



EASYCAP

EEG Recording Caps and Related Products

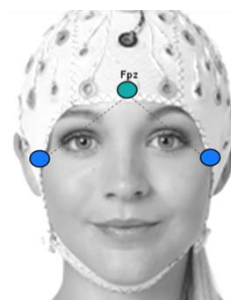
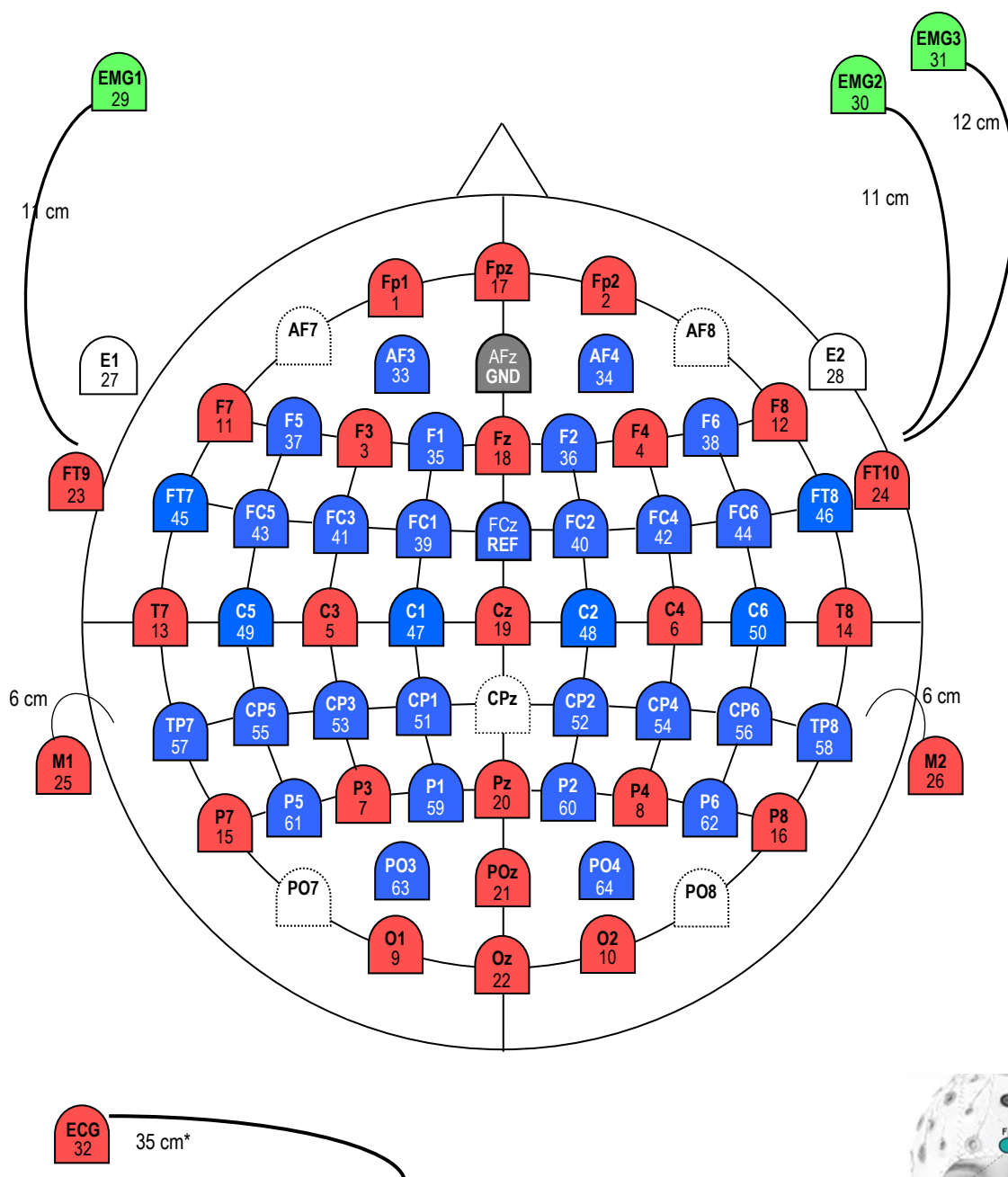
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64Ch Standard BrainCap for Sleep Recordings with Multitrodes

Layout in accordance with "AASM manual for the Scoring of Sleep"

Electrode Layout and Channel Assignment



FCz offers a reliable position for online recording reference.

For mastoid reference we suggest to reference the data *offline* to M2 as recommended in AASM.

