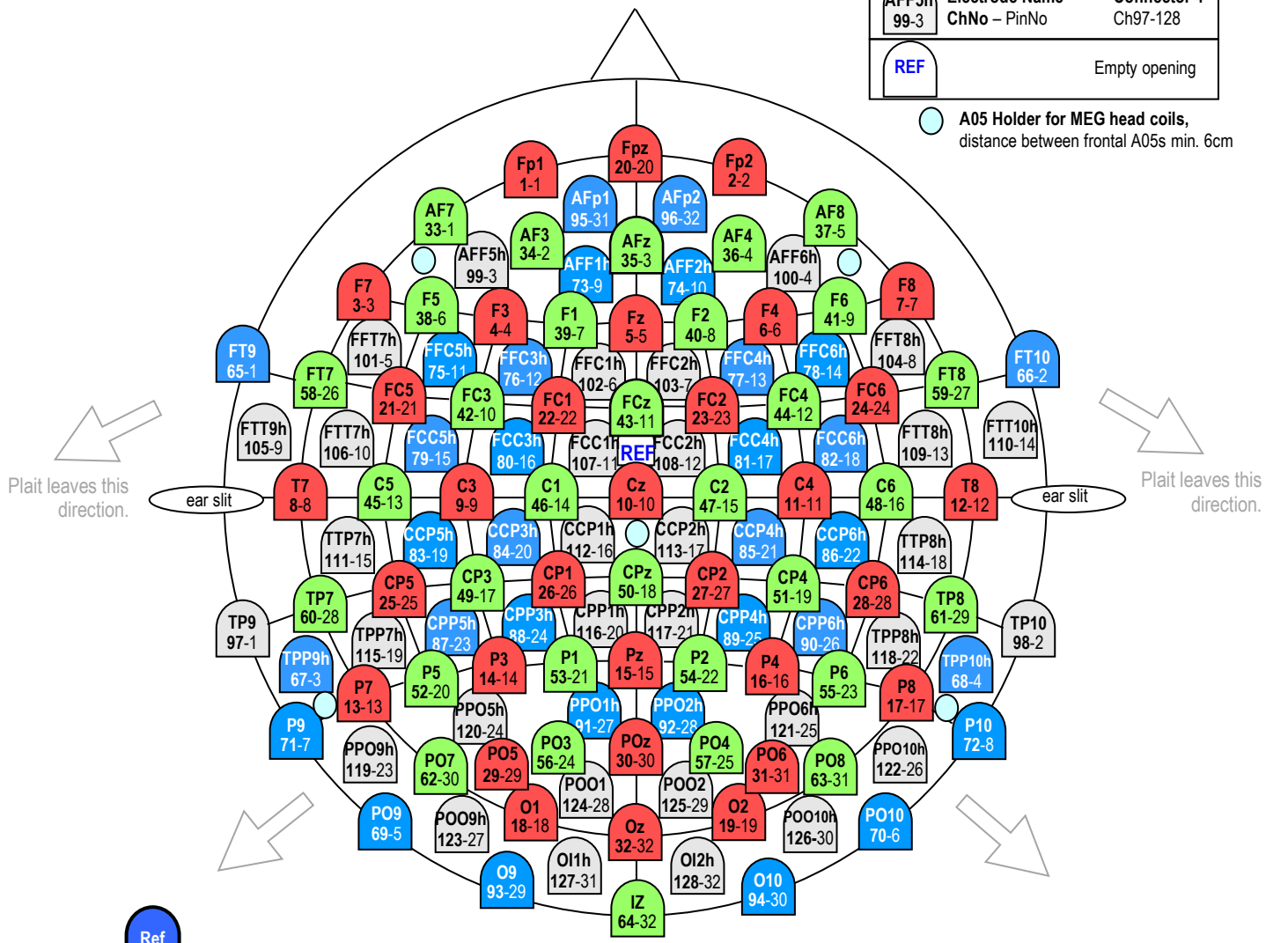
BC-MEG-128-X2 - 128Ch MEG BrainCap for TRIUX

