Attachment B

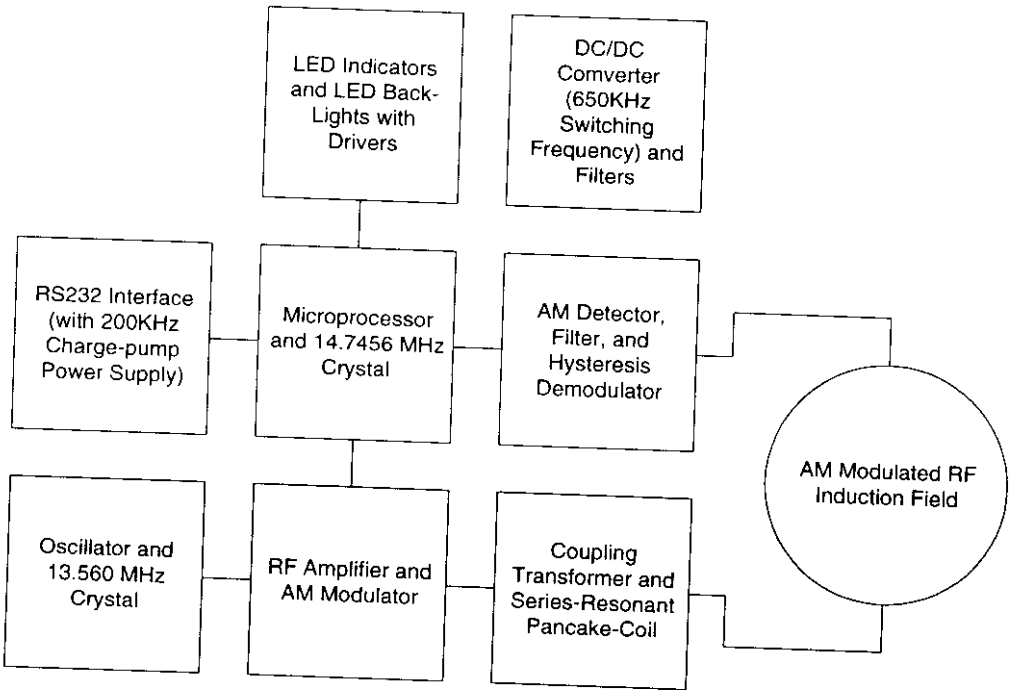
Block Diagram

The Target

The Target consists of:

a standard RS232 interface (providing 19.2, 38.4, 57.6, and 115.2 Kilo-Baud communications),
a microprocessor and it's 14.7456 MHz crystal (for baud rate conversion and other control functions),
an oscillator (using a 13.560 MHz crystal as the frequency determining element of the RF amplifier),
a modulator, RF amplifier, and coupling transformer (to provide modulated RF energy to a coil),
a tuned, series resonant, pancake-coil (acting as the primary of an air-core transformer - the secondary being a corresponding coil on the Tag),
a detector, filter, and demodulator (which responds to amplitude changes of the RF voltage across the pancake-coil),
a three color indicator LED and four back-lighting LEDs and,
a DC to DC converter and filters (which provide the required regulated 5 Volts for the rest of the circuitry).

Both the Target and the Tag coils are tuned to the induction field frequency to increase the circuit efficiency, to decrease the amplitude of any generated harmonic frequencies, and to help reject out-of-band interference.



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