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(54) Title: IMPROVED FIBER OPTIC GPS LINK

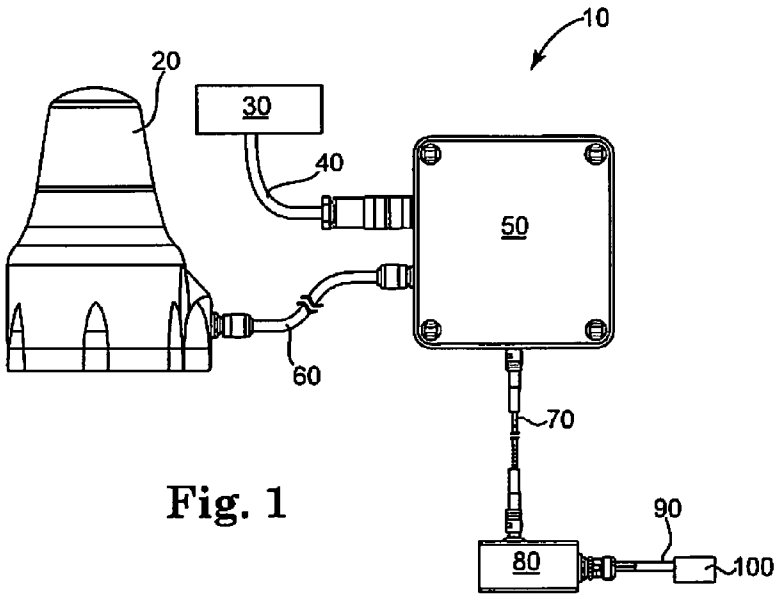

Fig. 1

(57) Abstract: A fiber optic GPS signal device and method comprising a VCSEL multimode transmitter having a gain that, together with the GPS antenna gain, is greater than the VCSEL multimode transmitter noise. When in operative communication, via a long length of multimode fiber, i.e., up to 2000 feet and greater, with a fiber optic receiver, the GPS signals are transmitted at, inter alia, L1 and L2 frequencies with minimal degradation over the length of multimode fiber. The present invention may be used in a variety of GPS transmission applications requiring long lengths of cabling. For example, the invention is particularly useful when the GPS antenna is located on top of an office building or cell phone tower and remotely from the GPS receiver and for use in high-volume commercial telephone synchronizing (DTMF) applications.

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