



**EASYCAP**

*EEG Recording Caps and Related Products*

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# **PARTIAL EASYCAP PRODUCT OVERVIEW**

**August 1st, 2019**

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## BrainCap

The BrainCap is a complete cap with built-in electrodes for standard EEG recordings, without simultaneous other data acquisition technologies such as MEG, MR, TMS, etc.

ALL BrainCaps listed here use the layout as named in the layout document, and are terminated for use with BrainAmp. They come with integrated chin belt and buckles to attach a chest belt.

### TO BE SPECIFIED

SIZES are given in cm head circumference. Please replace the wildcard # by the intended size.

Average adult male size is 58, average adult female size is 56. Newborn size is 36.

Cap sizes 64 to 52 come with high precision cap fabric, smaller sizes 50 to 32 with softer, high-elasticity fabric.

ASIA CUT can be specified at no charge.

22 channels is possible for all sizes

32 channels is possible for size 36 and larger

64 channels is possible for size 42 and larger

96 / 128 channels are possible for size 52 and larger

**Customization requests (other layouts, other fabric, other connectors, etc.) are welcome, please simply ask (a little surcharge may incur).**



<i>Order No</i>	<i>Description</i>
BC-22-UCMW-#	Standard 22Ch BrainCap with sintered Ag/AgCl-Multitrodes, Layout (Int. 10/20-System) according to "BC-22.doc"
BC-32-UCMW-#	Standard 32Ch BrainCap with sintered Ag/AgCl-Multitrodes, Layout (Extended 10/20-System) according to "BC-32.doc"
BC-64-UCMW-#	Standard 64Ch BrainCap with sintered Ag/AgCl Multitrodes, Layout (10%-System) according to "BC-64.doc"
BC-96-UCMW-#	Standard 96Ch BrainCap with sintered Ag/AgCl Multitrodes, Layout (10/5-System) according to "BC-96.doc"
BC-128-UCMW-#	Standard 128Ch BrainCap with sintered Ag/AgCl-Multitrodes, Layout (10/5-System) according to "BC-128.doc"

## BrainCap-MEG

**The BrainCap-MEG is a complete cap with built-in electrodes for EEG recordings with simultaneous MEG. MEG-compatibility is well-proven.**

ALL BrainCap-MEG as listed here use the layout as named in the layout document, and are terminated for use with BrainAmp. They come with integrated chin belt and buckles to attach a chest belt.

### TO BE SPECIFIED

SIZES are given in cm head circumference. Please replace the wildcard # by the intended size.

Average adult male size is 58, average adult female size is 56. Newborn size is 36.

Cap sizes 64 to 52 come with high precision cap fabric, smaller sizes 50 to 32 with softer, high-elasticity fabric.

ASIA CUT can be specified at no charge.

22 channels is possible for all sizes

32 channels is possible for size 36 and larger

64 channels is possible for size 42 and larger

96 / 128 channels are possible for size 52 and larger

**Customization requests (other layouts, other fabric, other connectors, etc.) are welcome, please simply ask (a little surcharge may incur).**

**BrainCap for MEG are frequently requested to match MEG-manufacturer's layouts or amplifiers. We have the most common types on file. Please inquire for customization prices.**

**To use BrainAmps with MEG they may need to be synchronized. This requires an additional cable connecting the MEG-clock or -sync (exit) to the BrainAmp SyncBox (input).**



<b>Order No</b>	<b>Description</b>
BC-MEG-22-UCMW-#	Standard 22Ch BrainCap MEG with sintered Ag/AgCl Multitrodes, Layout (Int. 10/20-System) according to "BC-MEG-22.doc"
BC-MEG-32-UCMW-#	Standard 32Ch BrainCap MEG with sintered Ag/AgCl Multitrodes, Layout (Extended 10/20-System) according to "BC-MEG-32.doc"
BC-MEG-64-UCMW-#	Standard 64Ch BrainCap MEG with sintered Ag/AgCl Multitrodes, Layout (10%-System) according to "BC-MEG-64.doc"
BC-MEG-96-UCMW-#	Standard 96Ch BrainCap MEG with sintered Ag/AgCl Multitrodes, Layout (10/5-System) according to "BC-MEG-96.doc"
BC-MEG-128-UCMW-#	Standard 128Ch BrainCap MEG with sintered Ag/AgCl Multitrodes, Layout (10/5-System) according to "BC-MEG-128.doc"

## BrainCap-MR

The BrainCap-MR is a complete cap with built-in electrodes for EEG recordings with simultaneous fMRI. It incorporates features for safety and MR-image quality. BrainCap-MR is certified for use with BrainAmp-MR.

ALL BrainCap-MR listed here use the layout as named in the layout document, and are terminated for use with BrainAmp. They come with integrated chin belt and buckles to attach a chest belt.

### TO BE SPECIFIED

SIZES are given in cm head circumference. Please replace the wildcard # by the intended size.

Average adult male size is 58, average adult female size is 56. Newborn size is 36.

Cap sizes 64 to 52 come with high precision cap fabric, smaller sizes 50 to 32 with softer, high-elasticity fabric.

ASIA CUT can be specified at no charge.

32 channels is possible for size 36 and larger

64 channels is possible for size 42 and larger

96 / 128 channels are possible for size 52 and larger

**Customization within the safety limits are feasible after approval by Brain Products Technical Support. All MR-related articles can be ordered via Brain Products only.**



<b>Order No</b>	<b>Description</b>
BC-MR-32-UCMW-#	Standard 32Ch BrainCap MR with sintered Ag/AgCl Multitrodes, Layout (Int. 10/20-System) according to "BC-MR-32"
BC-MR-64-UCMW-#	Standard 64Ch BrainCap MR with sintered Ag/AgCl Multitrodes, Layout (10% System) according to "BC-MR-64"
BC-MR-96-UCMW-#	Standard 96Ch BrainCap MR with sintered Ag/AgCl Multitrodes, Layout (10/5 System) according to "BC-MR-96"
BC-MR-128-UCMW-#	Standard 128Ch BrainCap MR with sintered Ag/AgCl Multitrodes, Layout (10/5 System) according to "BC-MR-128"
BC-MR-256-UCMW-#	Standard 256Ch BrainCap for MR with sintered Ag/AgCl Multitrodes, Layout (5% System) according to "BC-MR-256"

## BrainCap-TMS

**The BrainCap-TMS is a complete cap for EEG recordings with simultaneous application of TMS. TMS-suitability includes features for safety, reduced TMS-artifacts in EEG, and subject comfort. In TMS caps, the electrode cable layout is flexible, and can be adjusted.**

ALL BrainCap-TMS listed here use the layout as named in the layout document, and are terminated for use with BrainAmp. They come with integrated chin belt and buckles to attach a chest belt. BrainCap for TMS up to 64 channels come with single electrodes and EIB input boards, caps with 96 channels or more come with BrainAmp connector boxes.

### TO BE SPECIFIED

SIZES are given in cm head circumference. Please replace the wildcard # by the intended size.

Average adult male size is 58, average adult female size is 56. Newborn size is 36.

Cap sizes 64 to 52 come with high precision cap fabric, smaller sizes 50 to 32 with softer, high-elasticity fabric.

ASIA CUT can be specified at no charge.

21 channels is possible for all sizes

32 channels is possible for size 36 and larger

64 channels is possible for size 42 and larger

96 / 128 channels are possible for size 52 and larger

**Customization requests (other layouts, other fabric, other connectors, etc.) are welcome, please simply ask (a little surcharge may incur).**



<b>Order No</b>	<b>Description</b>
BC-TMS-21-UCMW-#	Standard 21Ch BrainCap TMS with sintered Ag/AgCl multitrodes, Layout (Int. 10/20-System) according to "BC-TMS-21.doc"
BC-TMS-32-UCMW-#	Standard 32Ch BrainCap TMS with sintered Ag/AgCl multitrodes, Layout (Extended 10/20-System) according to "BC-TMS-32.doc"
BC-TMS-64-UCMW-#	Standard 64Ch BrainCap TMS with sintered Ag/AgCl multitrodes, Layout (10%-System) according to "BC-TMS-64.doc"
BC-TMS-96-UCMW-#	Standard 96Ch BrainCap TMS with sintered Ag/AgCl multitrodes, Layout (10/5-System) according to "BC-TMS-96.doc", with BrainCap connector boxes
BC-TMS-128-UCMW-#	Standard 128Ch BrainCap TMS with sintered Ag/AgCl multitrodes, Layout (10/5-System) according to "BC-TMS-128.doc", with BrainCap connector boxes

## BrainCap-SL

The BrainCap for Sleep is a complete cap with built-in electrodes for EEG, EOG and EMG recordings, optimized for sleep recording situations.

