

NL8 to NL4 SPI Splitter

Wire diagram · build 8 (5 + 3 spare) · prototype 1 first · KG3 · BEA 2026 (Beabadoobee Headline Tour) · rev Sep 9, 2026 (supersedes the Aug 31 16/6 version)

What it is: breakout that splits one Pixel Data + Power Cable (NL8) into the two NL4 circuits it serves. **Two 18/3 SOOW cables, one per NL4 leg, both landing in ONE NL8 cable connector (NL8FC).** There is no NL8 stub: each cable runs straight from the NL8 to its NL4. The NL8 side mates the Pixel Data + Power Cable through an **NL8 barrel**. Same colors in both cables: **WHITE = V+, GREEN = SPI data, BLACK = GND**. It is the NL8 rack panel (NL8MPR, two SPI outputs on 2x 18/3 SOOW) mirrored onto two ropes.

Tails (Kenny, Sep 9): OUTPUT 1 = the LONG 8 ft tail. OUTPUT 2 = the SHORT 2 ft tail. On the BEA pylons the NL8 trunk lands at the **BOTTOM arm**: **OUTPUT 2 (2 ft) feeds the bottom run** right there and **OUTPUT 1 (8 ft) rises one arm (5 ft 5 in) to the middle run**. Audience: the NL8 lands at AUD2, OUTPUT 2 onto AUD2, OUTPUT 1 plus the 10 ft NL4 jumper up to AUD1. Each tail gets its own label, OUTPUT 1 or OUTPUT 2; nothing else differs.

Pin map

CABLE	WIRE	NL8 POLE (CABLE SIDE)	NL4 TAIL	NL4 PIN	FUNCTION
Cable 1	White	1+	OUTPUT 1 (8 ft, long)	1+	V+ (+24V)
Cable 1	Green	1-	OUTPUT 1 (8 ft, long)	1-	SPI DATA 1
Cable 1	Black	2-	OUTPUT 1 (8 ft, long)	2-	GND
Cable 2	White	3+	OUTPUT 2 (2 ft, short)	1+	V+ (+24V)
Cable 2	Green	3-	OUTPUT 2 (2 ft, short)	1-	SPI DATA 2
Cable 2	Black	4-	OUTPUT 2 (2 ft, short)	2-	GND
—	no wire	2+ / 4+	—	2+ (both tails)	NOT IN USE. No wire, no jumper

Assembly stack at the bottom arm



Labels: two per splitter, on the NL4 tails

OUTPUT 1 · NL8-NL4 2x 18/3 SOOW · SPI Splitter · info@kg3.io on the **8 ft tail**

OUTPUT 2 · NL8-NL4 2x 18/3 SOOW · SPI Splitter · info@kg3.io on the **2 ft tail**. Same P-touch label, only the output number differs. **BLACK 24 mm tape, white text**, one wrap, clear shrink over it (18/3 SOOW is 9 mm OD: 1/2 in clear 2:1), 9 in from the stripped end, on **BEFORE** the NL4 goes on. No label on the NL8 end. Both .lbr files download from the NeonOS build page.

Prototype first: build ONE, verify with Kenny, then build the rest. **8 total** (5 in service + 3 spare). Both cables go through the one NL8FC gland (it takes 8 to 20 mm OD). NL8 barrels: 5 + spares needed. Wiring and tail rule per Kenny, Sep 9 2026.

KG3 LLC · Nashville TN · Build per the KG3 Cable Build Standard: label under clear heat shrink 9 in from the stripped end BEFORE terminating · job run tags on gaff, not shrink · continuity test every conductor end to end · log the build on the NeonOS build page. Wire colors on the actual jacket may differ from typical: run the wire color check and record the map. Do not guess.