BRAINACCESS®
EEG CAP

developed by ***NEUROtechnology***

Extended Manual

Version 2.0

Updated: January 2026

Find the latest product information on our website

Welcome to the user manual for the **BrainAccess EEG Cap**. BrainAccess is a line of products developed by **Neurotechnology**, designed to make brainwave recording and analysis simple, accessible, and reliable.

This manual contains detailed information on the design and components of the BrainAccess EEG Cap, handling guidelines, and maintenance procedures to ensure optimal performance and durability.

For further questions not covered in this guide, please contact us at *brainaccess@neurotechnology.com*.

Contents

Safety Notice

Please read these safety instructions carefully before using the **BrainAccess EEG Cap**. Failure to follow these guidelines may result in damage to the cap, user discomfort, or voiding of the product warranty.

Proper Use and Handling

- Use the cap **only** for its intended purpose: **mounting EEG electrodes for recording brain activity**.
- **Do not apply excessive force** when putting on, adjusting, or removing the cap to avoid tearing or damaging it.
- Store the cap in a **dry, clean environment**, away from moisture, dust, and direct sunlight.
- Keep the cap **out of reach of children**. Use only under adult supervision.
- If the cap shows **visible wear, damage, or defects**, discontinue use and contact *brainaccess@neurotechnology.com* for assistance.

Important Notice

BrainAccess EEG Cap is **not a medical product** and is intended for r**esearch, scientific, educational, general wellness**, or **non-clinical development purposes**.

Terms and Conditions for Use

Please read the safety instructions in this manual carefully and keep it for future reference.

The **Neurotechnology Terms and Conditions of Sale and Use** for BrainAccess products are available at *https://www.brainaccess.ai/terms-of-use/*.

Please review these safety terms carefully before handling or fitting the BrainAccess EEG Cap.

Legal Notice

BrainAccess devices are intended **solely for research, educational, and development purposes**. They are **not medical devices** and are **not designed, tested, or certified** for medical diagnosis, treatment, therapy, or disease prevention.

Before purchasing or using a BrainAccess product, please review the **Neurotechnology Terms and Conditions of Sale and Use**.

Neurotechnology UAB reserves the right to update this manual and modify its content at any time, without prior notice.

While every effort has been made to ensure the accuracy of the information contained herein, it does not constitute a legal or contractual commitment by Neurotechnology.

To make sure you are using the most recent version of this guide, please refer to the official BrainAccess website at *www.brainaccess.ai.*

EEG Cap Overview

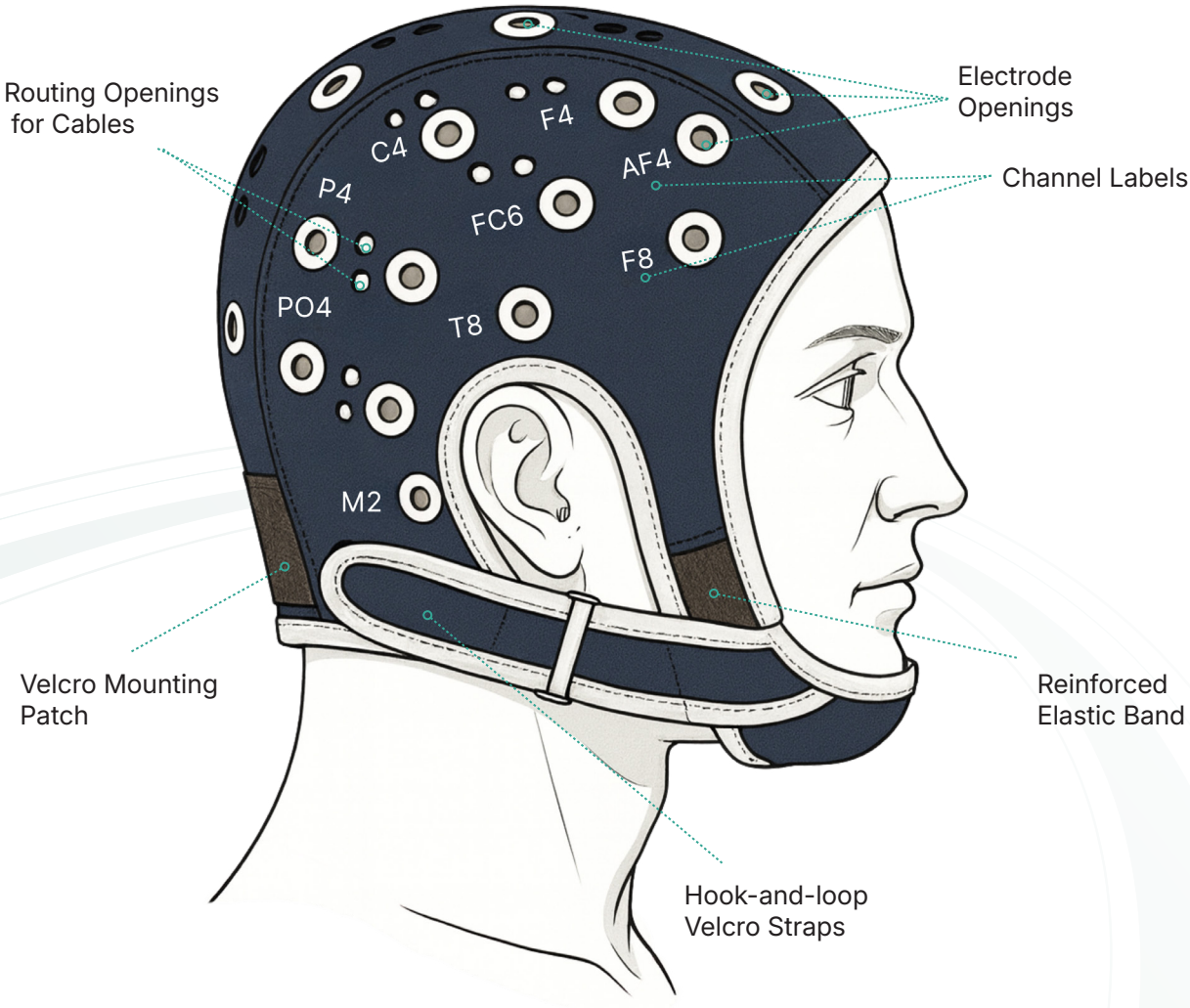

Figure 1: BrainAccess EEG Cap overview

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The **BrainAccess EEG Cap** is a reusable, flexible head cap designed to support high-quality EEG signal acquisition.

It is available in three sizes (S, M, L) to accommodate different head circumferences (Table 1). The cap size is printed on the **inside rear section** of the cap.

The cap layout follows the international 10–20 electrode placement system and includes 36 labeled electrode positions for accurate and repeatable placement of EEG electrodes.

Size	Head Circumference	Typical User
Small (S)	48–52 cm	adult female, adolescents/children
Medium (M)	50–55 cm	adult male, female
Large (L)	54–59 cm	adult male, female

Table 1. Table of available sizes

Electrode Configuration

- The cap provides **36 electrode positions**, each **clearly labeled** according to the 10–20 system (Figure 2).
- Supports up to **32 EEG acquisition channels**, **1 reference electrode (R)**, **1 bias electrode (B)**, and **2 mastoid positions (M1/M2**).
- Each **electrode opening** has a 12 mm diameter reinforced hole for reliable electrode placement.
- **Cable routing openings** (5 mm) are included near each electrode position to **secure electrode cables in place** and minimize motion artifacts.
- Electrode positions are printed with **high-contrast markings** to ensure easy identification during setup.

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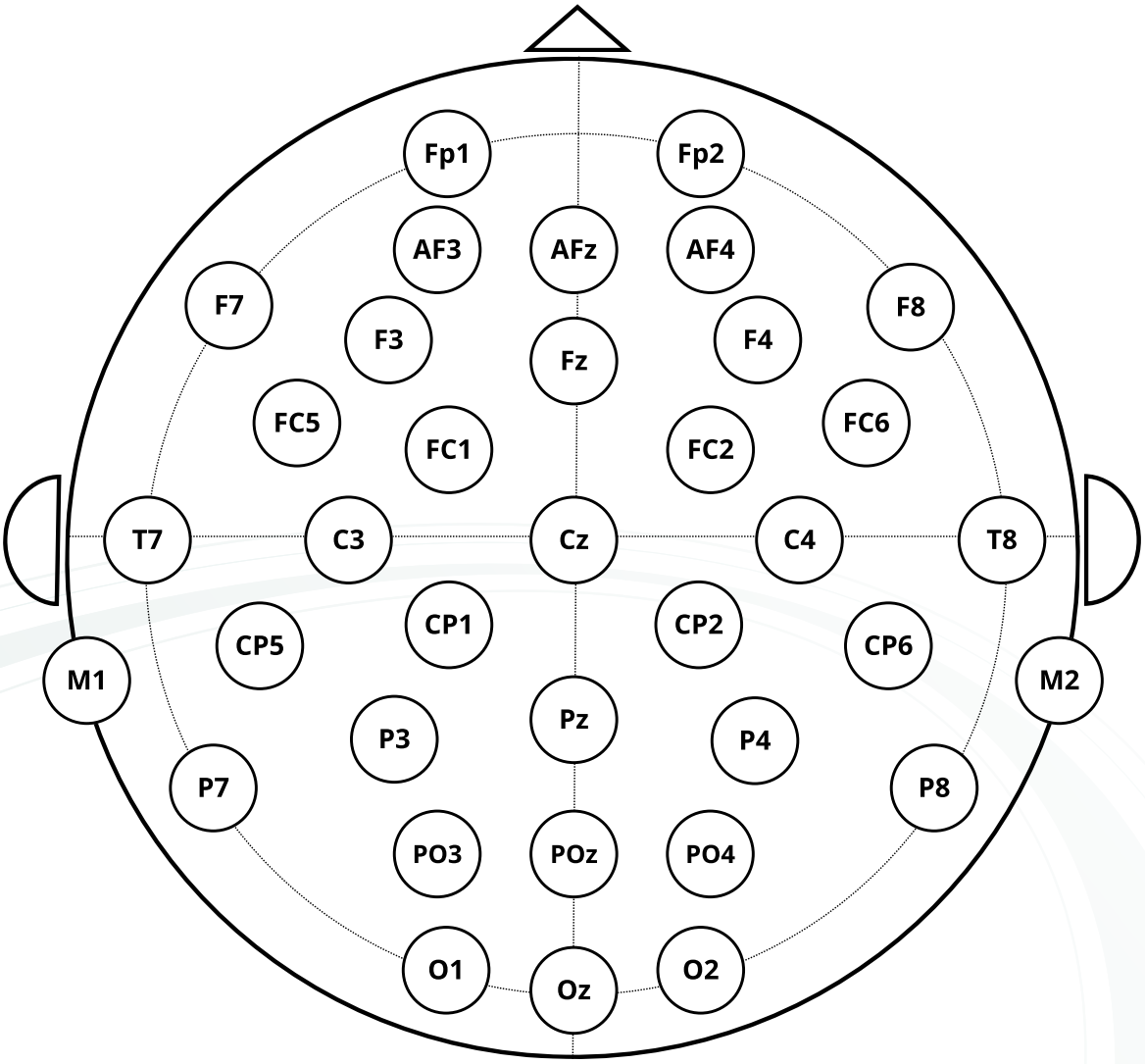

Figure 2. Electrode Location

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Mechanical Design and Fit

Main Material

The cap is constructed from neoprene, a synthetic rubber material selected for its **elasticity, durability, and environmental resistance**. Neoprene provides a balance between mechanical stability and user comfort, making it ideal for prolonged EEG recordings.

Some **key properties** include:

- **Flexibility:** Adapts naturally to different head shapes while maintaining firm electrode placement.
- **Comfort:** Soft, breathable texture minimizes discomfort and skin irritation during extended sessions.
- **Durability:** Resistant to tearing, stretching, and deformation even after repeated use.
- **Moisture and temperature resistance:** Maintains performance under various environmental conditions, including heat, humidity, and perspiration.
- **Ease of cleaning:** Can be gently washed at low temperature without degrading material properties, ensuring hygienic reuse.

Available Colors

Admiral Blue  Cool Gray 

Other Components

The cap incorporates a series of **mechanical elements** designed to optimize stability, comfort, and fit during use:

- **Adjustable buckle mechanism** combined with **dual hook-and-loop (Velcro) straps** provides a symmetrical and secure fit for different head sizes.
- **Reinforced elastic chin band** stretches with jaw and facial movement to prevent electrode displacement during speech or muscle activity.
- **Rear Velcro mounting patch** allows secure attachment of compatible BrainAccess EEG devices while maintaining balance and minimizing cable strain.

Technical Specification

Overview	
Size	S, M, L
Materials	Neoprene
Available colors	Admiral Blue, Cool Gray
Diameter of electrode openings	12 mm
Diameter of cables openings	5 mm
Max number of channels	36 (including reference, bias, mastoids)
System Compatibility	
EEG devices	BrainAccess MINI, BrainAccess MIDI, BrainAccess MAXI
Electrodes type	Neurotechnology gold-plated dry electrodes, Datwyler SoftPulse™ electrodes

System Compatibility

This product is intended for use exclusively with **BrainAccess EEG acquisition systems** and related accessories. It is mechanically and electrically compatible with **BrainAccess EEG Systems (MINI, MIDI, and MAXI)** and **dry-contact electrodes**, including **Neurotechnology's gold-plated dry electrodes and Datwyler SoftPulse™ electrodes**.

Use of non-approved accessories and devices may result in degraded performance and is not supported by the manufacturer.

This product is generally distributed as part of the **BrainAccess kits**, which includes the following components:

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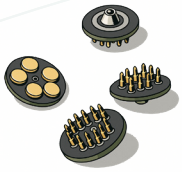
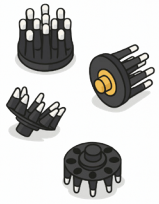
	Component	Description
	BrainAccess CAP	EEG cap
	BrainAccess EEG device	EEG acquisition unit with either 8, 16, or 32 channels
	Electrode Connector Module (only for MIDI and MAXI kits)	Single connector that allows the BrainAccess device to receive EEG signals from the electrodes placed on the cap
	Neurotechnology's Dry Electrodes & cables	18 gold-plated dry-contact electrodes; 16 spike electrodes and 2 pad electrodes
	USB Bluetooth adapter	Wireless communication interface for data transmission
	BrainAccess Software Suite	BrainAccess Board (desktop), BrainAccess Mobile App (Android), BrainAccess SDK (API)
	**Optional:** Datwyler SoftPulse™ electrodes	Upon request, clients can select additional soft electrodes made of a conductive elastomer body with a silver/silver-chloride (Ag/AgCl) contact

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Electrode Configuration

The BrainAccess kit comes pre-assembled and ready to use.

Depending on the model selected — MINI (8 channels), MIDI (16 channels), or MAXI (32 channels) — the electrode positions will differ as shown below.

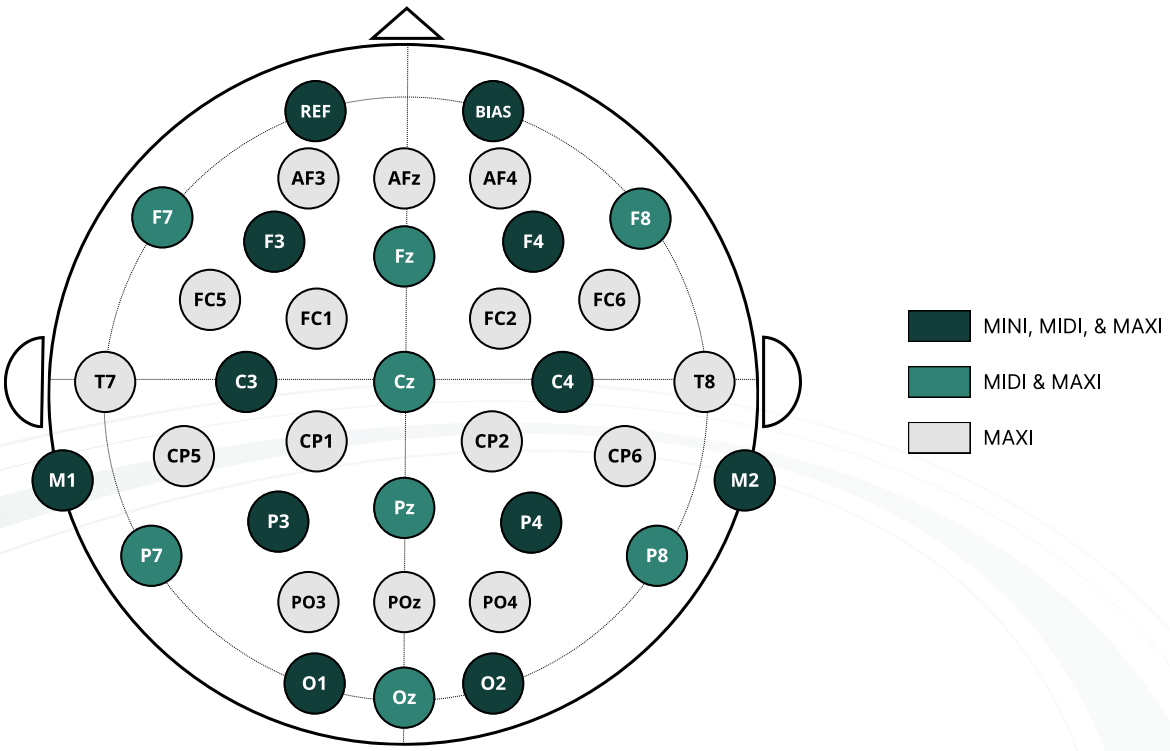

Figure 3. Electrode layout for BrainAccess EEG systems. Electrode positions common to all models (MINI, MIDI, and MAXI) are shown in dark green. Electrodes available in MIDI and MAXI configurations are shown in teal, while those exclusive to MAXI are shown in light gray.

For complete system setup, electrode installation, safety information, and maintenance procedures, refer to the following documents as well:

- BrainAccess MINI – Extended Manual (MAN-MINI-01)
- BrainAccess MIDI – Extended Manual (MAN-MIDI-01)
- BrainAccess MAXI – Extended Manual (MAN-MAXI-01)
- BrainAccess Electrodes & Cables – Extended Manual (MAN-ELEC-01)

All referenced documentation is available at: https://brainaccess.ai/documents/.

Maintenance

Proper maintenance of the BrainAccess EEG Cap ensures optimal performance, comfort, and longevity.

Storage

- When not in use, store the EEG cap in its **original packaging** or in a **clean, dry environment** at **room temperature**.
- Keep the cap **away from moisture, dust, oils, and direct sunlight**.
- Do not place **heavy objects** on top of the cap to avoid deformation of the material and electrode openings.
- Ensure the cap is **completely dry** before storage to prevent material degradation.

Cleaning and Hygiene

To maintain hygiene, the EEG cap and electrodes should be **regularly cleaned** using **disinfectant wipes** or a **mild disinfectant solution**.

For deeper cleaning, the cap can be **machine-washed** at 30 °C after disassembling all electrodes and cables.

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Disassembly Before Washing

- **Disconnect the EEG device and all electrodes and cables** from the cap.
- Ensure **no electronic components** remain attached to the cap before washing.

Detailed instructions on how to disassembly the kit can be found here:

- BrainAccess Electrodes & Cables – Extended Manual (MAN-ELEC-01)

⚠ Frequent disassembly is **not** recommended, as repeated connecting and disconnecting may lead to wear or damage of the input connector over time.

If you experience difficulties disassembling the kit or require technical assistance, please contact our support team at *brainaccess@neurotechnology.com*.

Procedure:

1. Disassemble the cap from electrodes and cables.
2. Place the cap in a protective laundry bag to prevent deformation.
3. Wash at 30°C using a gentle cycle with mild detergent.
4. Do not use bleach or fabric softeners, as they may degrade the fabric.
5. After washing, reshape the cap and lay flat to air dry at room temperature.
6. Ensure the cap is completely dry before reassembly or storage.

Parameter	Specification
Washing method	Machine wash or hand wash
Maximum temperature	30 °C
Cycle type	Gentle / delicate
Detergent	Mild, non-bleaching
Drying	Air dry only
Do not	Tumble dry, iron, wring, or bleach

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Cleaning and Disinfection of Electrodes

Dry-contact electrodes must not be washed in a washing machine. Clean them manually after each use.

Procedure:

1. Gently remove debris or skin oils using a **soft brush**.
2. Wipe each electrode surface with a **mild non-corrosive cleaning solution**.
3. **Avoid soaking** electrodes or letting liquids enter the connector area. Allow electrodes to **fully dry** before reconnecting to the cap.

⚠ Important:

Detailed instructions for cleaning, handling, and storage of BrainAccess systems and accessories are provided in their respective manuals:

- BrainAccess MINI – Extended Manual (MAN-MINI-01)
- BrainAccess MIDI – Extended Manual (MAN-MIDI-01)
- BrainAccess MAXI – Extended Manual (MAN-MAXI-01)
- BrainAccess Electrodes & Cables – Extended Manual (MAN-ELEC-01)

Please refer to these documents for detailed maintenance guidelines.

All referenced documentation is available at: *https://brainaccess.ai/documents/*.

Warranty

Neurotechnology UAB warrants the **BrainAccess EEG Cap** against defects in materials and workmanship for a period of **one (1) year** from the date of purchase, under normal consumer use conditions.

If the product fails during normal and proper use within the warranty period, **Neurotechnology** will, at its discretion, **repair or replace** the product. The company's liability under this warranty does **not cover any incidental or consequential damages**.

This warranty does **not apply** in cases of:

- Improper setup, operation, or maintenance
- Accidents, physical damage, or misuse
- Modifications or repairs not authorized by Neurotechnology
- Normal wear and tear
- Any events or circumstances beyond Neurotechnology's control

The warranty is **void** if the product's **serial number has been altered or removed**, or if the **cap has been repaired by unauthorized personnel**.

Support

If you require assistance or encounter any issues while using your **BrainAccess EEG Cap**, please contact Neurotechnology for assistance.

Technical support related to hardware compatibility, cap fitting, or component replacement is provided free of charge.

Support inquiries involving hardware troubleshooting (e.g., broken connectors, strap issues, electrode fit) are also covered.

Requests related to consulting, experimental design, EEG acquisition guidance, data analysis, or custom software development may be subject to additional service fees.

For general documentation and product resources, visit:
https://brainaccess.ai/documents/.

BRAINACCESS®
developed by ***NEUROtechnology***

Compatible EEG Systems

BrainAccess MINI

BrainAccess MIDI

BrainAccess MAXI

Other Accessories

Electrodes & Cables

Neurotechnology UAB

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