

Headstage Cables

Headstage cables are available in a variety of options including: wire gauge, cable wraps, lengths, connectors and configurations. The proper build will improve the quality of your recordings as well as protect your investment. All Plexon headstage cables are reusable.

Wire Gauge

Standard 34 Gauge

The standard gauge for headstage cable wire used by Plexon is 34 gauge which is flexible, yet robust. 34 gauge wire is ideal for head-fixed experiments, or for research in which the freely behaving animals are unlikely to be impeded by the cable. The standard 34 gauge wire is easy to identify as the wire insulation is multi-colored.



Ultra-fine 36 Gauge

If your experiments require small animals such as mice, we recommend our 36 gauge ultra-fine wire. This thinner cable wire is lighter-weight and is less likely to impede the behavior of smaller animals. The ultra-thin wire is also easy to identify as it has white wire insulation.



Cable Wraps

Unless otherwise requested, headstage cable wires are bound using tiny shrink-wrap cuffs spaced approximately every 1.0 to 1.5 inches. There are situations, however, in which the standard cuffed method may not be sufficient: if the cables may be snagged during normal use, damaged by biting animals, or if you wish to increase the cable torque transmitted to a standard, non-motorized commutator for more effective operation. In these circumstances, we recommend one of the following wraps.

Polyester Mesh Wrap

The polyester mesh wrap is the lightest-weight and most flexible wrap Plexon offers. It will protect the headstage cable from damage incurred due to general use such as snagging, and is light enough and flexible enough for use with small animals, such as mice. This wrap is recommended for use on ultra-fine 36 gauge wire cables, and if working with small animals.



Metal Mesh Wrap

The metal mesh wrap is stronger yet. It will provide protection from standard use damage, transmit additional torque to a non-motorized commutator, and offer a minimal degree of protection from animal bites. The metal mesh wrap provides additional protection beyond that of the previous options.



Clear Plastic Wrap

The next step up in strength is the clear plastic wrap. It provides some additional benefit over the polyester mesh wrap with respect to protection from damage incurred during standard use, and is slightly stiffer. The clear plastic wrap is especially beneficial if your experimental set-up includes a non-motorized, Standard Commutator. A plastic-wrapped headstage cable will transmit torque to the commutator better than an unwrapped or polyester mesh-wrapped headstage cable will.



Metal Coil Wrap

The metal coil wrap is our strongest, most robust wrap. It will transmit torque to the non-motorized commutator and protect the headstage cable from animal bites and other damage. It is especially beneficial when experimental subjects are likely to become bored or quite agitated, such as with substance abuse research in which the animals become aggressive or bored.



Cable Lengths

Headstage cable length is defined as tip-to-tip including the connectors. Plexon's headstage cables have a default length of 36 inches and can often be cut to custom lengths. The technical specifications table will identify our most popular headstage cables with options. These are cables that we stock in inventory and are able to turn around very quickly. We do produce many cables beyond what is outlined in the table. We are happy to discuss any custom requirements that you may have or variations to what is provided to meet your needs.

Configurations

Straight Cables

The vast majority of cables requested are simple, straight cables in which there is one connector on each end.

Y-Cables

Occasionally, a bifurcated cable is necessary, such as with an experiment recording neural data bilaterally. Any straight cable we manufacture can also be manufactured as a Y-cable.



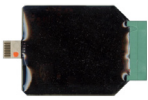



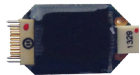

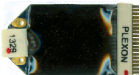

Technical Specifications

The table below provides a listing of the most commonly ordered straight headstage cables based on headstage; Further, we can produce custom cables beyond what is listed below — including transforming the straight cables into Y-cables.

Please note that the product images below are not to scale relative to either actual size or to each other.

Headstage	Headstage Catalog Numbers	Compatible Cable Catalog Numbers Wire Gauge* and Length (inches)	Wraps**
A 	Pitch: 0.050" Channels: 8, 16, 24 HST/8o50-Gx-xR HST/16o50-Gx-xR HST/24o50-Gx-XR	Cable: HSC/8 Cable: HSC/16o50 Cable: HSC/24o50 Standard 34 gauge: 36, 120 Ultra-fine 36 gauge: 36, 96	Polyester Mesh Wrap 
B 	Pitch: 0.050" Channels: 8, 16, 24 HST/8o50-Gx-xR-Lxx HST/16o50-Gx-xR-Lxx HST/24o50-Gx-xR-Lxx		
C 	Pitch: 0.025" Channels: 8 HST/8o25-9P-xR	Cable: HSC/8 Standard 34 gauge: 36, 120 Ultra-fine 36 gauge: 36, 96	Clear Plastic Wrap 
D 	Pitch: 0.025" Channels: 8 HST/8o25-10P-xR		
E2a 	Pitch: 0.025" Channels: 16 HST/16o25-GEN2-18P-2GP-G1	Cable: HSC/16o25-GEN2 Standard 34 gauge: 36, 96 Ultra-fine 36 gauge: 36, 132	
E2b 	Pitch: 0.025" Channels: 16 HST/16o25-GEN2-18P-6GP-G1		
F3 	Pitch: 0.025" Channels: 32 HST/32o25-GEN3-36P-G1	Cable: HSC/32o25-GEN3 Standard 34 gauge: 36 Ultra-fine 36 gauge: 36, 84, 96	Metal Mesh Wrap 
H 	Pitch: 0.025" Channels: 16 HST/16V-G20	Cable: HSC/16V Standard 34 gauge: 36, 96 Ultra-fine 36 gauge: 36, 132	Metal Coil Wrap 
J 	Pitch: 0.025" Channels: 32 HST/32V-G20	Cable: HSC/32V Standard 34 gauge: 36 Ultra-fine 36 gauge: 36, 84, 96	
M 	Pitch: 0.050" Channels: 96 HST/CereStage 96	Cable: HST/CereStage 96-H42F-36G-36L Cable: HST/CereStage 96-2H26F-36G-36L Standard 34 gauge: 36 Ultra-fine 36 gauge: 36, 84, 96	



Headstage	Headstage Catalog Numbers	Compatible Cable Catalog Numbers Wire Gauge* and Length (inches)	Wraps**
N	 Pitch: 0.049" Channels: 8 HST/8-BIOP-PNS	Cable: HSC/8-BIOP Standard 34 gauge: 36	Polyester Mesh Wrap 
P	 Pitch: 0.049" Channels: 8 HST/8-BIOP-EDIF		Clear Plastic Wrap 
Q	 Pitch: 0.025" Channels: 16 HST/16D	Cable: HSC/DHSC1-36L Ultra-fine 36 gauge: 36, 96	Metal Mesh Wrap 
R	 Pitch: 0.025" Channels: 32 HST/32D		Metal Coil Wrap 

*Almost any cable can be produced using either 34 gauge or 36 gauge wire. Additionally, most cables can be produced in many lengths 132 inches or less. Please plan additional manufacturing time for custom cables.

**Wraps can be applied to any cable of any length. However, cables over 72 inches require special attention and may take a bit longer to produce.