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.

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.

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 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.

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.

Cable Weights

Plexon offers several headstage cable wire options that can be wrapped in the cable wraps listed above. The table below shows the weight of each of the cable wire options and the additional weight of including one of the cable wrap options on a standard 36 inch headstage cable.

Wire Type	Cable (No Wrap)	Polyester Mesh	Clear Plastic	Metal Mesh	Metal Coil
Analog 34 Gauge	13.3 grams	+3.4 grams	+8.2 grams	+12.8 grams	+47.1 grams
Analog 36 Gauge	7.4 grams				
Digital (DHSC1/DHSC2)	4.8 grams				
Jacketed Digital (DHSC3)	9.9 grams				

Configurations

Straight Cables

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

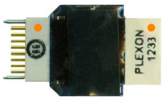
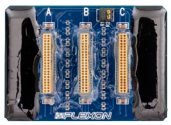
Y-Cables

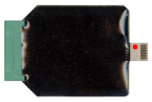
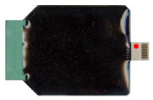
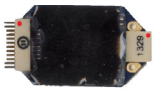
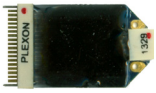
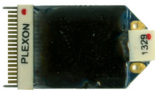
Occasionally, a bifurcated cable is necessary, such as with an experiment recording neural data bilaterally. Any straight cable we manufacture can also be manufactured as a Y-cable.

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 Type*	Wraps**
A	**Pitch:** 0.050″ **Channels:** 8, 16 HST/8o50-Gx-xR HST/16o50-Gx-xR	**Cable:** HSC/8 **Cable:** HSC/16o50 **Analog 34 gauge** **Analog 36 gauge**	Polyester Mesh Wrap
C2	**Pitch:** 0.025″ **Channels:** 8 HST/8o25-GEN2-9P-G1-xR	**Cable:** HSC/8 **Analog 34 gauge** **Analog 36 gauge**	
D2	**Pitch:** 0.025″ **Channels:** 8 HST/8o25-GEN2-10P-G1-xR		
E2a 	**Pitch:** 0.025″ **Channels:** 16 HST/16o25-GEN2-18P-2GP-G1	**Cable:** HSC/16o25-GEN2 **Analog 34 gauge** **Analog 36 gauge**	Clear Plastic Wrap
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 **Analog 34 gauge** **Analog 36 gauge**	Metal Mesh Wrap
H2	**Pitch:** 0.025″ **Channels:** 16 HST/16V-G20 LN	**Cable:** HSC/16V **Analog 34 gauge** **Analog 36 gauge:**	
J2	**Pitch:** 0.025″ **Channels:** 32 HST/32V-G20 LN	**Cable:** HSC/32V **Analog 34 gauge** **Analog 36 gauge**	
J3	**Pitch:** 0.025″ **Channels:** 32 HST/32V-G20 LN 5V		Metal Coil Wrap
M 	**Pitch:** 0.025″ **Channels:** 96 HST/CereStage 96	**Cable:** HST/CereStage 96-H42F-36G **Cable:** HST/CereStage 96-2H26F-36G **Analog 34 gauge** **Analog 36 gauge**	

Headstage	Headstage Catalog Numbers	Compatible Cable Catalog Numbers Wire Type and Length (inches)*	Wraps**
N 	**Pitch:** 0.049″ **Channels:** 8 HST/8-BIOP-PNS	**Cable:** HSC/8-BIOP **Analog 34 gauge**	Polyester Mesh Wrap
P 	**Pitch:** 0.049″ **Channels:** 8 HST/8-BIOP-EDIF		Clear Plastic Wrap
Q2 	**Pitch:** 0.025″ **Channels:** 16 HST/16D Gen2	**Cable:** HSC/DHSC1 **Digital** **Cable:** HSC/DHSC3 **Jacketed Digital**	Metal Mesh Wrap
R 	**Pitch:** 0.025″ **Channels:** 32 HST/32D		Metal Coil Wrap
T 	**Pitch:** 0.025″ **Channels:** 16 HST/16D Gen2 DIFF		
S	**Pitch:** 0.025″ **Channels:** 64 HST/64D	**Cable:** HSC/DHSC2 **Digital**	

**Standard cable length is 36 inches. Most cables can be produced in lengths of 120 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.*

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