ALL BrainCap-SL use the layout as named in the layout document, and up to 64 channels are terminated with single electrodes / quick connect interface for use with most amplifiers. They come with integrated chin belt and buckles to attach a chest belt.

### TO BE SPECIFIED

SIZES are given in cm head circumference. Please replace the wildcard # by the intended size.

Average adult male size is 58, average adult female size is 56. Newborn size is 36.

For sleep, all cap sizes will come with the soft, high-elasticity fabric. ASIA CUT can be specified at no charge.

15 channels is possible for all sizes

32 channels is possible for size 36 and larger

64 channels is possible for size 42 and larger

128 channels are possible for size 52 and larger

**Customization requests (other layouts, other fabric, connection to dedicated sleep amplifiers, etc.) are welcome, please simply ask (a little surcharge may incur).**



<b>Order No</b>	<b>Description</b>
BC-SL-15-SCHS-#	Standard 15Ch BrainCap Sleep, with sintered Ag/AgClMultitrodes Layout according to "BC-SL-15.doc", ending in safety sockets
BC-SL-32-SCHS-#	Standard 32Ch BrainCap Sleep, with sintered Ag/AgClMultitrodes Layout according to "BC-SL-32.doc", ending in safety sockets plus quick connect interface
BC-SL-64-SCHS-#	.. in preparation ..
BC-SL-128-SCHS-#	Standard 128Ch BrainCap Sleep, with sintered Ag/AgClMultitrodes Layout according to "BC-SL-128.doc", ending in BrainCap connector boxes



## EasyCap: Standard Sets

EasyCaps flexible EC Sets use caps with holders and single electrodes. This allows for a multitude of different layouts and channel numbers. Further, as one set of electrodes can be swapped between different cap (sizes), the invest is low.

The standard packages contain everything you need to start recording right out of the box:

- One cap equipped with holders (based on 10-20-system)
- Ag/AgCl sintered ring electrodes, number labelled
- two ear-lobe electrodes
- chest belt set
- all necessary consumables
- a quick-connect interface to almost all amplifiers.

### TO BE SPECIFIED

SIZES are given in cm head circumference. Please replace the wildcard # by the intended size.

Average adult male size is 58, average adult female size is 56. Newborn size is 36.

Cap sizes 64 to 52 come with high precision cap fabric, smaller sizes 50 to 32 with softer, high-elasticity fabric. ASIA CUT can be specified at no charge.

The compilation of these standardized sets cannot be changed. For individual requests, please refer to the section "EasyCap individually compiled".



<b>Order No</b>	<b>Description</b>
EC-20-#	Ready-to-use EEG Recording Cap Set for 21 Channels, cap size #
EC-40-#	Ready-to-use EEG-Recording Cap Set for 32/40 Channels, cap size #
EC-40-BA-#	Ready-to-use EEG-Recording Cap Set for 32 Channels, cap size # with special quick-connect-interface to BrainAmp
EC-80-#	Ready-to-use EEG Recording Cap Set for 64/80Channels, cap size #
EC-80-BA-#	Ready-to-use EEG-Recording Cap Set for 64 Channels, cap size # with special quick-connect-interface to BrainAmp

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<b>OrderNo</b>	<b>Description</b>
<b>Components of EC-Sets which can also be ordered separately:</b>	
CEC-20-UCMW-#	Standard Empty Cap Size # with holders for EC-20, subtemporal white, high precision, caucasian cut, according to layout M25
CEC-40-UCMW-#	Standard Empty Cap Size # with holders for EC-40, subtemporal white, high precision, caucasian cut, according to layout M24
CEC-80-UCMW-#	Standard Empty Cap Size # with holders for EC-80, subtemporal white, high precision, caucasian cut, according to layout M1
B10-HS-120	Ag/AgCl sintered ring electrode with 1,5mm-touchproof safety socket and 120 cm heavy duty leadwire
S05	Label on leadwire
C4	Pair of Nihon-Kohden ear clips with fitting electrodes (please state requested length of electrode cables)
KI	38 Channel Inputbox
KV	38 Channel Electrode board adaptor
GS-50-80	Chest belt set Small for chest circumference 50 - 80 cm 1 chest belt, 2 chin straps
GS-75-105	Chest belt set Large for chest circumference 75-105 cm 1 chest belt, 2 chin straps
GS-100-130	Chest belt set X-Large for chest circumference 100 - 130 cm 1 chest belt, 2 chin straps
V17	Abralyt 2000 (1000 gr.) Salt-free, abrasive electrolyte gel
SCE	Start Set EC Cotton swabs, measuring tape, 3 x 10-ml syringes, cleaning brush, 50 washers, 2 spatulae, 7 spare adaptors, manual, layout

