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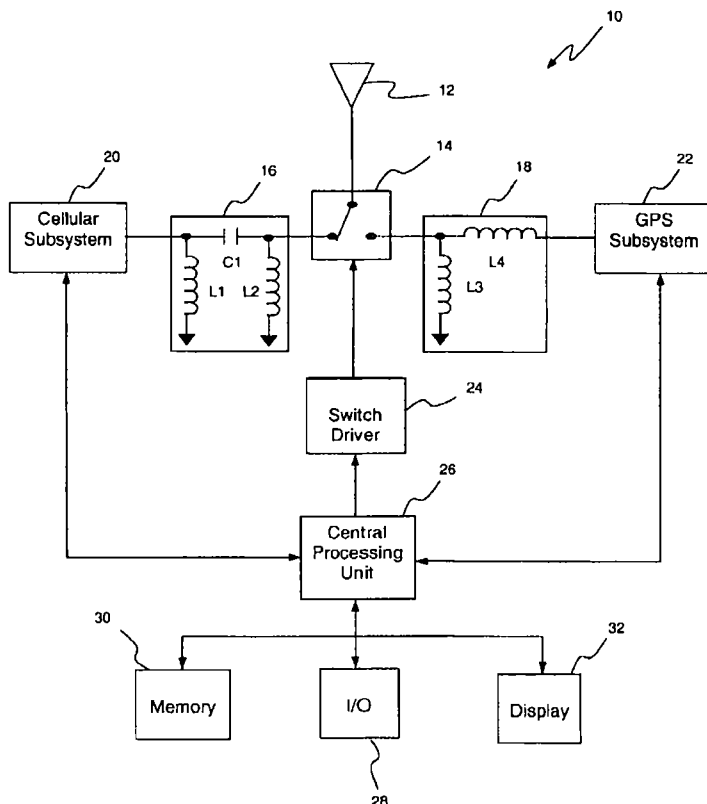
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(54) Title: GPS EQUIPPED CELLULAR PHONE USING A SPDT MEMS SWITCH AND SINGLE SHARED ANTENNA



(57) Abstract: An antenna sharing system and method. In the illustrative embodiment, the inventive system includes a first matching network coupled to a first circuit; a second matching network coupled to a second circuit; and a MEMS switch having a first throw coupled to the first network, a second throw coupled to the second network, and a pole coupled to the antenna. In the specific implementation, the first circuit is a cellular subsystem and the second circuit is a Global Positioning System subsystem. The system further includes a controller for selectively actuating the switch whereby the first network is coupled to the antenna in a first operational mode and the second network is coupled to the antenna in a second operational mode. In the illustrative implementation, the first network provides an impedance match to the switch and the antenna with respect to the first circuit. The second network provides an impedance match to the switch and the antenna with respect to the second circuit. In the preferred embodiment, the invention includes a first diplexer network coupled to a first circuit; a second diplexer network coupled to a second circuit; and an antenna match which incorporates a shunt SPST switch to shift the matching frequency between the cellular (or PCS) and GPS bands.

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