



# Tech Info Library

## Newton MessagePad: Infrared Specifications (11/94)

Revised: 11/8/94  
Security: Everyone

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Article Created: 8 November 1994

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

Support Information Services

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Tech Info Library Article Number:16710