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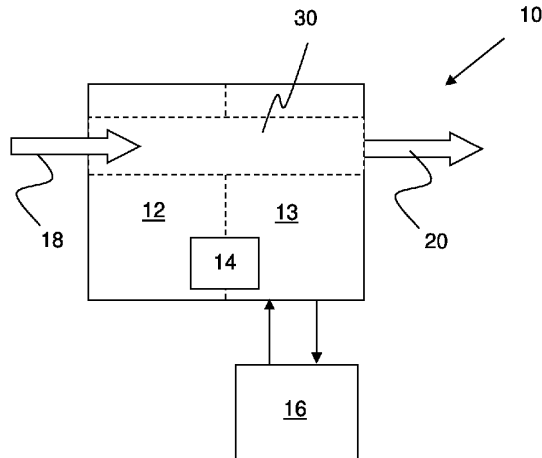
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(54) Title: BIOLOGICAL MEASUREMENT APPARATUS

Figure 1



(57) Abstract: A biological measurement apparatus (10) comprises a stimulation apparatus (12) including at least one stimulation electrode (102a, 102b) and a stimulation circuit. The stimulation circuit is configured to provide an electric stimulus signal to the at least one stimulus electrode (102a, 102b), such that the at least one stimulus electrode (102a, 102b) generates a pre-determined, electrodynamic field that is applied to biological matter. The sensing apparatus includes at least one sensing electrode (202a, 202b) and a sensing circuit, the at least one sensing electrode (202a, 202b) configured to sense the response electrodynamic field and provide a corresponding electric response signal to the sensing circuit. The electric stimulus signal comprises a plurality of different pseudo-random binary sequences, each pseudo-random binary sequence having a length and data rate that provide the pre-determined, electrodynamic field with a range of frequencies that is different to the range(s) of frequencies provided by the other pseudo-random binary sequence(s).

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