

# Gottlieb's Panthera

## Switch Matrix

|                                                         | RETURN 0<br>A1J6-10<br>Blu-Blk-Blk (600)               | RETURN 1<br>A1J6-11<br>Blu-Brn-Brn (611)               | RETURN 2<br>A1J6-12<br>Blu-Red-Red (622)               | RETURN 3<br>A1J6-13<br>Blu-Orn-Orn (633)             | RETURN 4<br>A1J6-14<br>Blu-Yel-Yel (644)                | RETURN 5<br>A1J6-15<br>Blu-Grn-Grn (655)                   | RETURN 6<br>A1J5-8 / A1J6-16<br>Blu-Blu-Blu (666) | RETURN 7<br>A1J5-1 / A1J6-17<br>Blu-Pur-Pur (677)       |
|---------------------------------------------------------|--------------------------------------------------------|--------------------------------------------------------|--------------------------------------------------------|------------------------------------------------------|---------------------------------------------------------|------------------------------------------------------------|---------------------------------------------------|---------------------------------------------------------|
| <b>STROBE 0</b><br>A1J5-2 / A1J6-1<br>Yel-Blk-Blk (400) | #1 Yellow<br>Drop Target<br>Red-Pur-Pur (277)<br>SW.00 | #2 Yellow<br>Drop Target<br>Grn-Yel-Yel (544)<br>SW.01 | #3 Yellow<br>Drop Target<br>Pur-Blk-Blk (700)<br>SW.02 | Yellow<br>Rollover (2)<br>Blk-Red-Red (022)<br>SW.03 | Bullseye<br>Target<br>Blk-Yel-Yel (044)<br>SW.04        | #1<br>Rollover<br>Red-Brn-Brn (211)<br>SW.05               | Not Used<br>SW.06                                 | Test Button<br>Grn-Blk-Blk (500)<br>SW.07               |
| <b>STROBE 1</b><br>A1J5-3 / A1J6-2<br>Yel-Brn-Brn (411) | #1 Blue<br>Drop Target<br>Red-Slt-Slt (288)<br>SW.10   | #2 Blue<br>Drop Target<br>Grn-Grn-Grn (555)<br>SW.11   | #3 Blue<br>Drop Target<br>Pur-Brn-Brn (711)<br>SW.12   | Blue<br>Rollover (2)<br>Blk-Orn-Orn (033)<br>SW.13   | Rollover<br>Button (2)<br>Blk-Grn-Grn (055)<br>SW.14    | #2<br>Rollover<br>Brn-Slt-Slt (188)<br>SW.15               | Not Used<br>SW.16                                 | Left Coin Chute<br>Grn-Brn-Brn (511)<br>SW.17           |
| <b>STROBE 2</b><br>A1J5-4 / A1J6-3<br>Yel-Red-Red (422) | #1 White<br>Drop Target<br>Orn-Yel-Yel (344)<br>SW.20  | #2 White<br>Drop Target<br>Grn-Blu-Blu (566)<br>SW.21  | #3 White<br>Drop Target<br>Pur-Red-Red (722)<br>SW.22  | White<br>Rollover (2)<br>Red-Blu-Blu (266)<br>SW.23  | Pop Bumper<br>(2)<br>Red-Orn-Orn (233)<br>SW.24         | #3 Rollover &<br>Spin Target<br>Blk-Pur-Pur (077)<br>SW.25 | Not Used<br>SW.26                                 | Right Coin Chute<br>Grn-Red-Red (522)<br>SW.27          |
| <b>STROBE 3</b><br>A1J5-5 / A1J6-4<br>Yel-Orn-Orn (433) | #1 Green<br>Drop Target<br>Orn-Grn-Grn (355)<br>SW.30  | #2 Green<br>Drop Target<br>Grn-Pur-Pur (577)<br>SW.31  | #3 Green<br>Drop Target<br>Pur-Orn-Orn (733)<br>SW.32  | Green<br>Rollover (2)<br>Red-Yel-Yel (244)<br>SW.33  | 10 Points<br>Contacts (10)<br>Blu-Blu-Bu (666)<br>SW.34 | Hole<br>Blk-Brn-Brn (011)<br>SW.35                         | Not Used<br>SW.36                                 | Center Coin Chute<br>Grn-Orn-Orn (533)<br>SW.37         |
| <b>STROBE 4</b><br>A1J5-6 / A1J6-5<br>Yel-Yel-Yel (444) | Not Used<br>SW.40                                      | Not Used<br>SW.41                                      | Not Used<br>SW.42                                      | Not Used<br>SW.43                                    | Not Used<br>SW.44                                       | Not Used<br>SW.45                                          | Not Used<br>SW.46                                 | Replay Button<br>Grn-Yel-Yel (544)<br>SW.47             |
| <b>STROBE 5</b><br>A1J5-7 / A1J6-6<br>Yel-Grn-Grn (455) | Not Used<br>SW.50                                      | Not Used<br>SW.51                                      | Not Used<br>SW.52                                      | Not Used<br>SW.53                                    | Not Used<br>SW.54                                       | Not Used<br>SW.55                                          | Not Used<br>SW.56                                 | Tilt<br>Grn-Grn-Grn (555)<br>Brn-Pur-Pur (177)<br>SW.57 |
| <b>STROBE 6</b><br>A1J6-7<br>Yel-Blu-Blu (466)          | Not Used<br>SW.60                                      | Not Used<br>SW.61                                      | Not Used<br>SW.62                                      | Not Used<br>SW.63                                    | Not Used<br>SW.64                                       | Not Used<br>SW.65                                          | Not Used<br>SW.66                                 | Outhole<br>Brn-Blu-Blu (166)<br>SW.67                   |
| <b>STROBE 7</b><br>A1J5-9 / A1J6-8<br>Yel-Pur-Pur (477) | Not Used<br>SW.70                                      | Not Used<br>SW.71                                      | Not Used<br>SW.72                                      | Not Used<br>SW.73                                    | Not Used<br>SW.74                                       | Not Used<br>SW.75                                          | Not Used<br>SW.76                                 | Not Used<br>SW.77                                       |

