | A | MCR-106 |
| Q45 | J10-10 | Bonus 9K | 28 | Blu-Blk | B | 2N5060 | Q49 | J11-9/J12-8 | Playfield Multiplier 3X | 67 | Brn-Orn | A | 2N5060 |
| Q60 | J10-13 | Bonus 10K | 36 | Yel-Brn | B | 2N5060 | Q64 | J11-2/J12-3 | Playfield Multiplier 6X | 58 | Wht-Blk | A | 2N5060 |
| Q29 | J11-8 | Bonus 20K | 64 | Brn-Grn | B | 2N5060 | Q33 | J11-15/J12-11 | Playfield Multiplier 9X | 75 | Orn-Wht | A | 2N5060 |
| Q46 | J11-16 | Bonus 30K | 78 | Orn-Blk | B | 2N5060 | Q50 | J11-7/J12-9 | Playfield Multiplier 12X | 63 | Brn-Yel | A | 2N5060 |
| Q61 | J11-6/J12-10 | Bonus 40K | 62 | Brn-Blu | B | 2N5060 | Q47 | J11-11/J12-6 | Same Player Shoots Again | 71 | Orn-Red | A | 2N5060 |
| Q30 | J11-12/J12-14 | Bonus 50K | 72 | Orn-Blu | B | 2N5060 | Q42 | J10-9 | Saver On | 26 | Blu-Brn | A | 2N5060 |
| Q31 | J11-13/J12-13 | Bonus Multiplier 2X | 73 | Orn-Yel | B | 2N5060 | Q23 | J10-1 | SCIENCE "S" | 12 | Red-Blu | B | 2N5060 |
| Q48 | J11-10/J12-7 | Bonus Multiplier 3X | 68 | Brn-Blk | B | 2N5060 | Q70 | J10-7 | SCIENCE "C" (first) | 24 | Blu-Grn | B | 2N5060 |
| Q63 | J11-3/J12-2 | Bonus Multiplier 4X | 59 | Wht-Gry | B | 2N5060 | Q55 | J10-16 | SCIENCE "I" | 38 | Yel-Blk | B | 2N5060 |
| Q32 | J11-14/J12-12 | Bonus Multiplier 5X | 74 | Orn-Grn | B | 2N5060 | Q24 | J10-2 | SCIENCE "E" (first) | 13 | Red-Yel | B | 2N5060 |
| Q49 | J11-9/J12-8 | Bonus Multiplier 6X | 67 | Brn-Orn | B | 2N5060 | Q41 | J10-8 | SCIENCE "N" | 25 | Blu-Wht | B | 2N5060 |
| Q47 | J11-11/J12-6 | Brain (Left) | 71 | Orn-Red | B | 2N5060 | Q56 | J10-17 | SCIENCE "C" (second) | 41 | Grn-Red | B | 2N5060 |
| Q62 | J11-4/J12-1 | Brain (Right) | 61 | Brn-Red | B | 2N5060 | Q25 | J10-3 | SCIENCE "E" (second) | 14 | Red-Grn | B | 2N5060 |
| Q35 | J13-2 | Bright, Atom Bottom | 83 | Blk-Yel | D | MCR-106 | Q46 | J11-16 | Spark Bonus | 78 | Orn-Blk | A | 2N5060 |
| Q51 | J12-15/J13-8 | Bright, Atom Top | 93 | Gry-Yel | C | MCR-106 | Q42 | J10-9 | Special | 26 | Blu-Brn | B | 2N5060 |
| Q34 | J12-17/J13-1 | Bright, Atomic Generator | 81 | Blk-Red | C | MCR-106 | Q23 | J10-1 | STRANGE "S" | 12 | Red-Blu | A | 2N5060 |
| Q52 | J13-13 | Bright, Atomic Generator Entrance | 97 | Gry-Orn | D | MCR-106 | Q70 | J10-7 | STRANGE "T" | 24 | Blu-Grn | A | 2N5060 |
| Q35 | J13-2 | Bright, Atomic Generator Exit | 83 | Blk-Yel | C | MCR-106 | Q55 | J10-16 | STRANGE "R" | 38 | Yel-Blk | A | 2N5060 |
| Q51 | J12-15/J13-8 | Bright, Back Left | 93 | Gry-Yel | D | MCR-106 | Q24 | J10-2 | STRANGE "A" | 13 | Red-Yel | A | 2N5060 |
| Q36 | J13-3 | Bright, Back Middle | 84 | Blk-Grn | D | MCR-106 | Q41 | J10-8 | STRANGE "N" | 25 | Blu-Wht | A | 2N5060 |
| Q34 | J12-17/J13-1 | Bright, Back Right | 81 | Blk-Red | D | MCR-106 | Q56 | J10-17 | STRANGE "G" | 41 | Grn-Red | A | 2N5060 |
| Q67 | J13-5 | Bright, Particle (Left) | 86 | Blk-Brn | C | MCR-106 | Q25 | J10-3 | STRANGE "E" | 14 | Red-Grn | A | 2N5060 |
| Q67 | J13-5 | Bright, Particle (Right) | 86 | Blk-Brn | D | MCR-106 | Q63 | J11-3/J12-2 | Thumper Bumper Left | 59 | Wht-Gry | A | 2N5060 |
| Q66 | J12-16/J13-6 | Bright, Spark 25K | 87 | Blk-Orn | C | MCR-106 | Q48 | J11-10/J12-7 | Thumper Bumper Middle | 68 | Brn-Blk | A | 2N5060 |
| Q66 | J12-16/J13-6 | Bright, Spark 50K | 87 | Blk-Orn | D | MCR-106 | Q37 | J11-14/J12-12 | Thumper Bumper Right | 74 | Orn-Grn | A | 2N5060 |
| Q52 | J13-13 | Bright, Spark 75K | 97 | Gry-Orn | C | MCR-106 | Q52 | J10-18 | Volts 100V | 43 | Grn-Yel | A | 2N5060 |
| Q36 | J13-3 | Bright, Volts | 84 | Blk-Grn | C | MCR-106 | Q26 | J10-4 | Volts 200V | 15 | Red-Wht | A | 2N5060 |
| Q53 | J13-12 | Bubble 5K (Left) | 96 | Gry-Brn | A | MCR-106 | Q43 | J10-11 | Volts 300V | 31 | Yel-Red | A | 2N5060 |
| Q53 | J13-12 | Bubble 5K (Right) | 96 | Gry-Brn | B | MCR-106 | Q58 | J10-19 | Volts 400V | 45 | Grn-Wht | A | 2N5060 |
| Q68 | J13-10 | Bubble 10K (Left) | 94 | Gry-Grn | A | MCR-106 | Q27 | J10-5 | Volts 500V | 18 | Red-Blk | A | 2N5060 |
| Q68 | J13-10 | Bubble 10K (Right) | 94 | Gry-Grn | B | MCR-106 | Q44 | J10-12 | Volts 600V | 32 | Yel-Blu | A | 2N5060 |
| Q37 | J13-4 | Bubble 15K (Left) | 85 | Blk-Wht | A | 2N5060 | Q59 | J10-14 | Volts 700V | 37 | Yel-Orn | A | 2N5060 |
| Q37 | J13-4 | Bubble 15K (Right) | 85 | Blk-Wht | B | 2N5060 | Q28 | J10-6 | Volts 800V | 21 | Blu-Red | A | 2N5060 |
| Q54 | J13-11 | Bubble 25K (Left) | 95 | Gry-Wht | A | 2N5060 | Q45 | J10-10 | Volts 900V | 28 | Blu-Blk | A | 2N5060 |



