



# Tech Info Library

## Apple Personal Modem: Specifications (Discontinued)

### I. Technical Specifications

A. FCC registration Number: BCG794-12381-DM-E

B. Ringer Equivalence Number: 0.4B

-- The total number of ringer equivalence numbers on any one telephone line may not exceed 5.0.

C. Self-test:

-- The modem executes a brief self-test when first powered up, and sounds a short "BEEP" if all tests pass. This test and response cannot be disabled.

D. Data format

1. Protocol: Asynchronous

2. Character Length:

a. 7 data bits:

1. Stop bits: 1 or 2

2. Parity: Odd, even, fixed: mark, space, or none

b. 8 data bits:

1. Stop bits: 1 or 2

2. No parity

4. Mode: Full duplex with echo back

E. Transmission speeds:

1. 1200 baud

a. Tolerance in character asynchronous format (DTE data rate):

1. Plus 1.0%

2. Minus 2.5 %

b. Tolerance in modulation rate: Plus or minus 0.01%

-- Frequency Shift Keying (FSK) signal modulation

2. 0-300 baud

- Phase Shift Keying (PSK) signal modulation
- Data and handshaking modes
- Automatic adjustment to correct baud rate for receiving
- Bell System Tech Reference 412145 - 103 / 212A modem specification

F. Interface: RS-232-C, with mini-circular 8-pin connector

G. Operating modes:

- 1. Auto or manual dial (including redial)
  - a. Tone: DTMF (Dual Tone Multi-Frequency -"Touch Tone")
    - 1. Frequency tolerance: +/- 1/0%
    - 2. Tone Balance: Within 3dB
  - b. Pulse (Rotary)
    - 1. Dialing Rate: 10 pps
    - 2. Dialing Duty Cycle = 40%/60% Mark/Break Ratio
- 2. Auto or manual answer

H. Receiver Dynamic Range: -10 to -45 dBm full duplex

I. Transmitter level:

- -10dB, fixed
- as per FCC Interconnect Specification, Part 68

J. Environmental specifications:

	Degrees	
	Fahrenheit	Celsius
1. Operating:	13 to 13	0 to 45
2. Storage:	-4 to 149	-20 to 65

K. Line monitoring:

- 1. Audio
  - Adjustable volume
- 2. Software
  - Prints status messages to computer
- 3. Visual
  - A single small indicator on the modem lights when the unit is "on line", or communicating with another modem. It serves the function of a RS-232 DCD (Data Carrier Detect) status indicator.

L. Connectors:

1. Two RJ-11 modular telephone jacks

- Either jack can be connected to the telephone line, since the modem internally configures itself when it detects the telephone system voltage so that the other jack can be used for a telephone set.

2. Detachable head AC plug

3. Mini-circular 8-pin jack

#### M. Compatibilty

1. Complete set of Hayes modem command instructions

### II. System Configuration

#### A. Computer

1. Apple II, Apple II+, or Apple IIe

- with Super Serial Card or compatible serial interface

2. Apple IIc with a serial number of 510,000 or lower

- Contact Authorized Apple Dealer for information on a free upgrade.

3. Apple IIc with a serial number greater than 510,000

4. Apple III, Macintosh, Macintosh XL, or Lisa

5. A computer with an RS-232 port

#### B. Interface cable

- Shielded cable from Apple (using any other type of cable might violate the FCC specification (Class B, Part 15)).

1. For Apple II, Apple II+, IIe, III, or Macintosh XL: 590-0331

2. For Apple IIc: 590-0332

3. For Macintosh = 590-0333

#### C. Standard single-line telephone outlet with RJ-11 modular jack

#### D. Appropriate communications software:

1. Access II

2. MacTerminal

3. Hayes-compatible programs  
Apple Technical Communications

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