



EASYCAP

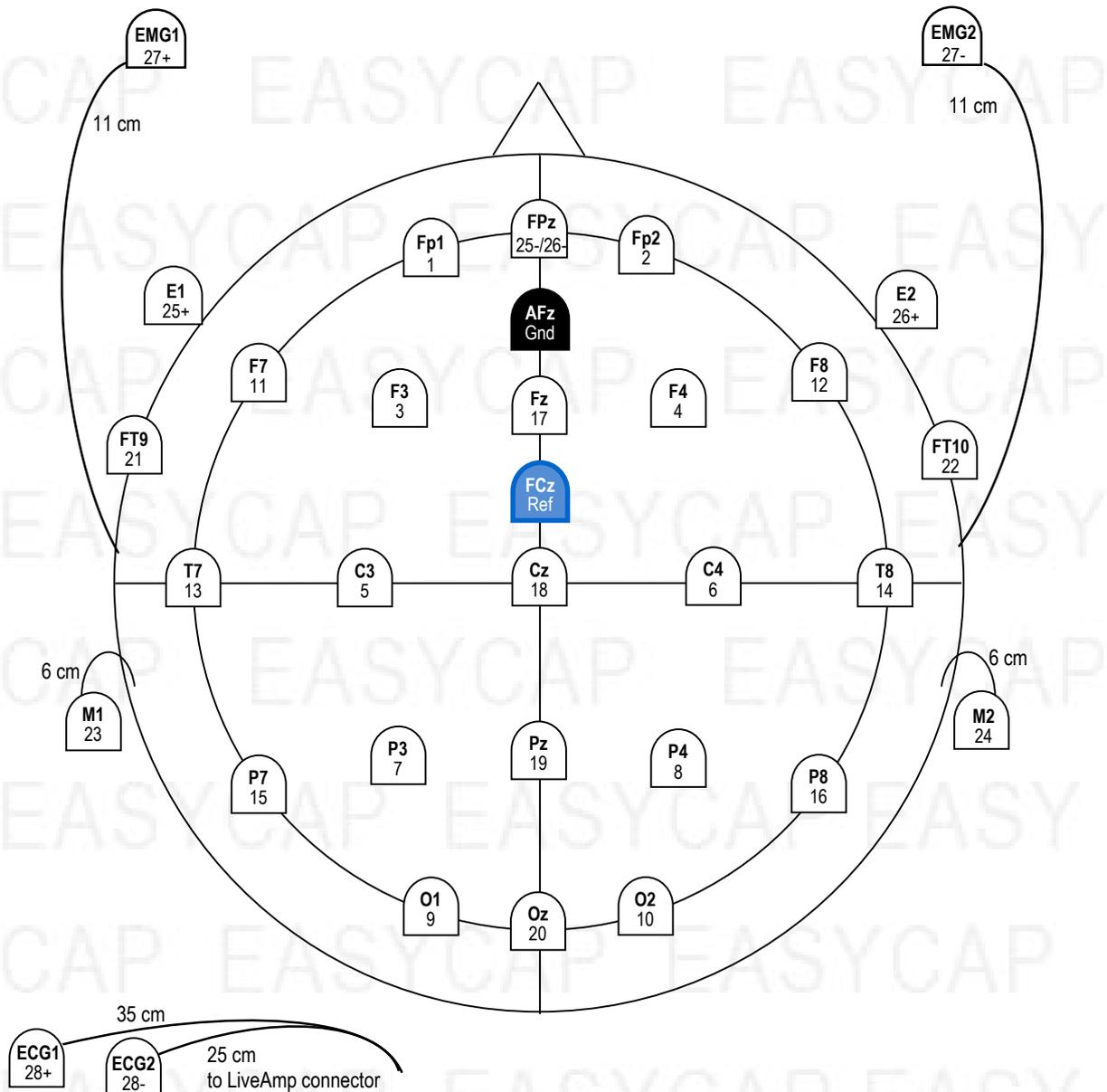
EEG Recording Caps and Related Products

EASYCAP GmbH
Steingrabenstrasse 14
DE-82211 Herrsching
Germany
DeliveryAddress: Am Anger 5, DE-82237 Woerthsee-Etterschlag

Tel +49 (0) 8153 88702-00
Fax +49 (0) 8153 88702-10
www.easycap.de
info@easycap.de

32Ch LiveAmp Cap for Sleep Recordings with Multitrodes

Electrode Layout and Channel Assignment



FCz offers a reliable position for online recording reference,
for mastoid reference please reference the data *offline* to M2 or M1.