Switch Matrix

| Column | strobe (ST) → return (I) | | | | | |
|--|--|--|--|--|--|------------------------------------|
| | STROBE 0 J4-15 Wht-Red (51) J3-15 Red-Yel (13) | STROBE 1 J4-14 Wht-Blu (52) J3-14 Red-Grn (14) | STROBE 2 J4-13 Wht-Yel (53) J3-13 Orn-Grn (74) | STROBE 3 J4-12 Wht-Grn (54) J3-12 Yel-Wht (35) | STROBE 4 J4-11 Wht-Brn (56) J3-11 (not used) | STROBE 5 J4-1 Wht-Vio (511) |
| RETURN 10 CJ4-10 Red (10) CJ3-10 Red-Wht (15) | Right Outlane 01 | Coin Chute III (Right) 09 | Science Target (Top) 17 | Return Lanes 25 | Trough 5 (Left) 33 | Brain Rollover (Left) 41 |
| RETURN 11 CJ4-9 Blu (20) CJ3-9 Brn-Wht (65) | Left Outlane 02 | Coin Chute I (Left) 10 | Science Target (Middle) 18 | Middle Thumper Bumper 26 | Trough 4 34 | Brain Rollover (Right) 42 |
| RETURN 12 CJ4-8 Yel (30) CJ3-8 Blu (20) | Exit Anti-Gravity 03 | Coin Chute II (Middle) 11 | Science Target (Bottom) 19 | Left Thumper Bumper 27 | Trough 3 35 | Unload Ball Lane 43 |
| RETURN 13 CJ4-7 Grn (40) CJ3-7 Blu-Red (21) | Enter Anti-Gravity 04 | Bubble Bonus Lane (Left) 12 | Strange Target (Top) 20 | Right Thumper Bumper 28 | Trough 2 36 | Load Ball Lane 44 |
| RETURN 14 CJ4-6 Wht (50) CJ3-6 Gry-Orn (97) | Left Side Button 05 | Bubble Bonus Lane (Right) 13 | Strange Target (Middle) 21 | Left Slingshot 29 | Trough 1 (Right) 37 | Rebound 45 |
| RETURN 15 CJ4-4 Brn (60) CJ3-5 Yel (30) | Credit Button 06 | Slam 14 | Strange Target (Bottom) 22 | Right Slingshot 30 | L Lower LAB 38 | L Upper LAB 46 |
| RETURN 16 CJ4-3 Orn (70) CJ3-4 Blu-Orn (27) | Right Side Button 07 | Tilt 15 | Not Used 23 | Not Used 31 | A Lower LAB 39 | A Upper LAB 47 |
| RETURN 17 CJ4-2 Blk (80) CJ3-2 (not used) | Outhole 08 | Not Used 16 | Not Used 24 | Right Saucer 32 | B Lower LAB 40 | B Upper LAB 48 |

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.