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Newton MessagePad

Models: original (OMP) and 100 (MP100)



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Gallery Commentary

A result of the combined efforts of [Steve Capps](#), [Walter Smith](#), [Michael Tchao](#), Gaston Bastiaens, [John Sculley](#) and many members of the Newton Team, the Original newton MessagePad (OMP) was the first in a family of communications assistants from Apple. The OMP was unveiled and released on August 3, 1993 at MacWorld Boston. Its release was somewhat premature and it is referred to by some of the newton faithful as the 'grand public beta test'. The rumor is that Gaston Bastiaens, Vice President and General Manager of Apple's Personal Interactive Electronics Division (PIE), had made a very public 'bet' with a member of the Press that the Newton would be released at MacWorld Boston or he'd give up his wine cellar. He loved his wine cellar, thus the release happened

With the introduction of the MessagePad at MacWorld Boston, Apple defined a new realm of personal computing -- the Personal Digital Assistant (PDA). The MessagePad was Apple's first pen-based device based on its Newton Intelligence operating system. Its key features were its communications capabilities (fax, email), its built-in personal organizer applications (Names, Dates, To Dos, Notes) and its ability to recognize and the interpret words written on its screen. An amazing capacity to 'parse' language was inside this tiny device. If one would write "Lunch with Bob tomorrow" on the screen, then tap the Assist button. The MessagePad would interpret the phrase and open a meeting slip already filled out with the last-accessed person named Bob, tomorrow's date, and the lunch hour already allocated to this new meeting. Stunning.

Unfortunately, the word-based handwriting recognition engine in the Newton which was developed by the Soviet programmers at Paragraph International Inc. got more attention for what it couldn't do than what it could. The Gary Trudeau comic strip 'Doonesbury' cartoons summed up the criticism and made the MessagePad infamous, and labeled it a failure. As a semi apology for the damage his cartoon did to the Newton's reputation (since he had never actually seen one before writing the strip), in the later versions of the Newton OS (2.0) Trudeau re-created a frame similar to the original to be included as an easter egg in the newton ROM. (write "egg freckles" on a 2.0 Newton, tap Assist, and you get a real [Gary Trudeau cartoon](#)). Later, Apple's Newton OS 2.0 had an amazing 'Apple created' print recognizer engine in addition to the Paragraph Cursive recognizer (Calligrapher) for very high reliability. The new recognition didn't get any press, though. Features that separated the MessagePad from other devices on the market were grounded in the Newton OS. Newton used an entirely new way of storing data -- soups. Soups were designed as reusable data stores so any application could access any other application's data, and this flexibility gave Newton an advantage. Soups could

exist on multiple storage devices, so some of your Names could be held in internal RAM and others on multiple RAM cards, with the OS doing all the housekeeping. There are two different ROMs which shipped in the OMP. The first shipped at the introduction with version 1.0 on the chip with a patch to version 1.02; later updates were 1.03, 1.04, and finally 1.05. The second ROM shipped after 10/30/93 with 1.10 on the chip and a patch to 1.11; there were no later patches.

The Newton MessagePad 100 had the same hardware as an OMP but with a much nicer operating system (version 1.3). Sharp's [ExpertPads](#) were clones of these machines. In both of these messagepads, handwriting recognition (HWR) was the basis of data input to many of the built-in applications. HWR depended solely on Paragraph International Inc.'s Calligrapher recognition engine. Calligrapher is amazing technology but is limited somewhat by the dictionary of words to which it has access. If you write a word that doesn't exist in the dictionary Calligrapher is NOT going to recognize it correctly. Calligrapher also 'learns' your handwriting over weeks. Thus a messagepad is very personal and can fail miserably at recognizing a stranger's handwriting especially words it's never heard of before. With some training and adding new words to its dictionary (word list) Calligrapher can be amazingly accurate at HWR. HWR is like magic sometimes, recognizing scribble that no human could. Version 1.3 of the Newton OS (Newton Intelligence as it was originally named) added another letter by letter recognition engine and deferred recognition capabilities to the HWR which enhanced the newton's capabilities quite a bit. OS 1.3 is a very stable and capable operating system (much nicer than previous versions). These first newtons were manufactured by Sharp Electronics Inc. and had bright clear supertwist LCD screens. Some of the OMPs had golden colored screens which were so nice that they caused trouble when Apple had to change to another manufacturer and the MP110's screen was poor in comparison. The newtons also had a wonderful texture to them. They had a rubberized surface that kept the units well gripped in the user's hand. This 'skin' as it was called was later omitted in the MP120's after heavily used MP110's began to peel and draw complaints from users. The OMP and MP100s had a flat stylus (stored on the holster on the side of the unit) that was called a carpenter's pen. Later models had rounded styluses with internal storage holsters.

Original Product Specifications Announcement (1993)

The Newton MessagePad is the first in a family of communications assistants from Apple. By combining Newton Intelligence technology with sophisticated communications capabilities, the Newton MessagePads help you stay in touch with friends and colleagues, organize your life, and keep track of your ideas. You can take notes. Make a quick sketch. Format and print letters. Share and synchronize information with your personal computer. Send a fax. Receive pages and messages. Tap into on-line services or electronic mail. Even exchange business cards with a colleague via built-in infrared technology. And wherever you go, the powerful, under-one-pound personal digital assistant goes too, tucked in your pocket or briefcase.

Almost as easy to use as pencil and paper, the Newton MessagePad lets you leave your notes handwritten or reads your handwriting and transforms it into typed text. If you prefer, you can type words using an on-screen keyboard. It even cleans up your rough sketches. And as time goes by, it learns about you, your handwriting, and the way you work.

Because the Newton MessagePad is designed to know how you work, it can help you work smarter. For example, the Newton MessagePad can find a phone number and dial the phone for you, fax a note, format a letter, and even set up a lunch appointment.

The Newton MessagePad comes with built-in applications that include a notepad, to-do list, datebook, and name file to get you started. When you're ready, you can customize your Newton MessagePad to include Apple and third-party software and hardware additions as well. There's already a good selection of Shareware available on popular Macintosh FTP Sites like sumex-aim.stanford.edu.

Features

Built-in applications

- Let you capture, organize, and communicate all kinds of information
- Allow free-form notetaking -- mixing ink handwriting, printed text, and graphics all on the same page
- Turn printed or cursive handwriting into typed text or leave it as ink
- Track tasks via a to-do list that helps you assign priorities, lets you check off completed tasks, and then updates the next day's list for you
- Let you create name files with a familiar, business-card look and feel that help you store information on hundreds of colleagues and friends
- Help you plan monthly, weekly, and daily calendars
- Include an assortment of information and productivity tools (such as time-zone maps, calculator, and currency-exchange formulas)

Communications capabilities

- Send notes or messages, schedule appointments, or exchange business cards with other nearby Newton users via built-in, infrared beaming technology
- Print formatted letters and notes to serial and parallel printers
- Send faxes anywhere with an optional compact fax modem
- Receive and store wireless paging messages with the optional Newton Messaging Card
- Share information and keep files synchronized and updated with personal computers running Microsoft Windows or with Macintosh computers (requires Newton Connection Kit)
- Tap into electronic mail and on-line services with an optional compact fax modem

Intelligent assistance

- Knows how you work and actively assists you in completing tasks
- Assists you in making phone calls, faxing, finding information, sending electronic mail, printing, scheduling meetings, and completing to-do lists

Technical Specifications

Newton Intelligence

Newton Recognition Architecture

- Recognizes handwriting: printed, cursive, or mixed word recognition
- Recognizes graphics and the inherent symmetry in objects

Newton Information Architecture

- Object-oriented data storage optimized for storing, finding, and linking small pieces of information
- Easy creation of custom forms applications via the flexible graphical view toolbox
- Easy data sharing using standard tags
- Object-oriented database provides flexible view of data

Newton Communications Architecture -- Provides single interface for all communication services

- Integrated to support easy communications with minimum setup requirements
- Designed in modules to support new communications capabilities

Intelligent Assistance Architecture

- Assists users in completing repetitive tasks done in multiple categories, including communications, scheduling, finding, and reminding functions
- Contains smart defaults to reduce complexity
- Functions across applications transparently
- Allows extensions by third-party developers

Newton Hardware Architecture

Original Message Pad same as Newton Message Pad 100 except OS

System Version: OMP has 1.0,1.1, MP100 has 1.2,1.3

Low-power, reflective LCD display (336 x 240 pixels)

-Apple custom system ASIC

CPU: ARM 610 processor at 20 MHz

ROM: Transparent tablet with passive pen -- 4MB of ROM

RAM: 640KB

System space 482 (448) KB *():1.04,1.10

User space 158 (192) KB *():1.04,1.10

Heap: 50K

Size: 184.8 x 114.3 x 27.5 (mm)

Weight: 400g (and Batt.)

Card: One PCMCIA type 2 card slot

Interface: LocalTalk compatible serial port (RS422) x 1

IR: Low-power, half-duplex, infrared transceiver (9600 baud at 1 meter)

Batt.:AAA 14 hours (alkaline batt.) 4 hours (NiCd batt.)

Communications capabilities

- Print to Apple LaserWriters and StyleWriters with serial cable and to popular parallel printers using Newton Print Pack
- Fax with optional fax modem (9600 baud fax send, automatic cover-page generation, post-formatting)
- "Beam" via infrared technology (send notes, name cards, appointments at 9600 baud with 1-meter range)
- Handle telephony needs with assistance for intelligent auto dialing (DTMF or modem dialing)
- Receive and store wireless messages using optional Messaging Card
- Send and receive NewtonMail to other Newtons, PC's and Macintosh computers with optional modem*

Size and weight

- Height: 7.25 in. (184.75 mm)
- Width: 4.50 in. (114.3 mm)
- Depth: 0.75 in. (19.05 mm)
- Weight: 0.9 lb. (0.4 kg)

Operating environment

- Temperature: +0 to +40 C
- Storage temperature: -20 to +60 C
- Humidity range: 20% to 95% RH noncondensing

Power requirements

Power adapter

- Universal, 100 to 240 VAC, 50/60 Hz
- Four plug configurations: U.S., U.K., Europe, and Australia

Battery type: alkaline or nickel-cadmium

- Alkaline output: 6.0V DC, 1.1 WH (nominal)
- Nickel-cadmium output: 4.8V DC, 200 mAh (nominal)

Lithium cell: CR2032

- Operating range: 3 V (nominal)

Power source

- AC adapter (included) or four AAA batteries (included)
- optional Rechargeable Battery Pack

System requirements

- Works with personal computers running Microsoft Windows; requires connector cable and version 3.0 or later
- Works with Macintosh personal computers; requires connector cable and system 7.01 or later

Printer support

- Built-in printer support for the Apple StyleWriter and StyleWriter II
- All Apple PostScript laser printers from the LaserWriter Plus and up
- The Apple Personal LaserWriter printer
- Works with most popular PC printers, including the Hewlett-Packard LaserJet, Hewlett-Packard DeskJet, Canon BubbleJet, and Epson LQ and FX using the Print Pack option

Fax machine support

- Supports Group 3 fax machines

☐ About this capture