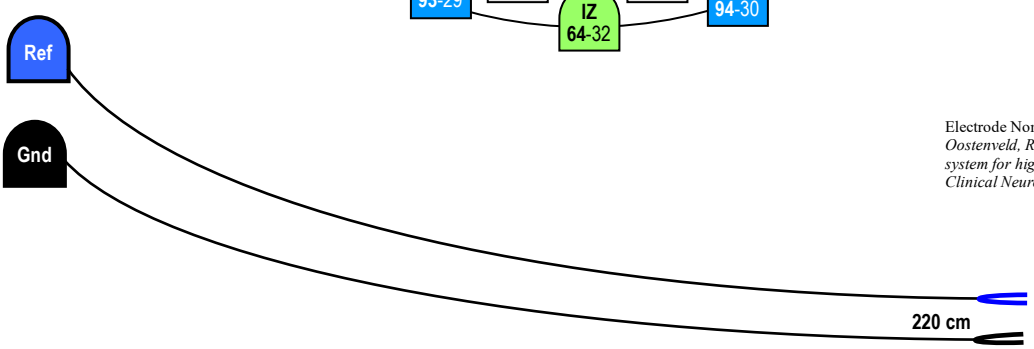
modular channel assignment based on TRIUX 128Ch layout

Electrode Layout and Channel Assignment

Fpz 20-20	**Electrode Name** **ChNo** – PinNo	**Connector 1** Ch1-32
AF3 34-2	**Electrode Name** **ChNo** – PinNo	**Connector 2** Ch33-64
AFF1h 73-9	**Electrode Name** **ChNo** – PinNo	**Connector 3** Ch65-96
AFF5h 99-3	**Electrode Name** **ChNo** – PinNo	**Connector 4** Ch97-128
REF		Empty opening

A05 Holder for MEG head coils,
distance between frontal A05s min. 6cm





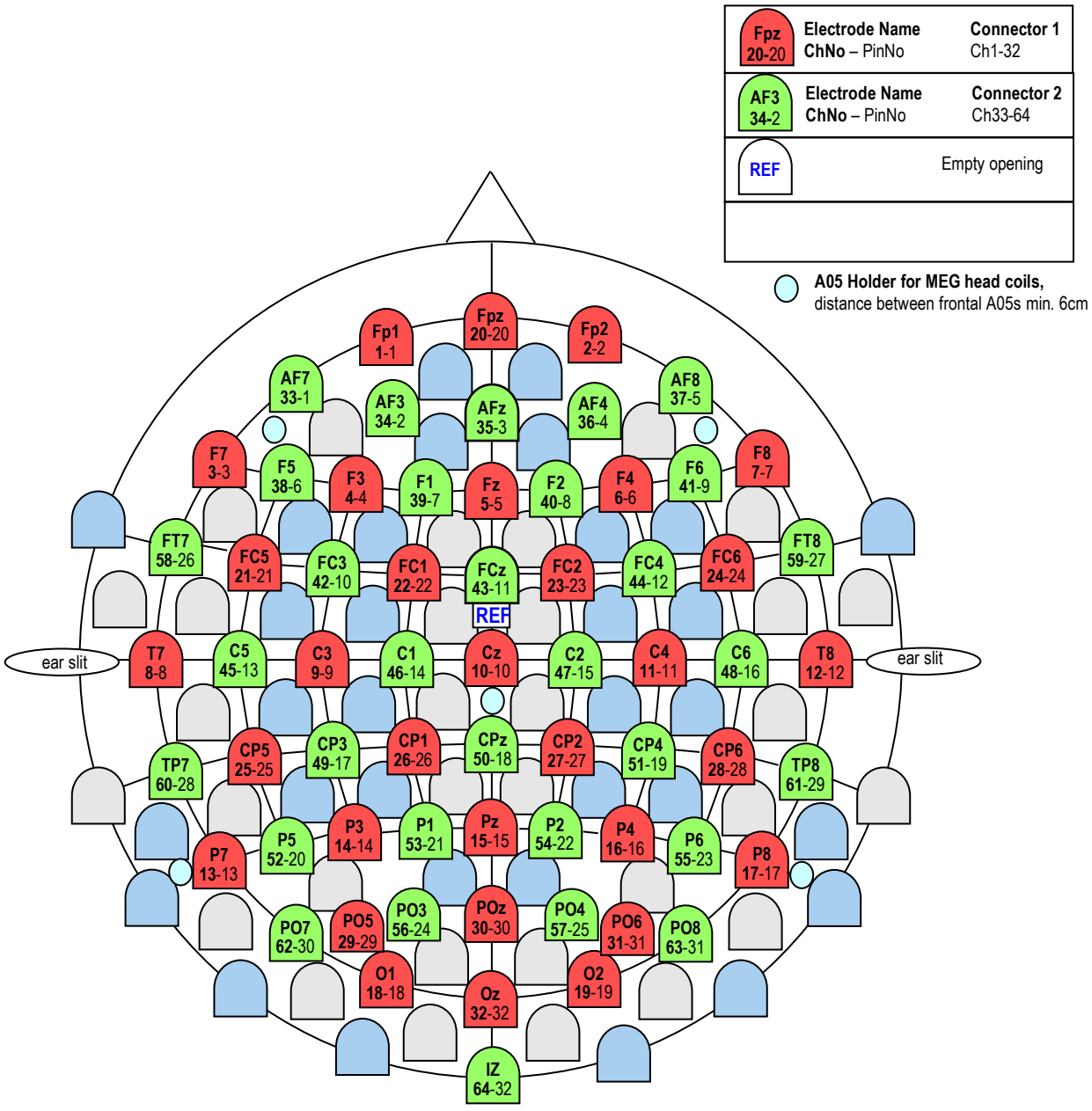
Electrode Nomenclature according to:
Oostenveld, R. & Praamstra, P. The five percent electrode system for high-resolution EEG and ERP measurements. Clinical Neurophysiology 2001; 112: 713-719

BC-MEG-128-X2_TRIUX.docx

BC-MEG-128-X2 Triux

Channels 1-32 and 33 - 64

Electrode Layout and Channel Assignment



Details

Ordering Information

For ordering please give **Layout Name, Cap Cut, and Size:**
(e.g. BC-MEG-128-X2, C-Cut, 56)

- Layout Name: ***BC-MEG-128-X2***
- 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)

The catalogue-number comprises the cap as described. For further information about accessories or consumables, please visit our website or contact our local distributor.

Cap

Standard: Subtemporal Cap with integrated chin belt, medium elasticity, white
Options: C-Cut or A-Cut, Size. For further variations, contact us.

Electrodes

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

All cap-electrodes are labelled with name (Fp1, …) AND channel number (1 thru 128) at the sensor end. The cable colours correspond to the above figure. The first 32 and first 64 channels represent a subset covering core positions of the International 10-20 / 10-10 system.

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. 20 cm before the connector-boxes there is a crossing-point. Lengths of cable trees are approx. 170 cm.

Additional 5pcs of A05 holders are inserted at the indicated positions (little gray circles) for MEG head coils, at approximate positions AFF5h/AFF6h (minimum 6cm apart), TPP9h/TPP10h (slightly posterior), and CCPz.

Termination

Channels 1-32, 33-64, 65-96, 97-128 are each converted onto round cables inside a small box and then terminated into four push-pull-32Ch-connectors to match the Triux-Inputs.
REF and GND are single electrodes, to be used with their individual safety sockets.

Cap Layout download

The QR code and link below take you to the download section of our website, where you can search for and download this cap layout document including Theta/Phi coordinates:
https://easycap.de/cap-layout-download/

Hints for Handling MEG-compatible Electrodes

It is important to understand that although MEG-compatible electrodes are and stay non-magnetic if handled correctly, they still contain soft metals which will become magnetic if exposed to a magnetic field.
Therefore, please never take them close to sources of electromagnetic fields, e.g. into a MR-scanner. Even closeness to neon-bulbs, wall outlets etc. should be avoided.

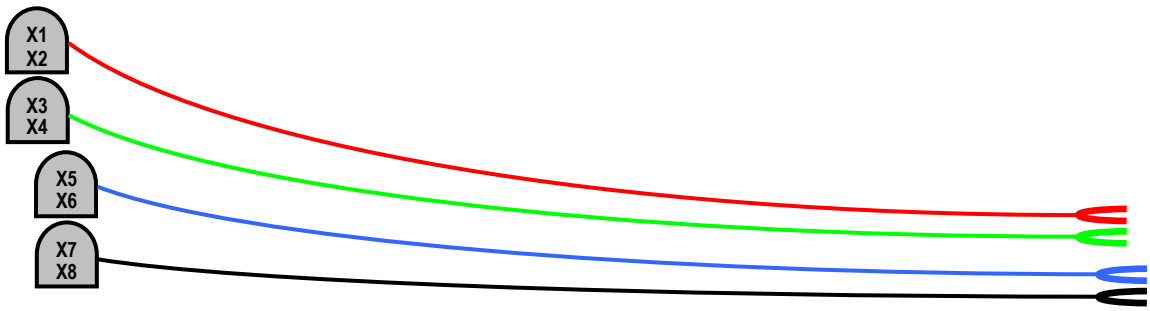
Further, cleanliness is important not only for hygienic but also for technical reasons: it is astonishing how many ferro-magnetic particles are contained in ordinary household dust. Thus not only the cap but also the storage room should be kept clean.

As tap water may contain metallic particles, the whole cleaning process should be performed with purified water (pharmacy-available). If this is not possible, then at least the last step of each cleaning should be to rinse the electrodes with purified water.

In case electrodes become (slightly) magnetized, in most cases they can be made MEG-compatible again either by simple cleaning or else by de-magnetizing the electrodes with e.g. a hand-held degausser (among others available from us).

Extra Electrodes (to be ordered separately)

For further bipolar channels, separate single electrodes are required. See here an example set:



8x B18-MEG-HS-220 MEG-compatible Multitrodes
transparent housing, 200 cm heavy duty leadwire, silver-plated 1.5mm touchproof safety socket with labels „X1 .. X8“ on both ends

cable colours 2 red, 2 green, 2 blue, 2 black

Table of Coordinates for BC-MEG-128-X2 Triux

Channel-number	Name	Theta	Phi
1	Fp1	-90	-72
2	Fp2	90	72
3	F7	-90	-36
4	F3	-60	-51
5	Fz	45	90
6	F4	60	51
7	F8	90	36
8	T7	-90	0
9	C3	-45	0
10	Cz	0	0
11	C4	45	0
12	T8	90	0
13	P7	-90	36
14	P3	-60	51
15	Pz	45	-90
16	P4	60	-51
17	P8	90	-36
18	O1	-90	72
19	O2	90	-72
20	Fpz	90	90
21	FC5	-69	-21
22	FC1	-31	-46
23	FC2	31	46
24	FC6	69	21
25	CP5	-69	21
26	CP1	-31	46
27	CP2	31	-46
28	CP6	69	-21
29	PO5	-81	60
30	POz	67	-90
31	PO6	81	-60
32	Oz	90	-90
33	AF7	-90	-54
34	AF3	-74	-68
35	Afz	67	90
36	AF4	74	68
37	AF8	90	54
38	F5	-74	-41
39	F1	-49	-68
40	F2	49	68
41	F6	74	41
42	FC3	-49	-29
43	FCz	23	90
44	FC4	49	29
45	C5	-68	0
46	C1	-23	0
47	C2	23	0
48	C6	68	0
49	CP3	-49	29
50	CPz	22	-90
51	CP4	49	-29
52	P5	-74	41
53	P1	-49	68
54	P2	49	-68
55	P6	74	-41
56	PO3	-74	68
57	PO4	74	-68
58	FT7	-90	-18
59	FT8	90	18
60	TP7	-90	18
61	TP8	90	-18
62	PO7	-90	54
63	PO8	90	-54
64	Iz	112	-90
65	FT9	-113	-18
66	FT10	113	18
67	TPP9h	-101	27
68	TPP10h	101	-27
69	PO9	-113	54
70	PO10	113	-54
71	P9	-113	36
72	P10	113	-36
73	AFF1h	-57	-82
74	AFF2h	57	82
75	FFC5h	-62	-35
76	FFC3h	-46	-48
77	FFC4h	46	48
78	FFC6h	62	35
79	FCC5h	-57	-12
80	FCC3h	-35	-19
81	FCC4h	35	19
82	FCC6h	57	12
83	CCP5h	-57	12
84	CCP3h	-35	19
85	CCP4h	35	-19
86	CCP6h	57	-12
87	CPP5h	-62	35
88	CPP3h	-46	48
89	CPP4h	46	-48
90	CPP6h	62	-35
91	PPO1h	-57	82
92	PPO2h	57	-82
93	O9	-112	72
94	O10	112	-72
95	AFp1	-79	-82
96	AFp2	79	82
97	TP9	-113	18
98	TP10	113	-18
99	AFF5h	-72	-55
100	AFF6h	72	55
101	FFT7h	-81	-29
102	FFC1h	-35	-73

103	**FFC2h**	35	73
104	**FFT8h**	81	29
105	**FTT9h**	-101	-9
106	**FTT7h**	-79	-10
107	**FCC1h**	-16	-45
108	**FCC2h**	16	45
109	**FTT8h**	79	10
110	**FTT10h**	101	9
111	**TTP7h**	-79	10
112	**CCP1h**	-16	45
113	**CCP2h**	16	-45
114	**TTP8h**	79	-10
115	**TPP7h**	-81	29
116	**CPP1h**	-35	73
117	**CPP2h**	35	-73
118	**TPP8h**	81	-29
119	**PPO9h**	-101	45
120	**PPO5h**	-72	55
121	**PPO6h**	72	-55
122	**PPO10h**	101	-45
123	**POO9h**	-101	63
124	**POO1**	-79	82
125	**POO2**	79	-82
126	**POO10h**	101	-63
127	**OI1h**	-101	81
128	**OI2h**	101	-81
Ref	(FCCz)	11	90

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

The signs follow this convention:

