



EASYCAP

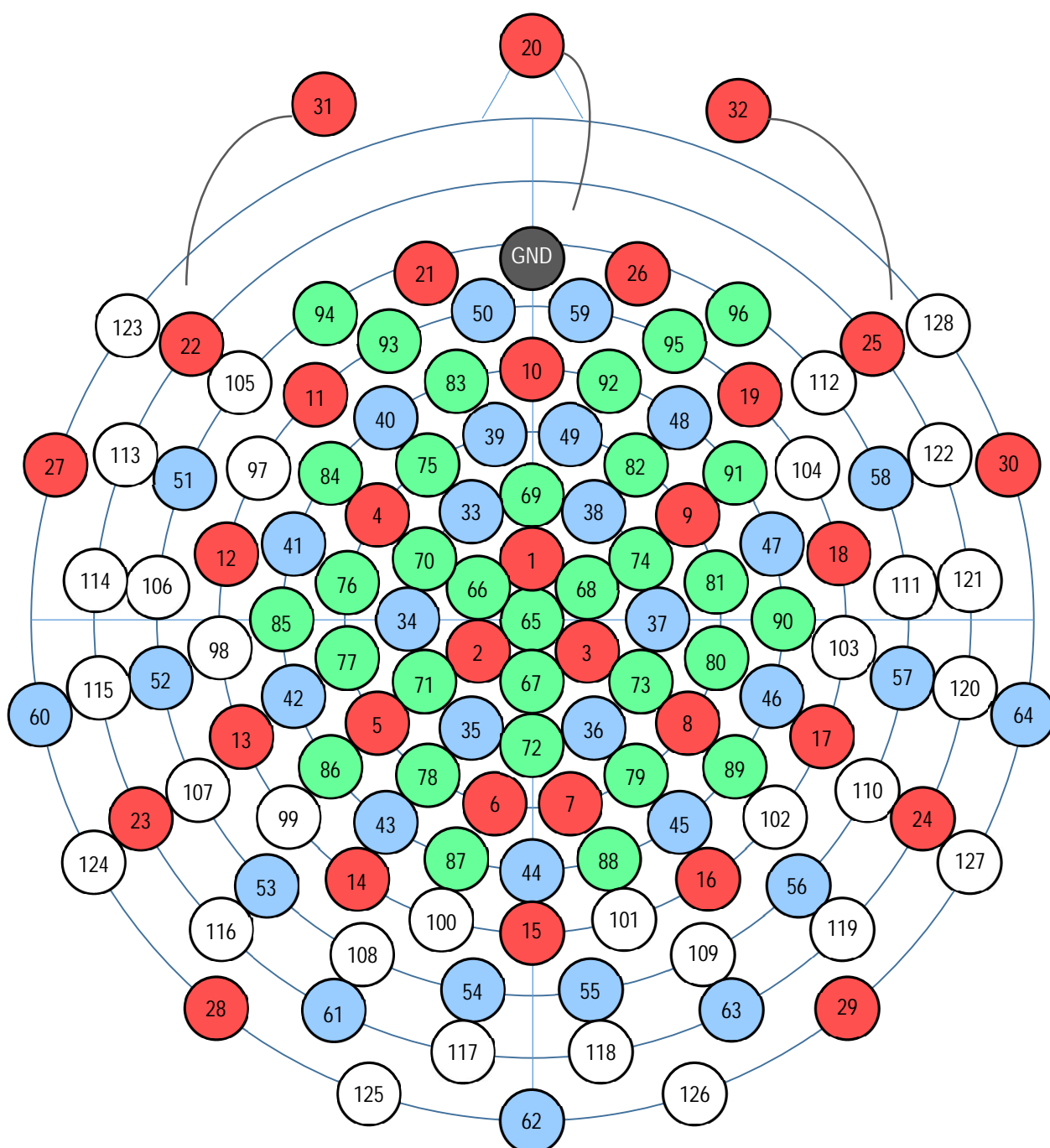
EEG Recording Caps and Related Products

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128Ch BrainCap for actiChamp Plus with Multitrodes customized for Kiel based on equidistant layout M42-V1

Electrode Layout & Channel Assignment



Details for Users

Ordering Information

For ordering please give Article Number, Cap Cut, and Size:

(e.g. *BCA-128-X1, Caucasian, 56*)

- Article Number: *BCA-128-X1*
- Cap Cut: *Caucasian or Asian*
- Size (given in cm head circumference):
 - Adult caps: *54, 56, 58, 60, 62, 64* (average male: 58, average female: 56)
 - Children caps: *52* (5-10 years), *54* (11-14 years)

The catalogue-number comprises the cap with 128+1 electrodes as described, serial number, and this document; all packed in a labelled cardboard box. For further information on accessories or consumables, please visit our website or contact our local distributor.

