Shtok NPXL thin neck chassis connector demonstration
by Charlie Rayner
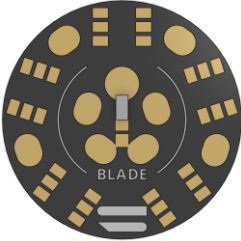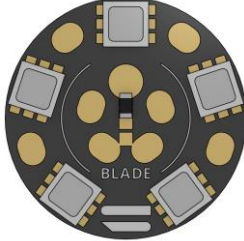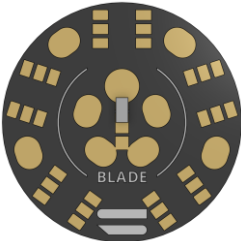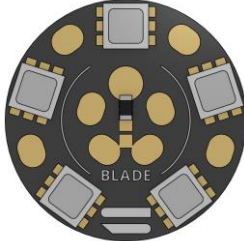

NPXL "Blade" PCB with 330ohm SMD resistor
Let's call this "Blade PCB"

NPXL "Hilt" PCB
Let's call this "Emitter PCB"

NPXL "Blade" PCB WITHOUT 330ohm SMD resistor
Let's call this "Thin Neck PCB"

NPXL "Hilt" PCB
Let's call this "Chassis PCB"

Chassis PCB **Thin Neck PCB** **Emitter PCB** **Blade PCB**

22AWG
32AWG
22AWG
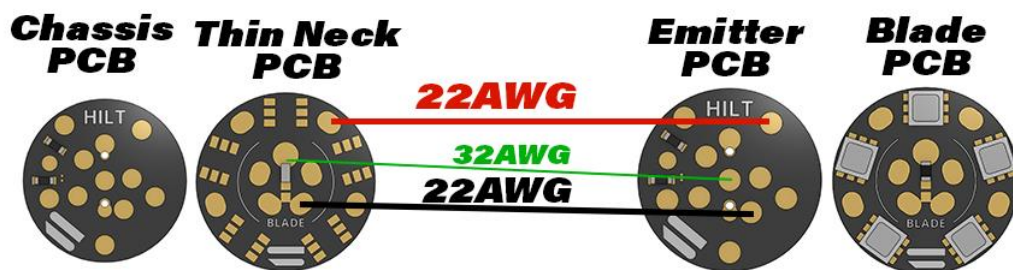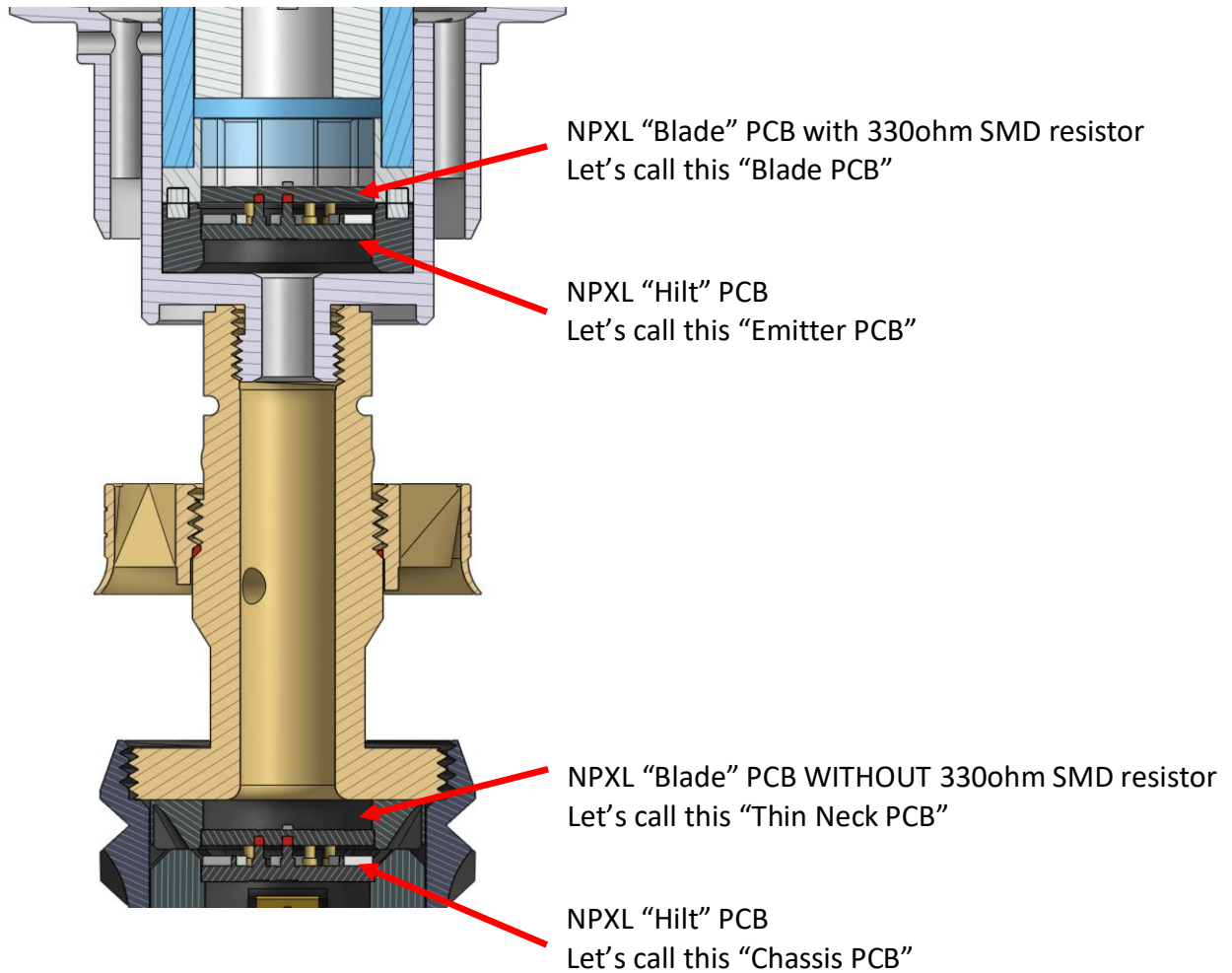
Layout 1: Blade LEDs ONLY

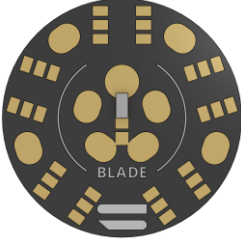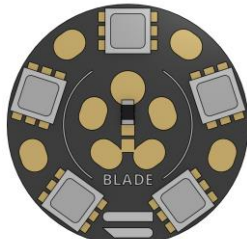| Hilt PCB	Thin Neck PCB	Emitter PCB	Blade PCB
1. 330ohm resistor on R1 2. No Jumper 3. Data lead wired to D1 or D2 (V1 LAYOUT)	1. No resistor on Data pads 2. Solder bridge between data pads 3. No LEDs on this PCB	1. 330ohm resistor on R1 2. No Jumper 3. Data lead wired to D1 or D2 (V1 LAYOUT)	1. 330ohm resistor on Data pads

Layout 2: All LEDs in PARALLEL

Hilt PCB	Thin Neck PCB	Emitter PCB	Blade PCB
1. 330ohm resistor on R1 AND R2 2. No Jumper 3. Data lead wired to D2 (V2 LAYOUT)	1. No resistor on Data pads 2. Solder bridge between data pads 3. No LEDs on this PCB	1. 330ohm resistor on R1 AND R2 2. No Jumper 3. Data lead wired to D2 (V2 LAYOUT)	1. 330ohm resistor on Data pads

Layout 3: All LEDs in SERIES
(Add an additional 10 LEDs to your config file)
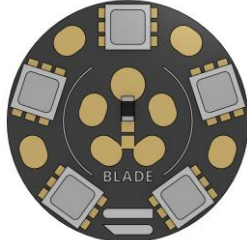
Hilt PCB	Thin Neck PCB	Emitter PCB	Blade PCB
1. 330ohm resistor on R2 2. Jumper on J pads 3. Data lead wired to D2 (V3 LAYOUT)	1. No resistor on Data pads 2. Solder bridge between data pads 3. No LEDs on this PCB	1. 330ohm resistor on R2 2. Jumper on J pads 3. Data lead wired to D2 (V3 LAYOUT)	1. 330ohm resistor on Data pads

Layout 4: Chassis and Emitter in PARALLEL but Emitter and Blade in SERIES
(Add an additional 5 LEDs to your config file)

Hilt PCB	Thin Neck PCB	Emitter PCB	Blade PCB
1. 330ohm resistor on R1 AND R2 2. No Jumper (V2 LAYOUT)	1. No resistor on Data pads 2. Solder bridge between data pads 3. No LEDs on this PCB	1. 330ohm resistor on R2 2. Jumper on J pads 3. Data lead wired to D2 (V3 LAYOUT)	1. 330ohm resistor on Data pads

Layout 5: No Chassis LEDs but Emitter and Blade in PARALLEL

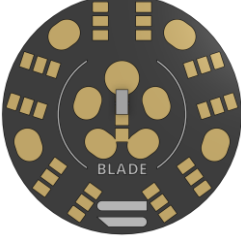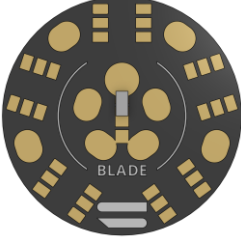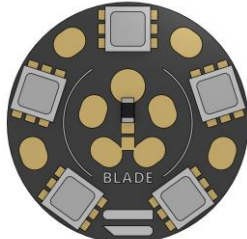| Hilt PCB	Thin Neck PCB	Emitter PCB	Blade PCB
1. 330ohm resistor on R1 2. No Jumper 3. Data lead wired to D1 or D2 (V1 LAYOUT)	1. No resistor on Data pads 2. Solder bridge between data pads 3. No LEDs on this PCB	1. 330ohm resistor on R1 AND R2 2. No Jumper 3. Data lead wired to D2 (V2 LAYOUT)	1. 330ohm resistor on Data pads