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## Driverboard

| transistor | connector       | code       | description               | wire code | wire color  | transistor type  |
|------------|-----------------|------------|---------------------------|-----------|-------------|------------------|
| Q01        | A3J3-A          | L0         | Game Over Relay (Q)       | 288       | Red-Slt-Slt | MPS-U45          |
| Q Relay    |                 |            | Match                     | 011       | Blk-Brn-Brn | Q relay n.c.     |
| Q Relay    |                 |            | Ball in Play              | 033       | Blk-Orn-Orn | Q relay n.o.     |
| Q02        | A3J3-B          | L1         | Tilt Relay (T)            | 277       | Red-Pur-Pur | MPS-U45          |
| T Relay    |                 |            | Tilt                      | 022       | Brn-Red-Red | T relay n.o.     |
| Q03        | A3J5-2          | L2         | Coin Lockout              | 877       | Slt-Pur-Pur | MPS-U45          |
| Q04        | A3J2-1 / A3J3-C | L3         | Same Player Shoot Again   | 588       | Grn-Slt-Slt | MPS-U45          |
| Q05        | A3J2-2          | L4         | Player 1                  | 500       | Grn-Blk-Blk | MPS-A13          |
| Q06        | A3J2-3          | L5         | Player 2                  | 511       | Grn-Brn-Brn | MPS-A13          |
| Q07        | A3J2-5          | L6         | Player 3                  | 522       | Grn-Red-Red | MPS-A13          |
| Q08        | A3J2-4          | L7         | Player 4                  | 533       | Grn-Orn-Orn | MPS-A13          |
| Q09        | A3J2-10         | L8         | Not Used                  | 544       | Grn-Yel-Yel | MPS-A13          |
| Q10        | A3J2-9          | L9         | Not Used                  | 555       | Grn-Grn-Grn | MPS-A13          |
| Q11        | A3J2-7          | L10        | High Game To Date         | 577       | Grn-Pur-Pur | MPS-A13          |
| Q12        | A3J2-8          | L11        | Game Over                 | 566       | Grn-Blu-Blu | MPS-A13          |
| Q13        | A3J3-25         | L12        | Drop Yellow Target #1     | 100       | Brn-Blk-Blk | MPS-U45          |
| Q14        | A3J3-24         | L13        | Drop Blue Target #1       | 111       | Brn-Brn-Brn | MPS-U45          |
| Q15        | A3J3-22         | L14        | Drop White Target #1      | 122       | Brn-Red-Red | MPS-U45          |
| Q16        | A3J3-23         | L15        | Drop Green Target #1      | 133       | Brn-Orn-Orn | MPS-U45          |
| Q17        | A3J3-13         | L16        | Drop Yellow Target #2     | 144       | Brn-Yel-Yel | MPS-U45          |
| Q18        | A3J3-14         | L17        | Drop Blue Target #2       | 155       | Brn-Grn-Grn | MPS-U45          |
| Q19        | A3J3-16         | L18        | Drop White Target #2      | 166       | Brn-Blu-Blu | MPS-U45          |
| Q20        | A3J3-15         | L19        | Drop Green Target #2      | 177       | Brn-Pur-Pur | MPS-U45          |
| Q21        | A3J3-21         | L20        | Drop Yellow Target #3     | 300       | Orn-Blk-Blk | MPS-U45          |
| Q22        | A3J3-20         | L21        | Drop Blue Target #3       | 311       | Orn-Brn-Brn | MPS-U45          |
| Q23        | A3J3-18         | L22        | Drop White Target #3      | 322       | Orn-Red-Red | MPS-U45          |
| Q24        | A3J3-19         | L23        | Drop Green Target #3      | 333       | Orn-Orn-Orn | MPS-U45          |
| Q25        | A3J3-9          | L24        | Multiplier 2X             | 344       | Orn-Yel-Yel | MPS-U45          |
| Q26        | A3J3-10         | L25        | Multiplier 3X             | 355       | Orn-Grn-Grn | MPS-U45          |
| Q27        | A3J3-12         | L26        | Multiplier 4X             | 366       | Orn-Blu-Blu | MPS-U45          |
| Q28        | A3J3-11         | L27        | Multiplier 5X             | 377       | Orn-Pur-Pur | MPS-U45          |
| Q29        | A3J3-Y          | L28        | Rollover #1               | 500       | Grn-Blk-Blk | MPS-U45          |
| Q30        | A3J3-X          | L29        | Rollover #2 (2)           | 511       | Grn-Brn-Brn | MPS-U45          |
| Q31        | A3J3-V          | L30        | Rollover #3 & Spin Target | 522       | Grn-Red-Red | MPS-U45          |
| Q32        | A3J3-W          | L31        | 20,000 & Score Bonus      | 533       | Grn-Orn-Orn | MPS-U45          |
| Q33        | A3J3-5          | L32        | Bonus 1000                | 544       | Grn-Yel-Yel | MPS-A13          |
| Q34        | A3J3-6          | L33        | Bonus 2000                | 555       | Grn-Grn-Grn | MPS-A13          |
| Q35        | A3J3-K          | L34        | Bonus 3000                | 566       | Grn-Blu-Blu | MPS-A13          |
| Q36        | A3J3-7          | L35        | Bonus 4000                | 577       | Grn-Pur-Pur | MPS-A13          |
| Q37        | A3J4-1          | L36        | Bonus 5000                | 700       | Pur-Blk-Blk | MPS-A13          |
| Q38        | A3J4-2          | L37        | Bonus 6000                | 711       | Pur-Brn-Brn | MPS-A13          |
| Q39        | A3J4-4          | L38        | Bonus 7000                | 722       | Pur-Red-Red | MPS-A13          |
| Q40        | A3J4-3          | L39        | Bonus 8000                | 733       | Pur-Orn-Orn | MPS-A13          |
| Q41        | A3J3-4          | L40        | Bonus 9000                | 744       | Grn-Yel-Yel | MPS-A13          |
| Q42        | A3J3-3          | L41        | Bonus 10,000              | 755       | Grn-Grn-Grn | MPS-A13          |
| Q43        | A3J3-T          | L42        | Extra Ball                | 766       | Grn-Blu-Blu | MPS-A13          |
| Q44        | A3J3-2          | L43        | Special                   | 777       | Grn-Pur-Pur | MPS-A13          |
| Q45        | A3J3-D          | L44        | Yellow Drop Target (3)    | 800       | Slt-Blk-Blk | MPS-U45          |
| Q46        | A3J3-F          | L45        | Blue Drop Target (3)      | 811       | Slt-Brn-Brn | MPS-U45          |
| Q47        | A3J3-P          | L46        | White Drop Target (3)     | 822       | Slt-Red-Red | MPS-U45          |
| Q48        | A3J3-M          | L47        | Green Drop Target (3)     | 833       | Slt-Orn-Orn | MPS-U45          |
| Q49        | A3J3-E          | L48        | Yellow Rollover (2)       | 844       | Slt-Yel-Yel | MPS-U45          |
| Q50        | A3J3-H          | L49        | Blue Rollover (2)         | 855       | Slt-Grn-Grn | MPS-U45          |
| Q51        | A3J3-R          | L50        | White Rollover (2)        | 866       | Slt-Blu-Blu | MPS-U45          |
| Q52        | A3J3-N          | L51        | Green Rollover (2)        | 877       | Slt-Pur-Pur | MPS-U45          |
| Q53        | A3J5-8          | Solenoid 8 | Knocker                   | 888       | Slt-Slt-Slt | 2N6043           |
| Q54        | A3J6-3          | Solenoid 3 | Coin Counter 1            | 655       | Blu-Grn-Grn | MPS-U45          |
| Q55        | A3J6-2          | Solenoid 4 | Coin Counter 2            | 644       | Blu-Yel-Yel | MPS-U45          |
| Q56        | A3J6-1          | Solenoid 7 | Coin Counter 3            | 633       | Blu-Orn-Orn | MPS-U45          |
| Q57-Q58    | A3J4-13         | Solenoid 2 | #1 Drop Target Bank Reset | 200       | Red-Blk-Blk | MPS-U45 - 2N3055 |
| Q59        | A3J4-8          | Solenoid 9 | Outhole                   | 244       | Red-Yel-Yel | 2N6043           |
| Q60        | A3J4-7          | Solenoid 1 | #3 Drop Target Bank Reset | 266       | Red-Blu-Blu | 2N6043           |
| Q61-Q62    | A3J4-6          | Solenoid 5 | #2 Drop Target Bank Reset | 211       | Red-Brn-Brn | MPS-U45 - 2N3055 |
| Q63-Q64    | A3J4-12         | Solenoid 6 | Hole Kicker               | 233       | Red-Orn-Orn | MPS-U45 - 2N3055 |

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## Fuse List

| designation | Wire in           | Value          | Wire out          | description                   | location     |
|-------------|-------------------|----------------|-------------------|-------------------------------|--------------|
| F1          | Blk-Slt-Slt (088) | 12 Amp         | Blk-Pur-Pur (077) | 6.3VAC Lightbox Illumination  | Bottom Board |
| F2          |                   | 7½ Amp         | Blk-Blu-Blu (066) | 6.3VAC Playboard Illumination | Bottom Board |
| F3          | Orn-Blk-Blk (300) | 5 Amp Slo-Blo  | Orn-Brn-Brn (311) | 8VAC Controlled Lamps         | Bottom Board |
| F4          | Orn-Red-Red (322) | ¼ Amp Slo-Blo  | Orn-Orn-Orn (333) | 12VAC Sound Board             | Bottom Board |
| F5          | Red-Brn-Brn (211) | 5 Amp Slo-Blo  | Red-Orn-Orn (233) | 10VAC Power Supply            | Bottom Board |
| F6          | Red-Blu-Blu (266) | 5 Amp Slo-Blo  | Red-Pur-Pur (277) | 25VAC Solenoids               | Bottom Board |
| F7          | Brn-Slt-Slt (188) | ¼ Amp Slo-Blo  | Brn-Blk-Blk (100) | 60VAC Score Displays          | Bottom Board |
| F8          | --                | 5 Amp Slo-Blo  | Grn-Slt-Slt (588) | 115VAC Primary Fuse           | Bottom Board |
|             |                   | 2½ Amp Slo-Blo |                   | 230VAC Primary Fuse           | Bottom Board |
| F9          | Red-Red-Red (222) | 1 Amp Slo-Blo  | Yel-Slt-Slt (488) | Outhole                       | Playfield    |
| F10         | Red-Red-Red (222) | 2 Amp Slo-Blo  | Yel-Pur-Pur (477) | Drop Target Bank #1 Reset     | Playfield    |
|             |                   |                |                   | Drop Target Bank #2 Reset     |              |
|             |                   |                |                   | Drop Target Bank #3 Reset     |              |
|             |                   |                |                   | Hole Kicker                   |              |
| F11         | Orn-Slt-Slt (388) | 2 Amp Slo-Blo  | Slt-Slt-Slt (888) | Top Pop Bumper                | Playfield    |
| F12         |                   | 2 Amp Slo-Blo  | Red-Blk-Blk (200) | Lower Pop Bumper              | Playfield    |

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## Solenoids

|        | Solenoid description       | Solenoid Type    | Power Wire        | Fuse       | Transfer Wire     | Coil Wire Color   | Connector | Driver Tr.   | Transistor Type  | Coil Type |
|--------|----------------------------|------------------|-------------------|------------|-------------------|-------------------|-----------|--------------|------------------|-----------|
| L0     | Game Over Relay            | controlled       | Red-Red-Red (222) |            |                   | Red-Slt-Slt (288) | A3J3-A    | Q1           | MPS-U45          | A-16890   |
| L1     | Tilt Relay                 | controlled       | Red-Red-Red (222) |            |                   | Red-Pur-Pur (277) | A3J3-B    | Q2           | MPS-U45          | A-16890   |
| L2     | Lockout                    | controlled       | Red-Red-Red (222) |            |                   | Slt-Pur-Pur (877) | A3J5-2    | Q3           | MPS-U45          | A-16890   |
| Sol. 1 | Drop Target Bank #3 Reset  | controlled       | Red-Red-Red (222) | F10        | Yel-Pur-Pur (477) | Red-Blu-Blu (266) | A3J4-7    | Q60          | 2N6043           | A-18318   |
| Sol. 2 | Drop Target Bank #1 Reset  | controlled       | Red-Red-Red (222) | F10        | Yel-Pur-Pur (477) | Red-Blk-Blk (200) | A3J4-13   | Q57 + Q58    | MPS-U45 + 2N3055 | A-18318   |
| Sol. 3 | Coin Counter #1            | controlled       | Red-Red-Red (222) |            |                   | Blu-Grn-Grn (655) | A3J6-3    | Q54          | MPS-U45          |           |
| Sol. 4 | Coin Counter #2            | controlled       | Red-Red-Red (222) |            |                   | Blu-Yel-Yel (644) | A3J6-2    | Q55          | MPS-U45          |           |
| Sol. 5 | Drop Target Bank #2 Reset  | controlled       | Red-Red-Red (222) | F10        | Yel-Pur-Pur (477) | Red-Brn-Brn (211) | A3J4-6    | Q61 + Q62    | MPS-U45 + 2N3055 | A-18318   |
| Sol. 6 | Hole Kicker                | controlled       | Red-Red-Red (222) | F10        | Yel-Pur-Pur (477) | Red-Orn-Orn (233) | A3J4-12   | Q63 + Q64    | MPS-U45 + 2N3055 | A-1496    |
| Sol. 7 | Coin Counter #3            | controlled       | Red-Red-Red (222) |            |                   | Blu-Orn-Orn (633) | A3J6-1    | Q56          | MPS-U45          |           |
| Sol. 8 | Knocker                    | controlled       | Red-Red-Red (222) |            |                   | Slt-Slt-Slt (888) | A3J5-8    | Q53          | 2N6043           | A-5195    |
| Sol. 9 | Outhole                    | controlled       | Red-Red-Red (222) | F9         | Yel-Slt-Slt (488) | Red-Yel-Yel (244) | A3J4-8    | Q59          | 2N6043           | A-16570   |
|        | Top Pop Bumper             | Pop Bumper Board | Orn-Slt-Slt (388) | F11        | Slt-Slt-Slt (888) | Brn-Slt-Slt (188) | 1A8J1-1   | board 1 - Q1 | 2N6057           | A-1496    |
|        | Lower Pop Bumper           | Pop Bumper Board | Orn-Slt-Slt (388) | F12        | Red-Blk-Blk (200) | Yel-Slt-Slt (488) | 2A8J1-1   | board 2 - Q1 | 2N6057           | A-1496    |
|        | Left Kicking Rubber        | directly         | Orn-Slt-Slt (388) |            |                   |                   |           | switch       |                  | A-1496    |
|        | Lower Right Kicking Rubber | directly         | Orn-Slt-Slt (388) |            |                   |                   |           | switch       |                  | A-1496    |
|        | Upper Right Kicking Rubber | directly         | Orn-Slt-Slt (388) |            |                   |                   |           | switch       |                  | A-1496    |
|        | Left Flipper               | directly         | Orn-Slt-Slt (388) | to button, | Blk-Grn-Grn (055) | to coil           | A7J5-9    | button       |                  | A-17875   |
|        | Right Flipper              | directly         | Orn-Slt-Slt (388) | to button, | Blk-Yel-Yel (044) | to coil           | A7J5-10   | button       |                  | A-17875   |

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