Cap

Standard: SubInion Cap with integrated chin belt, white

Sizes 52 – 64 made from High Precision Fabric

Options: Caucasian or Asian, Size

Electrodes

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

The nose tip electrode (Ch 20) comes as a B05X electrode, can be used as reference during data acquisition.

All electrodes are number-labelled at the sensor end, cable colours correspond to the above figure.

The layout comprises EEG positions based on equidistant layout M42-V1. It can be used with 32, 64 or 128 EEG recording channels. Vertical EOG can be obtained with 31/21 and 32/26, horizontal EOG with 22/25.

The cables are attached to the cap with nylon threads. Four cable trees leave the cap plait-like in front of and behind the ears, pointing downwards. 25-30 cm before the connector-boxes there is a crossing-point. Length of cable trees is approx. 120 cm.

Termination

Each cable tree is led into a connector box, from here the caps can be connected to actiCHamp Plus with flat ribbon cables. These flat ribbon connections are suggested to be ordered once per amplifier.

Connecting a 128Ch cap will require 4x flat ribbon cables (4x EasyCap Cat. No. *E81-40*) plus one GND connection (EasyCap Cat. No. *KB-B40-B40-20-X1*).

Theta/Phi-Coordinates

Please find a table with Theta/Phi-Coordinates of all electrode sites at the end of this file.

Theta/Phi-Coordinates for BCA-128-X1 M42-V1 for KIEL

Name	Theta	Phi
1	17	90
2	-17	30
3	17	-30
4	-51	-34
5	-51	34
6	-51	78
7	51	-78
8	51	-34
9	51	34
10	68	90
11	-85	-46
12	-85	-12
13	-85	22
14	-85	56
15	85	-90
16	85	-56
17	85	-22
18	85	12
19	85	46
20	156	90
21	-98	-73
22	-119	-39
23	-119	27
24	119	-27
25	119	39
26	98	73
27	-136	-18
28	-136	51
29	136	-51
30	136	18
31	-151	-68
32	149	68
33	-34	-60
34	-34	0
35	-34	60
36	34	-60
37	34	0
38	34	60
39	-51	-78
40	-68	-54
41	-68	-18
42	-68	18
43	-68	54
44	68	-90
45	68	-54
46	68	-18
47	68	18
48	68	54
49	51	78
50	-85	-81

51	-102	-22
52	-102	9
53	-102	45
54	-102	81
55	102	-81
56	102	-45
57	102	-9
58	102	22
59	85	81
60	-136	11
61	-119	63
62	136	-90
63	119	-63
64	136	-11
65	0	0
66	-17	-30
67	17	-90
68	17	30
69	34	90
70	-34	-30
71	-34	30
72	34	-90
73	34	-30
74	34	30
75	-51	-56
76	-51	-12
77	-51	12
78	-51	56
79	51	-56
80	51	-12
81	51	12
82	51	56
83	-68	-72
84	-68	-36
85	-68	0
86	-68	36
87	-68	72
88	68	-72
89	68	-36
90	68	0
91	68	36
92	68	72
93	-85	-63
94	-100	-56
95	85	63
96	100	56
97	-85	-29
98	-85	5
99	-85	39
100	-85	73
101	85	-73

102	85	-39
103	85	-5
104	85	29
105	-102	-39
106	-102	-5
107	-102	27
108	-102	63
109	102	-63
110	102	-27
111	102	5
112	102	39
113	-119	-22
114	-119	-5
115	-119	9
116	-119	45
117	-119	81
118	119	-81
119	119	-45
120	119	-9
121	119	5
122	119	22
123	-136	-36
124	-136	29
125	-136	71
126	136	-71
127	136	-29
128	136	36
Gnd	98	90

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

The signs follow this convention:

