



HD-EEG Sensor Nets



More Data in Less Time

- Apply 32, 64, 128 or 256 EEG sensors simultaneously, without any skin preparation or cleaning before or after.
- With training, the Geodesic Sensor Nets can be applied in 10 minutes or less, regardless of number of channels.
- Traditional EEG with less than 32 channels misses potentially important signals (EEG, ERPs, oscillations and networks).
- Whole head coverage provides more complete data, particularly from frontal and temporal areas.

“The conventional way of recording neonatal EEG with about 10 electrodes ignores most spatial EEG content. increasing the electrode density is necessary to improve neonatal EEG source localization and information extraction”

From Odabae (2013)

Four neurotechnology brands.
One shared mission.

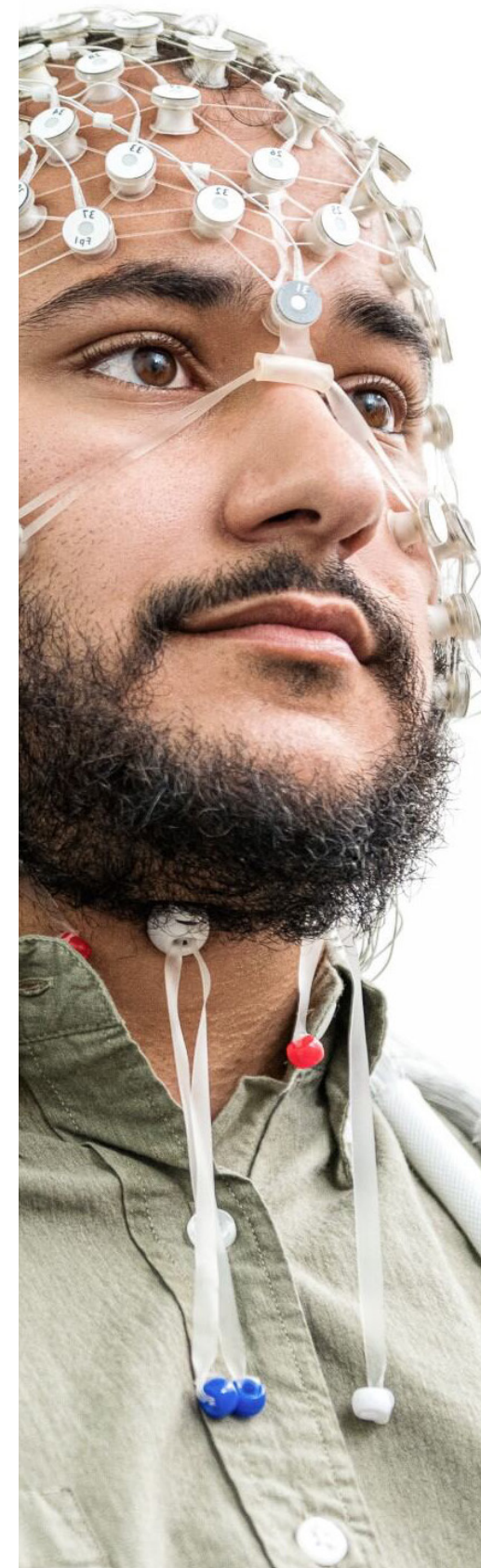


magstim.com



Designed for Superior Comfort

- Most HD-EEG uses saline instead of gel, but gel versions are available for recordings of 2-24 hours.
- Unlike traditional clinical EEG which uses paste, gel and glue - HD-EEG requires no scalp abrasion or clean up after the session. A saline solution is absorbed by sponges around each electrode.
- In cases when people are resting the weight of their head during EEG (sleep or MRI), more sensors distribute the weight of the head across more electrodes, improving participant comfort the geodesic structure provides uniform radial compression around the head resulting in a cushioning effect.



Include More People and Hair Types

- Sizes available for infants (including pre-term sizes down to 28cm), children and adults (up to 64 cm).
- Open flexible HD-EEG sensor net structure accommodates more head shapes and hair types than cap-based EEG electrodes.
- We offer advice and customer demonstrations of use of sensor nets with many hair types.
- Well tolerated by sensitive groups: 95% successful data collection in a sample study of 500 children with Autism Spectrum Disorder (ASD) and used by the multi-site Autism Biomarkers Consortium.
- Apply 128 channel sensor nets on infants in less than a minute to maximize data collection time.

Ideal for Brain Stimulation and Multimodal Use

- Versions of sensor nets for use with MRI, TMS, MEG, FUS, TES (tDCS, tACS, tRNS) and extended (long term monitoring) recordings available.
- Rapid application and removal of HD-EEG makes it ideal for collecting EEG before, during or after brain stimulation.
- The open design of the sensor net, allowing access to the scalp, can allow other sensors or stimulators to be placed between EEG electrodes – for example, cortical transducers for focused ultrasound.
- In longitudinal studies, high-density EEG sensor nets enable precise and reproducible placement across sessions, ensuring spatial consistency of electrode positioning.



HydroCel Geodesic Sensor Net™

Sponged (routine), Spongeless (LTM), and Magnetic resonance (MR) Nets

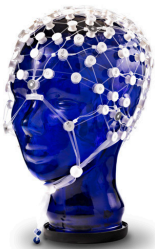
Size Chart

How to Use the Size Chart - Always base your Net size selection on the circumference of the participant's / patient's head, not their age.

Stage	Standard Net Size	General Age or Head Size		Channel Counts				Monitoring Type			Tall Version For More Hair Types		Cheek Electrodes removed on 32, 64, 128 ch Sensor Nets
		Male	Female	32	64	128	256	Saline	Gel/LTM	MRI Use	Avail	Tall Sizing	
Preterm infant	28 – 30 cm	Preterm Small		✓	✓	✓		✓					✓
	30 – 32 cm	Preterm Medium		✓	✓	✓		✓					✓
	32 – 34 cm	Preterm Large		✓	✓	✓		✓					✓
Infant	34 – 36 cm	Neonate	Neonate	✓	✓	✓		✓		✓			✓
	36 – 37 cm	Birth – 2 wks	Birth – 1 wks	✓	✓	✓		✓		✓	✓*	35 – 36 cm	✓
	37 – 38 cm	2 wks – 1 month	1 – 2 months	✓	✓	✓		✓		✓	✓*	36 – 37 cm	✓
	38 – 40 cm	1 – 2 months	2 – 3 months	✓	✓	✓		✓		✓	✓*	37 – 39 cm	✓
	40 – 42 cm	2 – 3 months	3 – 6 months	✓	✓	✓		✓		✓	✓*	39 – 41 cm	✓
	42 – 43 cm	3 – 5 months	6 – 7 months	✓	✓	✓		✓		✓	✓*	41 – 42 cm	✓
	43 – 44 cm	5 – 7 months	7 – 9 months	✓	✓	✓		✓		✓	✓*	42 – 43 cm	✓
	44 – 47 cm	7 – 15 months	9 – 21 months	✓	✓	✓		✓		✓	✓*	43 – 46 cm	✓
Pediatric	47 – 51 cm	Pediatric Small		✓	✓	✓		✓	✓	✓	✓	46 – 50 cm	✓**
	51 – 54 cm	Pediatric Large		✓	✓	✓	✓	✓	✓	✓	✓	50 – 53 cm	✓**
Adult	54 – 56 cm	Adult Small		✓	✓	✓	✓	✓	✓	✓	✓	53 – 55 cm	✓**
	56 – 58 cm	Adult Medium		✓	✓	✓	✓	✓	✓	✓	✓	55 – 57 cm	✓**
	58 – 61 cm	Adult Large		✓	✓	✓	✓	✓	✓	✓	✓	57 – 60 cm	✓**
	61 – 64 cm	Adult Extra Large		✓	✓	✓	✓	✓	✓	✓	✓	60 – 63 cm	✓**

*Tall version of infant nets must be requested when ordering

**Removal of cheek electrodes on pediatric and adult nets must be requested when ordering



32 channels



64 channels



128 channels



256 channels



Magstim Inc.
78 Centennial Loop, Suite C
Eugene, OR 97401 USA

To Find Out More Visit
magstim.com