Newton MessagePad: Infrared Specifications (11/94)

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TOPIC -----------------------------------------------------------

What protocol scheme is used on the Newton MessagePad? I want to develop an
application that uses the Infrared beam.

DISCUSSION ------------------------------------------------------

The following documents the general scheme used for Newton MessagePad units
built for the United States:

Communication Scheme: Bi-directional half-duplex

Modulation Type:  Amplitude shift keying (ASK)
                  carrier = space, no carrier = mark

Carrier: Infrared (900-1050 nm), 1000nm peak sensitivity

Transmission Rate: 38,400 bps(max), under SW control, fall back to
                   19,200 bps when error rate becomes too high.
                   (Sharp module specified to 19.2)

Transmission Modulation Frequency: 500kHz & 38 kHz

Receive Modulation Frequency: 500kHz only

Communication Range: 8 cm - 1 meter @ 19.2 kbps

Emission directional cone  +/- 13 degrees

Receive directional cone   +/- 13 degrees


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