For EOG, please reference the "E1" and "E2" channel offline to Fpz, for EOG left/right, as indicated

Details for Users

Ordering Information

For ordering please give **Article Number, Cap Cut, and Size**
(e.g. *BC-SL-64, C-Cut, 56*):

- Article Number: **BC-SL-64**
- Cap Cut: **C-Cut** or **A-Cut**
- Size (given in cm head circumference):
 - Adult caps: **54, 56, 58, 60, 62, 64** (average male: 58, average female: 56)
 - Children caps: **50** (3-4 years), **52** (5-10 years), **54** (11-14 years)
 - Infant caps: **42, 44** (7 month), **46, 48** (2 years)

The catalogue-number comprises the cap as described and an electrode input device EIB64-DUO for quick-connect. For further information about accessories or consumables, please visit our website or contact our local distributor.

Cap

Standard: Subinion Cap with integrated chin belt, black

All Sizes made from High Comfort Fabric

Options: *C-Cut* or *A-Cut*, Size

Electrodes

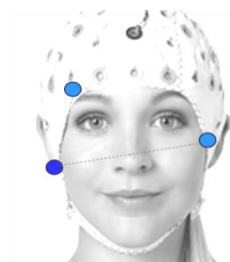
All electrodes are Multitrodes with sintered Ag/AgCl sensors. They are buttoned directly into the cap (total height 3,5 mm) or can be attached to the skin with washers (= double-sided adhesive rings).

All electrodes are name-labelled at the sensor and number-labelled at the socket end.

The cable colours correspond to the above figure.

Mastoid positions in the cap are approximated with TP9' / TP10' , 1cm below TP9 / TP10.

EOG positions E1 / E2 in the cap are approximated with F9' / F10' , bilateral at the lower outer canthus of the eyes.



EOG: For alternative EOG recording against right mastoid M2, please move the E2 electrode from position F10', close to the cap rim, to position E2' (AF8), located ABOVE the right eye. Then please reference your two EOG channels offline to the right mastoid, M2. This will result the EOG recording situation as also recommended in AASM.

Both alternative positions for recording of the EOG are integrated with openings in the cap for ease of application and better signal quality.

The cables are attached to the cap with nylon threads. Two cable trees leave the cap plait-like behind the ears, pointing downwards. Cables are kept flat to the cap for better comfort. Cable trees are covered in soft fabric for better comfort. The length of cable trees is approx. 120 cm

Termination

Cables end with name-labelled 1.5mm safety sockets, inserted into electrode input box EIB64-DUO.

From here the caps are connected to BrainAmp with flat-ribbon-cables. They can be ordered from BrainProducts (Cat-No. BP-02400-NN) or from EasyCap (Cat.-No. E80).

Table of Coordinates for BC-SL-64

Channel-number	Name	Theta	Phi
1	Fp1	-90	-72
2	Fp2	90	72
3	F3	-60	-51
4	F4	60	51
5	C3	-45	0
6	C4	45	0
7	P3	-60	51
8	P4	60	-51
9	O1	-90	72
10	O2	90	-72
11	F7	-90	-36
12	F8	90	36
13	T7	-90	0
14	T8	90	0
15	P7	-90	36
16	P8	90	-36
17	FPz	90	90
18	Fz	45	90
19	Cz	0	0
20	Pz	45	-90
21	POz	..67	-90
22	Oz	90	-90
23	FT9	-113	-18
24	FT10	113	18
25	M1	-121	18
26	M2	121	18
27	E1 (F9')	-121	-30
28	E2 (F10')	121	30
29	EMG1	-	-
30	EMG2	-	-
31	EMG3	-	-
32	ECG	-	-
Ref	FCz	23	90
Gnd	Afz	67	90

Channel-number	Name	Theta	Phi
33	AF3	-74	-68
34	AF4	74	68
35	F1	-49	-68
36	F2	49	68
37	F5	-74	-41
38	F6	74	41
39	FC1	-31	-46
40	FC2	31	46
41	FC3	-49	-29
42	FC4	49	29
43	FC5	-69	-21
44	FC6	69	21
45	FT7	-90	-18
46	FT8	90	18
47	C1	-23	0
48	C2	23	0
49	C5	-68	0
50	C6	68	0
51	CP1	-31	46
52	CP2	31	-46
53	CP3	-49	29
54	CP4	49	-29
55	CP5	-69	21
56	CP6	69	-21
57	TP7	-90	18
58	TP8	90	-18
59	P1	-49	68
60	P2	49	-68
61	P5	-74	41
62	P6	74	-41
63	PO3	-74	68
64	PO4	74	-68
	AF7	-90	-54
	AF8	90	54
	PO7	-90	54
	PO8	90	-54
	CPz	22	-90

These values are standardized to a Theta of 90° for the plane through Fpz, T7, T8, Oz.

The signs follow this convention:

