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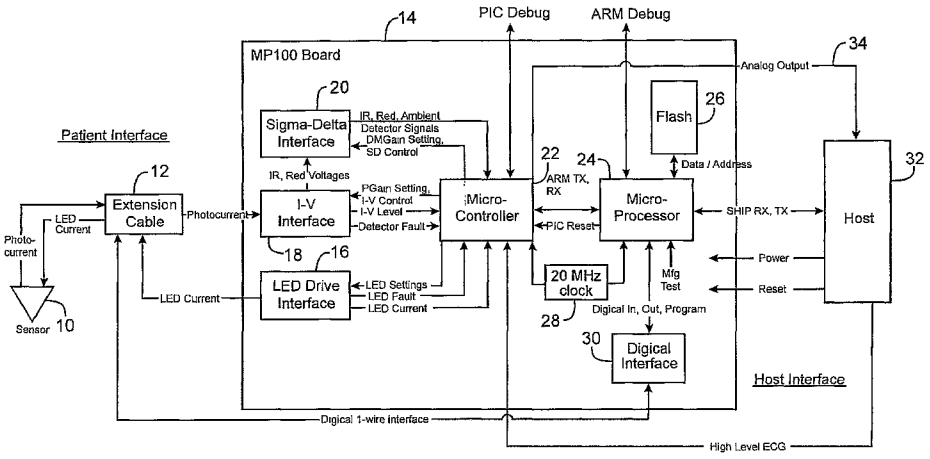
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[Continued on next page]

(54) Title: OXIMETER AMBIENT LIGHT CANCELLATION



(57) Abstract: A pulse oximeter method and apparatus which provides (1) a notch filter (46) at a distance between a modulation frequency and a common multiple of commonly used power line frequencies (50, 60, 100 and 120) and also (2) a demodulation frequency greater than a highest pulse rate of a person and lower than any harmonic of 50, 60, 100 or 120 Hz, to filter ambient light interference, while choosing an optimum demodulation frequency that avoids interference from the notch filter or from harmonics of the line interference. Also, ambient light for any low frequency interference, such as power line interference, is measured both before and after each of the light emitter wavelengths and the average of the ambient light is then subtracted from the detected signal.

WO 2005/082242 A1

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