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(54) Title: OPTOACOUSTIC IMAGING SYSTEM WITH FIBER OPTIC CABLE

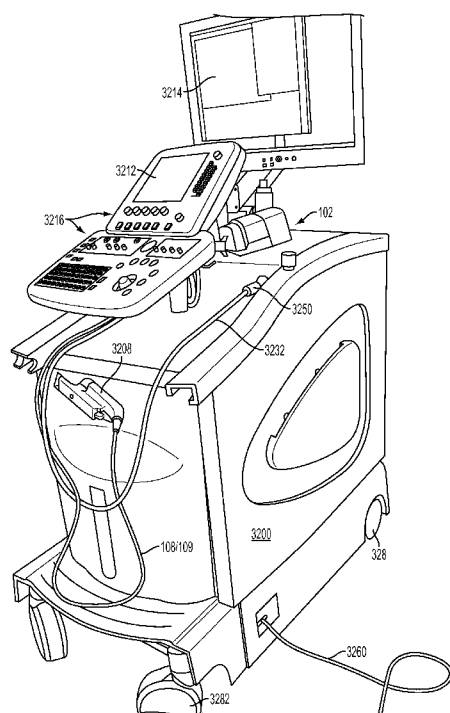


FIG. 32

(57) Abstract: An optoacoustic imaging system comprising a light source, a handheld probe and a fiber optic cable is disclosed. The light source is capable of generating at least one pulse of light. The handheld probe comprising a transducer array capable of receiving an optoacoustic return signal. In an embodiment, the fibers being randomized between the input and the output in a manner that prevents a local anomaly affecting an adjacent group of the fibers at the input from affecting an adjacent group of the fibers at the output. In an embodiment, the output of the fiber optic cable being organized into multiple groups, and the fibers being intermingled between the input and the output in a manner that prevents a local anomaly affecting an adjacent group of the fibers at the input from disproportionately affecting one or more of the output groups.



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