

ECoG Headstages

Hardware Reference



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Table of Contents

ECoG Headstages

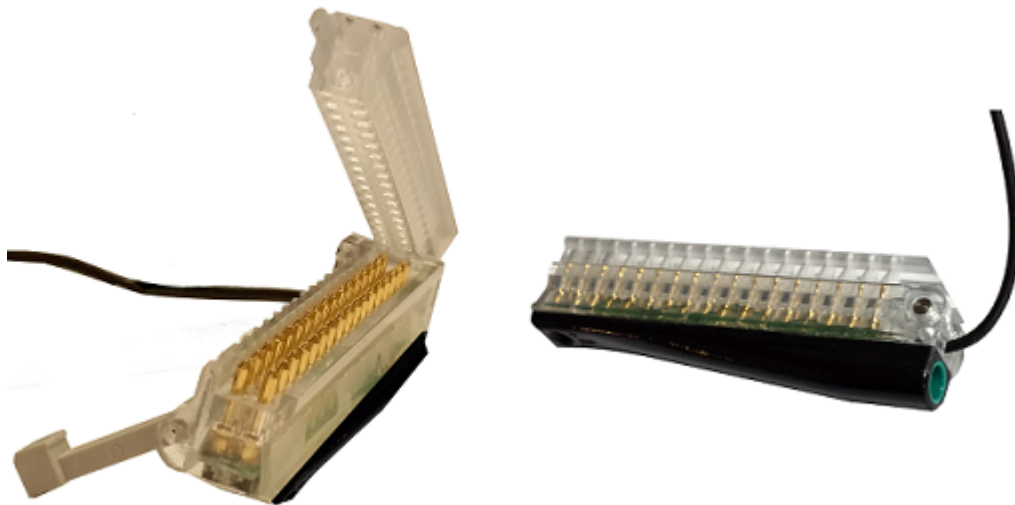
CB16-PMT - 16 Channel ECoG Headstage	4
Headstage Voltage Range	5
Technical Specifications	5

ECoG Headstages

CB16-PMT - 16 Channel ECoG Headstage

The 16 Channel ECoG headstages are recommended for 13 gauge tunneling needle/inline tail probes with impedance ranging from 20 kOhm to 5 Mohm. The headstage includes a Touch Proof connector for optional reference input and a locking bar for secure connection of probe to headstage.

The CB16-PMT is available as a passive or active headstage.



CB16-PMT Connector - Open / Closed, View from Bottom

Part Numbers:

CB16-PMT - 16 Channel Active Headstage for PZ PreAmps

CB16P-PMT - 16 Channel Passive Headstage for PZ PreAmps

Warning

The headstage has sensitive electronics. Always ground yourself before handling.

Headstage Voltage Range

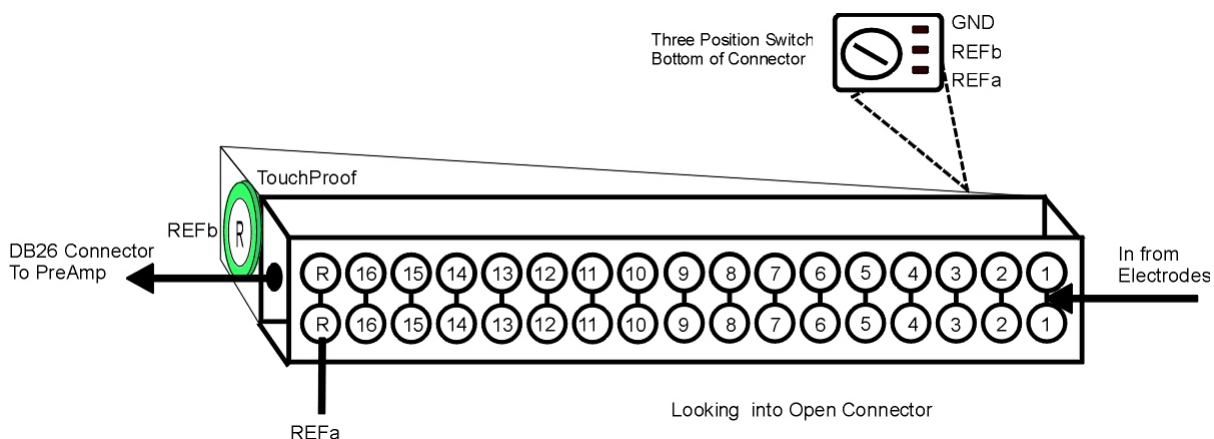
When using a TDT preamplifier the voltage input range of the preamplifier (PZ5, Subject Interface, RA16PA) is typically lower than the headstage and must be considered the effective range of the system. Also keep in mind that the output range of the headstage varies depending on the power supply provided by the preamplifier. PZ5 and Subject Interface supply ± 2.5 V. PZ2 and RA16PA preamplifiers supply ± 1.5 V. Third party preamplifiers may vary. TDT recommends using preamplifiers which deliver ± 2.5 V or less. The table below lists the input voltage ranges for the 16-channel ECoG headstages for either ± 1.5 V or ± 2.5 V power sources.

Power Source	Headstage Input Range
± 1.5 V	-1.5 V to +1.4 V
± 2.5 V	-2.5 V to +2.4 V

Technical Specifications

Input referred noise	3 μ Vrms bandwidth 300-3000 Hz 6 μ Vrms bandwidth 30-8000 Hz
Headstage Gain	Unity (1x)
Input Impedance	1e13 ohms

Pinout



The numbers on the pinout diagram above show the channel connections to the amplifier.

A three position switch is used to connect either REFa, REFb, or GND to the REF line on the DB26 connector.

The headstage does not provide access to ground and instead relies on the use of the external ground on the PZ5 / Subject Interface.