

INTRACRANIAL ELECTRODES (iEEG)

Intracranial EEG may be recorded using:

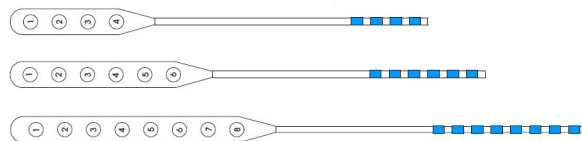
- Subdural electrodes- placed on the cortical surface directly.
 - Subdural strip electrodes
 - Subdural grid electrodes
 - Macro
 - Meso
 - Micro
- Depth electrodes (sEEG)- probes placed stereotactically into brain substance
 - Depth probes
 - Microwire depth electrodes
 - Macro-micro depth electrodes
- Neuroport (Utah) array
- Laminar electrodes

Characteristics:

- Number of electrodes or contacts
- Distance between contact centers (contact spacing)
- Contact diameter

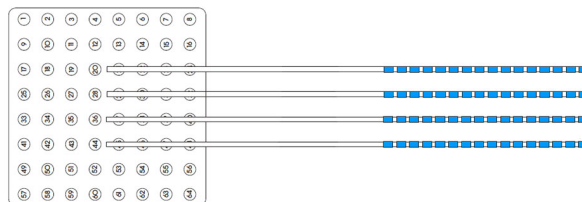
Subdural electrodes

Strips



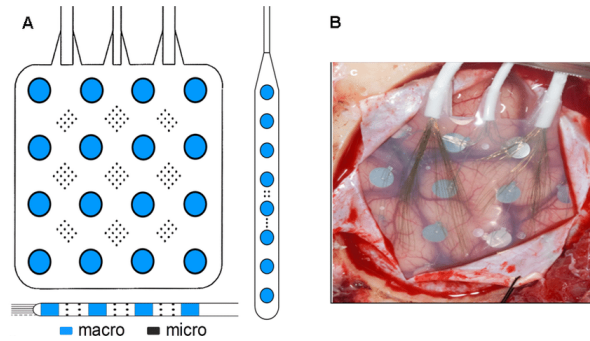
Common contact number: 4, 6, 8

Grids

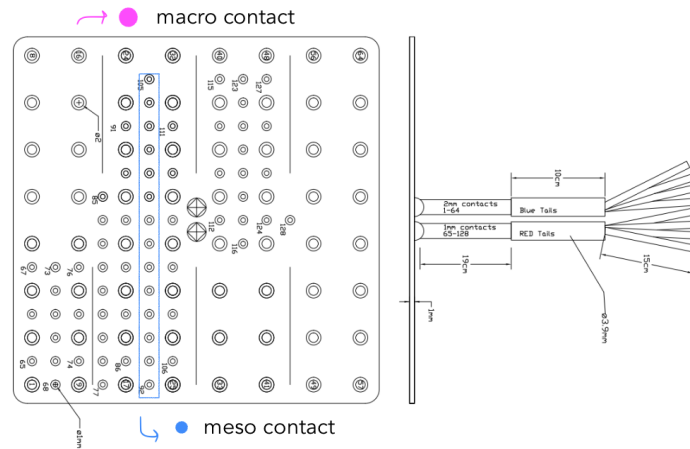


Common contact number: 64 (8x8), 32, 16, among others

Macro-micro grid



Macro-meso grid



Depth electrodes

Depth probes

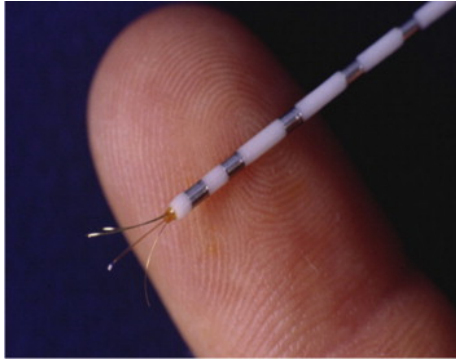


Common contact number: 4, 6, 8, 10, 12, 14, and 16

Hybrid macro-micro depth electrodes (a.k.a. Microwire depths)

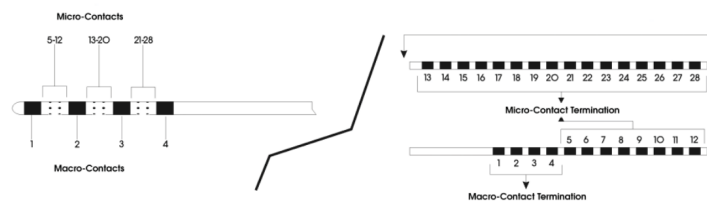
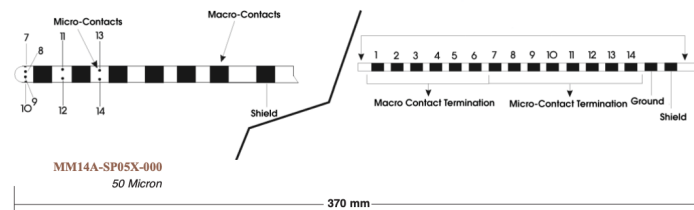
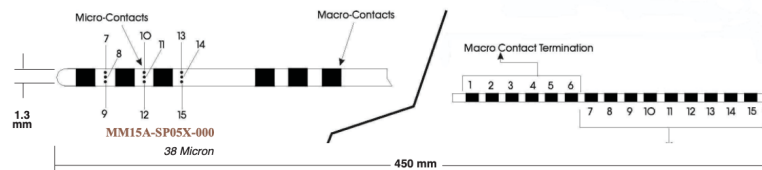
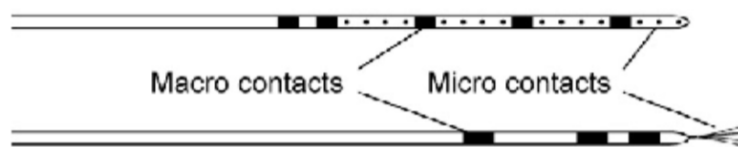


Microwire "splays":



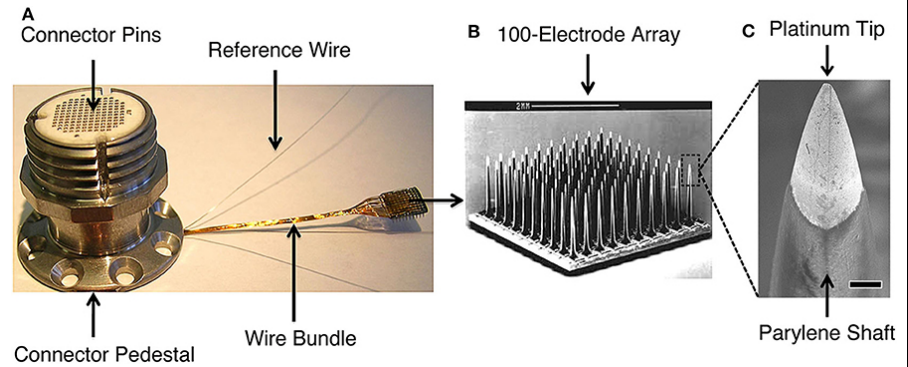
Macro-micro depth electrodes

Hybrid depth electrodes



Other

Neuroport (Utah) array



100 pins, 96 channels

Laminar "thumbtack" electrode



Foramen ovale electrodes

