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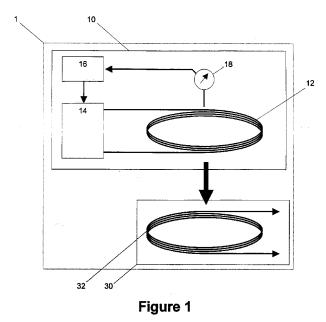
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(56) Documents Cited: EP 0867899 A2 EP 0357829 A1 US 4218648 A

(58) Field of Search:
UK CL (Edition W) H2K
INT CL⁷ H02H, H02J
Other: EPODOC, WPI, JAPIO

- (54) Abstract Title: Controlling inductive power transfer systems
- (57) During a measurement period power transfer from primary unit 10, via driver 14 and primary coil 12 to secondary coil 32 of a separable secondary unit 30 is suspended, the decay of resonant energy stored in primary coil 12 is measured by means 12, and controller 16 restricts or stops power transfer depending on the decay measurement. Primary unit 10 is thereby shutdown when secondary unit 30 is not present or when a parasitic load (fig 4, 500) of a foreign object is in the vicinity of coil 12. The measurement may be based on the rate of decay of resonating energy and may involve comparing the decay measured in consecutive measurement periods (fig 7), and may be augmented using a switchable dummy load (fig 4, 40). The inductive power transfer system may be used to re-charge the battery of a portable device (fig 4, 46).



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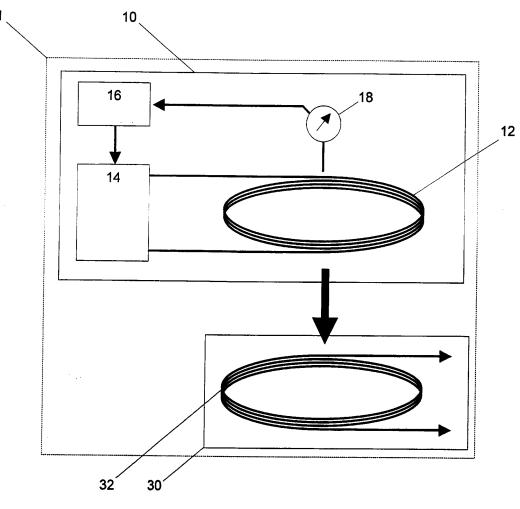


Figure 1



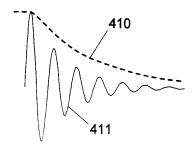


Figure 3

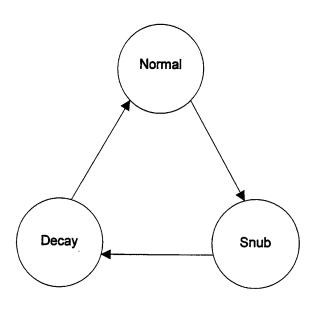


Figure 5

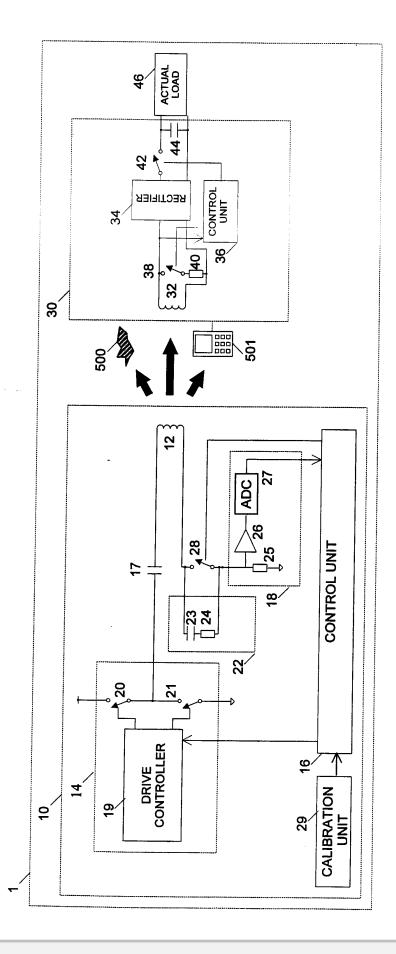


Figure 4



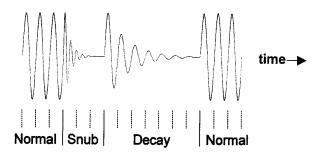


Figure 6



Figure 7

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