Layout 6: No Chassis LEDs but Emitter and Blade in SERIES
(Add an additional 5 LEDs to your config file)

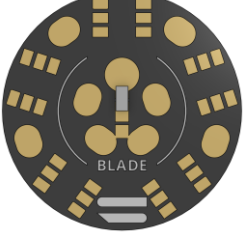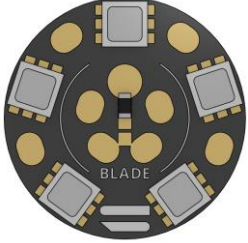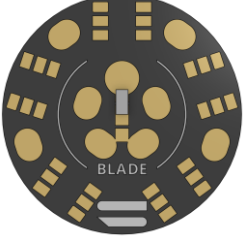| Hilt PCB	Thin Neck PCB	Emitter PCB	Blade PCB
1. 330ohm resistor on R1 2. No Jumper 3. Data lead wired to D1 or D2 (V1 LAYOUT)	1. No resistor on Data pads 2. Solder bridge between data pads 3. No LEDs on this PCB	1. 330ohm resistor on R2 2. Jumper on J pads 3. Data lead wired to D2 (V3 LAYOUT)	1. 330ohm resistor on Data pads

Layout 7: No Emitter LEDs but Chassis and Blade in PARALLEL

Hilt PCB	Thin Neck PCB	Emitter PCB	Blade PCB
1. 330ohm resistor on R1 AND R2 2. No Jumper 3. Data lead wired to D2 (V2 LAYOUT)	1. No resistor on Data pads 2. Solder bridge between data pads 3. No LEDs on this PCB	1. 330ohm resistor on R1 2. No Jumper 3. Data lead wired to D1 or D2 (V1 LAYOUT)	1. 330ohm resistor on Data pads

Layout 8: No Emitter LEDs but Chassis and Blade in SERIES
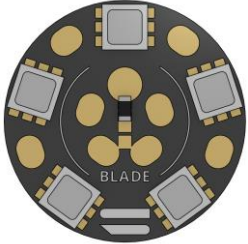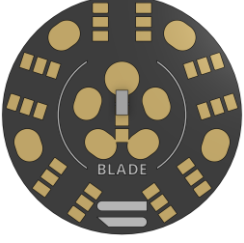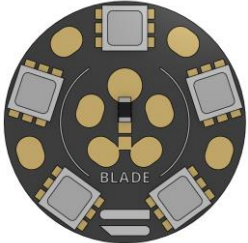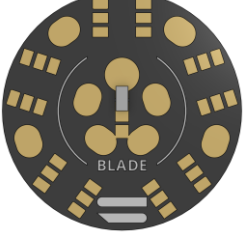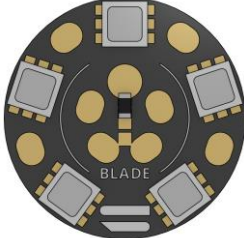**(Add an additional 5 LEDs to your config file)**

Hilt PCB	Thin Neck PCB	Emitter PCB	Blade PCB
1. 330ohm resistor on R2 2. Jumper on J pads 3. Data lead wired to D2 (V3 LAYOUT)	1. No resistor on Data pads 2. Solder bridge between data pads 3. No LEDs on this PCB	1. 330ohm resistor on R1 2. No Jumper 3. Data lead wired to D1 or D2 (V1 LAYOUT)	1. 330ohm resistor on Data pads

Layout 9: Chassis LEDs Independent but Emitter and Blade in PARALLEL

Hilt PCB	Thin Neck PCB	Emitter PCB	Blade PCB
1. 330ohm resistor on R2 2. No Jumper 3. 2 Data leads wired to D1 and D2 (V4 LAYOUT)	1. No resistor on Data pads 2. Solder bridge between data pads 3. No LEDs on this PCB	1. 330ohm resistor on R1 AND R2 2. No Jumper 3. Data lead wired to D2 (V2 LAYOUT)	1. 330ohm resistor on Data pads

Layout 10: Chassis LEDs Independent but Emitter and Blade in SERIES

Hilt PCB	Thin Neck PCB	Emitter PCB	Blade PCB
1. 330ohm resistor on R2 2. No Jumper 3. 2 Data leads wired to D1 and D2 (V4 LAYOUT)	1. No resistor on Data pads 2. Solder bridge between data pads 3. No LEDs on this PCB	1. 330ohm resistor on R2 2. Jumper on J pads 3. Data lead wired to D2 (V3 LAYOUT)	1. 330ohm resistor on Data pads

Blade ID and Blade detect is not possible with this layout, unless you detect the chassis itself.
Chassis, emitter and blade LEDs being independent is not possible either, unless using sub blades.