## EasyCap individually compiled

EasyCaps can be ordered as a compilation of three independent components:

- the fabric cap
- holders for electrodes
- single electrodes

These items can be combined freely. A complete order should specify:

- CAP type, cap cut, cap fabric, cap size
- LAYOUT of openings (or type of holders/electrodes to be buttoned in)  
(instead or additional to openings also waterproof marks can be specified)
- number, type, and style of ELETRODES (cable type, cable length, cable color, type of connector)

These main items can be completed by quick-connect interfaces (KI-KV or EIB for BrainAmp), chest belt sets, electrolyte gel, and other consumables.

**Should further questions arise please do not hesitate to contact us.**

## Cap with actiCAP SNAP holders (for actiCAP Slim electrodes)

This cap is equipped with actiCAP SNAP holders for the actiCAP slim electrodes, for use with the actiCAP / actiCHamp system.

Caps include the respective number of actiCAP SNAP holders including a holder for GND and REF (REF will not be needed for use with actiCHamp).

Corresponding to the bundles of 32 actiCAP active electrodes, the holders in the caps are color-coded in groups of 32. Each group is number-labeled 1-32.

ALL Caps listed here use the layout as named in the layout document, and come with integrated chin belt and buckles to attach a chest belt.

### TO BE SPECIFIED

SIZES are given in cm head circumference. Please replace the wildcard # by the intended size.

Average adult male size is 58, average adult female size is 56. Newborn size is 36.

Cap sizes 64 to 52 come with high precision cap fabric, smaller sizes 50 to 32 with softer, high-elasticity fabric.

ASIA CUT can be specified at no charge.

21 Channels is possible for all sizes

32 Channels is possible for size 36 and larger

64 Channels is possible for size 42 and larger

96 / 128 / 160 Channels are possible for size 52 and larger

**Customization requests (other layouts, other fabric, other connectors, etc.) are welcome, please simply ask (a little surcharge may incur).**



<i>Order No</i>	<i>Description</i>
CACS-21-SCMW-#	Standard 21Ch Empty Cap, size #, with actiCAP SNAP Holders according "CACS-21.doc" (Caucasian cut)
CACS-32-SCMW-#	Standard 32Ch Empty Cap, size #, with actiCAP SNAP Holders according "CACS-32.doc" (Caucasian cut)

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<b>OrderNo</b>	<b>Description</b>
CACS-64-SCMW-#	Standard 64Ch Empty Cap, size #, with actiCAP SNAP Holders according "CACS-64.doc" (Caucasian cut)
CACS-96-SCMW-#	Standard 96Ch Empty Cap, size #, with actiCAP SNAP Holders according "CACS-96.doc" (Caucasian cut)
CACS-128-SCMW-#	Standard 128Ch Empty Cap, size #, with actiCAP SNAP Holders according "CACS-128.doc" (Caucasian cut)
CACS-160-ICMW-#	Standard 160Ch Empty Cap, size #, with actiCAP SNAP Holders according "CACS-160.doc" (Caucasian cut)

## Cap for actiCAP / actiCHamp, Unified layout

The Cap for actiCAP/actiCHAMP is a cap with actiCAP holders for the actiCAP / actiCHamp system. Caps include the respective number of holders including a holder for GND and REF (REF will not be needed for use with actiCHamp).

Corresponding to the bundles of 32 actiCAP active electrodes, the holders in the caps are color-coded in groups of 32. Each group is number-labeled 1-32.

ALL Caps listed here use the layout as named in the layout document, and come with integrated chin belt and buckles to attach a chest belt.

### TO BE SPECIFIED

SIZES are given in cm head circumference. Please replace the wildcard # by the intended size.

Average adult male size is 58, average adult female size is 56. Newborn size is 36.

Cap sizes 64 to 52 come with high precision cap fabric, smaller sizes 50 to 32 with softer, high-elasticity fabric.

ASIA CUT can be specified at no charge.