Details for Users

Ordering Information

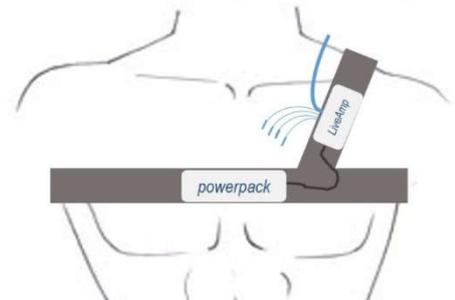
For ordering please give **Article Number, Cap Cut, and Size**
(Example: LC-SL-32, Caucasian, 58):

- Article Number: **LC-SL-32**
- 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: **50** (3-4 years), **52** (5-10 years), **54** (11-14 years)
 - Infant caps: **36** (newborn), **38, 40** (3 months), **42, 44** (7 month), **46, 48** (2 years)

The catalogue-number comprises the cap as described, serial number, and this document; all packed in a labelled cardboard box.

For placement of the amplifier and of the additional powerpack for the long-term sleep recording, LiveAmp sleep caps will best use at least one chest belt system "LC-GS" (to be ordered extra).

For further information about accessories or consumables, please visit our website or contact our local distributor.



Cap

Black Sub-Inion Cap with integrated chin belt, made from soft HighComfort Fabric
Options: *Caucasian* or *Asian*, *Size*

Electrodes

All electrodes are Multitrodes with sintered Ag/AgCl sensors and extra-thin cables. All cables are white. The electrodes are buttoned directly into the cap (total height 3,5 mm) or can be attached to the skin with washers (= double-sided adhesive rings). For small cap sizes, drop-down lengths will be adjusted accordingly.

All electrodes are number-labelled at the sensor end.

The cables are attached to the cap with nylon threads. They leave the cap and the cable tree continues to the LiveAmp, which is best placed on a chest belt. Mastoid electrodes are buttoned in the cap at approximately mastoid positions, but they can alternatively be placed directly on the skin.

Electrode leadwires for ECG leave directly from the connector. Further short leadwires for the bipolar channels 29-32, with labelled 1.5mm pin connections, also leave directly from the connector.

The battery for extended recording with LiveAmp can best be placed in respective straps on the chest belt.

Termination

All cables end in the Connector to LiveAmp.

Theta/Phi-Coordinates

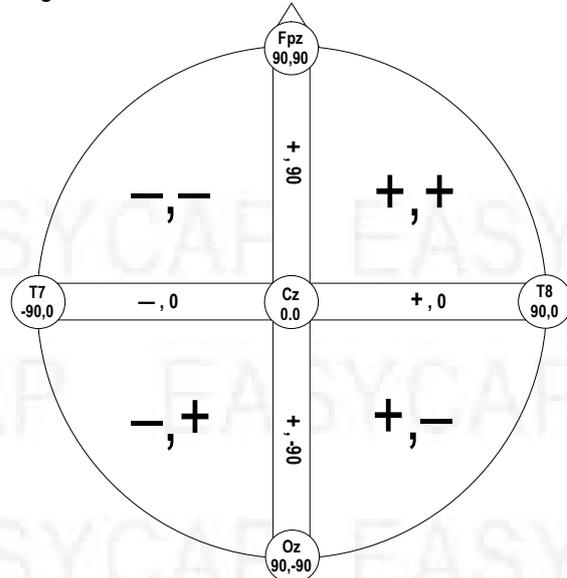
Please find a table with Theta/Phi-Coordinates of all electrode sites at the end of this file.

Table of Coordinates for LC-SL-32

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	Fz	45	90
18	Cz	0	0
19	Pz	45	-90
20	Oz	90	-90
21	FT9	-113	-18
22	FT10	113	18
23	M1 (TP9')	-121	18
24	M2 (TP10')	121	-18
25bip	EOG1	-	-
26bip	EOG2	-	-
27bip	Chin EMG	-	-
28bip	ECG	-	-
29bip		-	-
30bip		-	-
31bip		-	-
32bip		-	-
Gnd	Afz	67	90
Ref	FCz	23	90

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

The signs follow this convention:



For EOG, the "E1" and "E2" channel are referenced to Fpz, for EOG left/right, as indicated:

