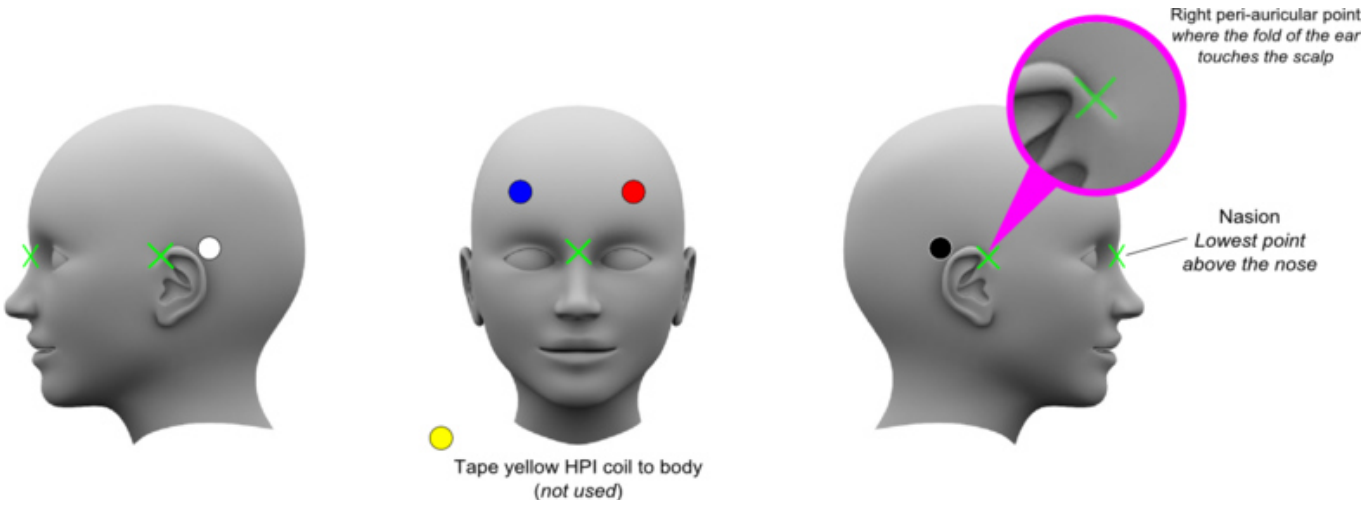
Natmeg/HPI placement

From SBIwiki

We adhere to a standard placement of HPI coils as shown here:



The default (Elekta configuration) frequencies with which the coils are energized are as follows:

1. Blue 293 Hz
2. White 307 Hz
3. Red 314 Hz
4. Black 321 Hz
5. Yellow 328 Hz Free placement

When the coils are places close together (closer than about 5 cm) the signal generated by the HPI coils might show interference in the difference frequency. In the default configuration this would mean a peak of 7hz in the measured signal when continuous HPI is used. For that purpose it is possible to energize the coils with frequencies of (multiples of) 50Hz apart. This would result in interference on top of the line noise (in the case of 50Hz line noise).

50-Hz apart frequencies:

1. Blue 128 Hz
2. White 178 Hz
3. Red 228 Hz
4. Black 278 Hz
5. Yellow 328 Hz Free placement

To reduce the bandwith used by the HPI coils, they can also be energized with (steps of) 25Hz difference, resulting is 50Hz difference of neighbouring coils. Note that in this case the coils have to be positioned as displayed above.

25-Hz apart frequencies:

1. Blue 220 Hz
2. White 245 Hz
3. Red 270 Hz
4. Black 295 Hz
5. Yellow 320 Hz

The configuration file for the coil frequencies is located on the data acquisition computer in */neuro/dacq/setup/collector /conf/collector.defs*

Currently, we have removed the 5th (yellow) coil from the default digitization protocol. This is done by adding/changing the line *DEFisotrakNcoil 4* in */neuro/dacq/setup/megacq.defs.local*

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