21 Channels is possible for all sizes

32 Channels is possible for size 36 and larger

64 Channels is possible for size 42 and larger

96 / 128 / 160 Channels are possible for size 52 and larger

**Customization requests (other layouts, other fabric, other connectors, etc.) are welcome, please simply ask (a little surcharge may incur).**



<b>OrderNo</b>	<b>Description</b>
CMA-21-SCMW-#	Standard 21Ch Empty Cap, size #, with actiCAP Holders according "CMA-21.doc" (Caucasian cut)
CMA-32-SCMW-#	Standard 32Ch Empty Cap, size #, with actiCAP Holders according "CMA-32.doc" (Caucasian cut)

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<b>OrderNo</b>	<b>Description</b>
CMA-32-SCMW-#	Standard 32Ch Empty Cap, size #, with actiCAP Holders according "CMA-32.doc" (Caucasian cut)
CMA-64-SCMW-#	Standard 64Ch Empty Cap, size #, with actiCAP Holders according "CMA-64.doc" (Caucasian cut)
CMA-96-SCMW-#	Standard 96Ch Empty Cap, size #, with actiCAP Holders according "CMA-96.doc" (Caucasian cut)
CMA-128-SCMW-#	Standard 128Ch Empty Cap, size #, with actiCAP Holders according "CMA-128.doc" (Caucasian cut)
CMA-160-ICMW-#	Standard 160Ch Empty Cap, size #, with actiCAP Holders according "CMA-160.doc" (Caucasian cut)



## Impedance Meter, Signal Generator, Data Logger, Electrode Tester

SIGGI-2 is a lab tool with parameters in the micro-volt range. This makes it the only tool available to measure and verify functionality of biophysiological devices without loss of signal quality and precision.

SIGGI-2 can issue AC- and DC-signals, measure impedances, record and replay physiologic signals and measure electrode potentials for up to 6 hours.



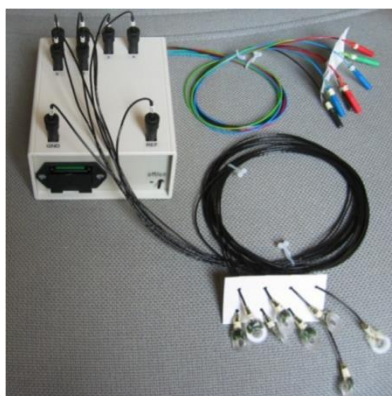
<b>OrderNo</b>	<b>Description</b>
SG2	SIGGI-2: Signal Generator, Impedance Meter, Amplifier with Data Logger, Electrode Tester International Version
SG2-KALIB	Calibration SIGGI-2 incl. Calibration Certificate
200010	Battery Charger for 9V, AA, AAA

## Single Active Electrodes

In recent years, active electrodes for registering EEG have become a widely used tool. Active electrodes are unaffected by cable movements, are less prone than passive electrodes to pick up 50/60 Hz noise, and deliver good signal quality even at higher impedances. In other words, active electrodes can shorten preparation times and can be used under noisier or more movement-prone conditions than passive electrodes.

Because until now active electrodes have been used mainly for EEG recordings, they usually come in bundles of 32 or more electrodes, connected to a single power supply. Other body surface biopotentials such as EMG and ECG, or EEG applications like neurofeedback or BCI, require less electrodes and will equally benefit from active electrodes.

Therefore, we present for the first time Single Active Electrodes with headbox-like power supply, to plug in single electrodes on demand. The headboxes can be configured to any channel number.



<b>OrderNo</b>	<b>Description</b>
AEM-HB-4U	Active Electrode Mini Headbox & Power Supply, Inputs for 4 Ch. & Ref & Gnd, incl. 9V-accumulator, acc. to "AEM-HB-4U.doc"
AEM-HB-6U	Active Electrode Mini Headbox & Power Supply, Inputs for 6 Ch. & Ref & Gnd, incl. 9V-accumulator, acc. to "AEM-HB-6U.doc"
AEM-HB-12U	Active Electrode Mini Headbox & Power Supply, Inputs for 12 Ch. & Ref & Gnd, incl. 9V-accumulator, acc. to "AEM-HB-12U.doc"
AEM-HB-16U	Active Electrode Mini Headbox & Power Supply, Inputs for 16 Ch. & Ref & Gnd, incl. 9V-accumulator, acc. to "AEM-HB-16U.doc"
AE-B12-CHN-RB4P-100	Active Fast'n Easy Electrode with individual connector with 100 cm cable length, number label at both ends
AE-B12-REF-RB4P-100	Active Fast'n Easy Reference Electrode, with individual connector with 100 cm cable length, Ref label at both ends
AE-B12-GND-LB4PS-100	Active Fast'n Easy Ground Electrode, single connector with 100cm light-duty leadwire, Gnd label at both ends
200010	Battery Charger for 9V, AA, AAA