

NEWtral \ 'nü - trəl \ n

1 : A cable specifically designed to neutralize noise generated by mechanical shock and vibration to maximize signal quality in small-signal applications.

2 : One of many high-performance product offerings from New England Wire Technologies, a world leader in the design and manufacture of specialty wire and cable.

Product Applications

Medical Equipment

ECG

EEG

Pulse Oximetry

Test and Measurement

Charge Amplifiers

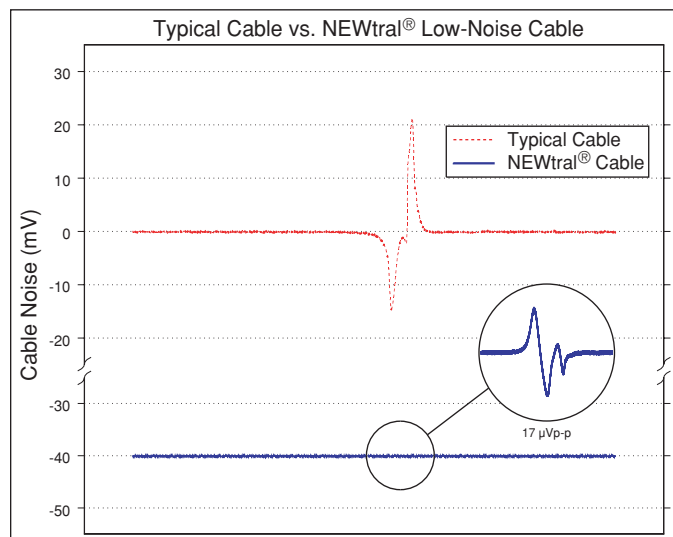
Vibration Analyzers

Oscilloscopes

Technical Information

In small-signal applications, noise-free transmission lines are necessary to maintain signal integrity. Simply flexing or twisting a traditional cable can generate voltage spikes with magnitudes in the tens of millivolts. This noise is due to triboelectric charging of the insulator materials, which act as capacitors and store the charge. The addition of conductive low-noise layers reduces the noise to the microvolt range.

New England Wire Technologies dedicated resources to develop a range of advanced low-noise cables. Our engineers design custom cables to meet all customer requirements for performance in their application.



Stripping/Termination Information

While preparing a low-noise cable for termination, it is important to consider the effect of the outer conductive low-noise suppression layer. Isolation of the low-noise layer from the conductors is necessary to prevent a short circuit situation. Depending on the type, the low-noise layer can either be stripped with conventional mechanical and laser stripping methods, or require chemical and abrasive stripping methods.



Extruded: Remove low-noise layer
Mechanical Stripping
Laser Stripping



Coated: Remove low-noise layer
Chemical (Citrus Solvent) Stripping
Abrasive Stripping



EZ-Strip: Remove outer insulation layer
Mechanical Stripping
Laser Stripping

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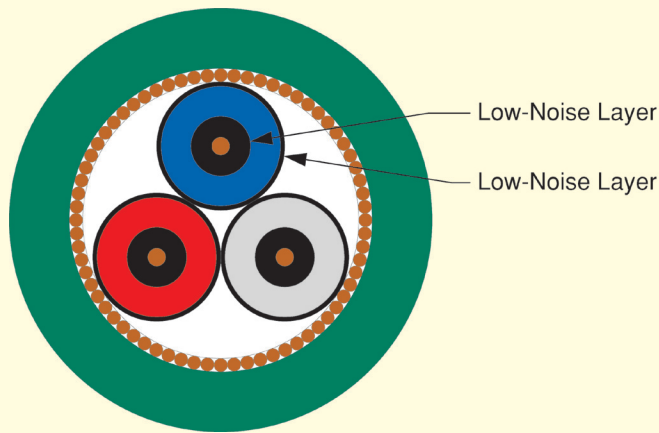
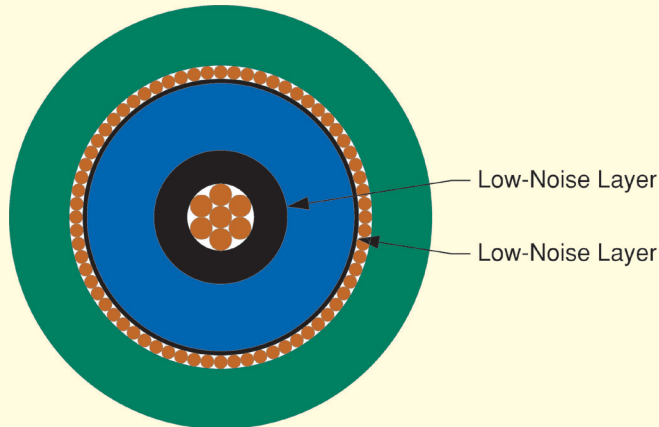
WEB: www.newenglandwire.com



new challenges. NEW solutions.

NEWtral[®] Cable Selection Guide

NEWtral - Type 1



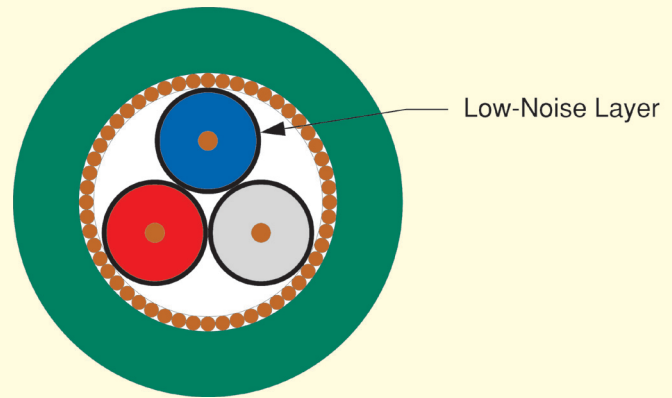
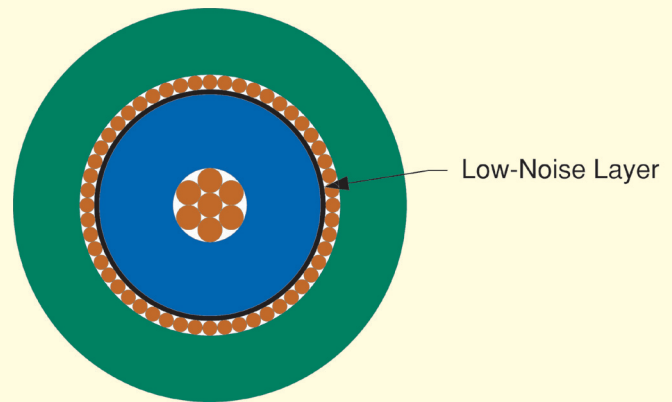
Advantage:

Excellent performance (10 μ V - 100 μ V)

Consideration:

Increase in primary diameter (.010" - .020")

NEWtral - Type 2



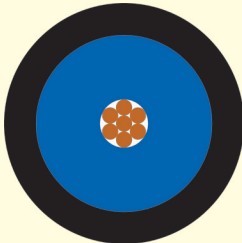
Advantages:

Very good performance (25 μ V - 250 μ V)

Low cost

Outer Low-Noise Layer Options

Extruded



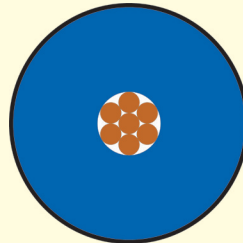
Advantage:

Can be mechanically stripped
Low cost

Consideration:

Diameter increase (.010" - .020")

Coated



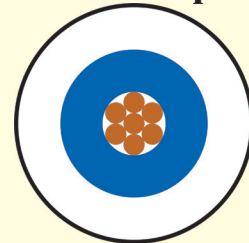
Advantage:

No diameter increase
Low cost

Consideration:

Must be chemically stripped

EZ-Strip



Advantage:

Can be mechanically stripped
No diameter increase

Consideration:

Higher cost