

LAIRD RTBNC-4505-XXX DATASHEET

The Laird RTBNC-4505 UHD BNC Cable Assembly is specifically designed for high-performance 12G-2K video applications. It features Neutrik rearTWIST UHD BNC connectors and Belden RG59 4505A cable, providing extended bandwidth. The innovative rear twist technology simplifies insertion and removal of connectors, ensuring easy interface with patch bays without the need for special removal tools. The cable's construction includes a solid bare copper conductor, gas-injected foam HDPE insulation, Duobond II + tinned copper braid shield, and a PVC jacket. Belden's certified max transmission distance: 12G Signals up to 208ft, 6G up to 302ft, and 3G up to 433ft. Laird's certified max transmission distance: 150 Feet for 12G/4K.

** Laird certified lengths are defined as max transmission where signal integrity remains 100% functional without any CRC errors, your 12GSDI ST 2082 signals may function at or beyond the manufacturer-certified lengths without issues- however when CRC errors are present there could be drops in audio, video, meta and ancillary data. In most circumstances, video integrity remains intact at OEM distance **

Features:

- Neutrik rearTWIST UHD BNC designed for UHD-data Transmissions
- Fully compatible with conventional BNC Chassis connectors
- Improved return loss values at high frequency
- Swiss Antraloy plating
- UL1666 compliant and CMR compliant
- Indoor-Riser Rated
- Suitable applications: SMPTE 3G, SMPTE 6G, SMPTE 12G



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Specifications:

- **Cable Type:** RG59/U
- **AWG:** 20
- **Stranding:** Solid
- **Number of Coax:** 1
- **Conductor Material:** Silvered Copper (SC)
- **Conductor Diameter:** 0.032in (0.812mm)
- **Outer Jacket Material:** Polyvinyl Chloride (PVC)
- **Overall Nom Diameter:** 0.233in (5.918mm)
- **Insulation:** Gas-Injected Polyethylene (PE)
- **Insulation Diameter:** 0.145in (3.683mm)
- **Outer Shield Layer 1 Type:** Bonded Duofoil (tape)
- **Outer Shield Layer 1 Material:** Tri-Laminate (Alum+Poly+Alum) Foil 100% coverage
- **Outer Shield Layer 2 Type:** Braid
- **Outer Shield Layer 2 Material:** Tinned Copper (TC) 95% coverage
- **Nom Impedance:** 75 Ω
- **Nom Inductance:** 0.107(μ H/ft)
- **Nom Capacitance Conductor to shield:** 16.1 pF/ft (52.8 pF/m)
- **Nom Velocity of Propagation:** 83%
- **Nom Delay:** 1.220 (ns/ft)
- **Nom Conductor DC resistance:** 10.200 (ohm/1000ft)
- **Nom Outer Shield DC resistance:** 3.400 (Ohm/1000ft)
- **Return Loss:**
 - 5-1600 MHz: 23dB
 - 1600-4500 MHz: 21dB
 - 4500-12000 MHz: 15dB
- **Min Bend Radius:** 2.3in (58mm)
- **Min Pulling Tension:** 52lbs (23.58kg)
- **Max Operating Voltage:** 300 V RMS
- **Operating Temperature:** -4°F to 167°F (-30°C To +75°C)
- **Weight:** 0.031lbs/ft

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Specifications:

Neutrik rearTWIST UHD BNC Connector:

- **Connection Type:** BNC
- **Shell:** Brass
- **Shell plating:** Antraloy
- **Insertion Force:** <25 N
- **Lifetime:** >1000 Mating Cycles
- **Contacts:** Brass 0.2 μm AuCo (center contact)
- **Contact Resistance Inner:** $\leq 3 \text{ m}\Omega$
- **Contact Resistance outer:** $\leq 2 \text{ m}\Omega$
- **Dielectric Strength:** 1.5 kVdc