1200 Universal Device Programmer

- **Support for over 15,800 devices, including E/EPROMs, Flash, CPLDs, FPGAs and Microcontrollers, among others.**
- **Full vector, functionality and continuity testing**
- **User-friendly software**
- **Free lifetime software updates every six weeks**
- **Three-year warranty**

BP MICROSYSTEMS

COMPANY BACKGROUND

For over fifteen years, BP Microsystems has led the way in advanced device programming and customer-focused support. Today, we support virtually every device available and release new programming algorithms every six weeks via the Internet.

BP Microsystems provides comprehensive technical support and user training in more than 52 countries around the world. Our advanced programming language allows the same algorithms to run on both engineering as well as production programmers, ensuring a simple transition from prototype to production.

DEVICE SUPPORT

The 1200 supports many of the latest programmable devices. That support includes a number of devices not fully supported by competing programmers, including complex PLDs, FPGAs, PALs, and microcontrollers. Check our regularly updated device support list for the complete list of supported devices. New devices are added every six weeks and are free for the life of the programmer.

Interchangeable socket modules allow you to switch easily between varying device package types. To be more cost effective, many of our socket modules are designed to program more than one device. For example, our PLCC socket module (the SM84UP) supports all PLCC devices up to 84 pins. That's 5,000 devices. Socket modules are also available for LCC, PGA, PLCC, PCMCIA, QFP, SOIC, SIMM, µBGA and TSOP, among others.

FUTURE DEVICES

For many people, the most valuable feature a programmer can have is its ability to support the newest devices. The 1200 improves your competitiveness by letting you take advantage of new devices as soon as they become available, giving you access to faster, denser, and less expensive devices. The 1200 has an innovative design intended for today's in test technology—giving you high programming yields and proper test results.

We work closely with major semiconductor manufacturers as they develop the newest devices to keep abreast of future programming trends. This helps us release software updates concurrently with the introduction of new devices. Software updates are available at all times on our world wide web page at www.bpmicro.com.

SOFTWARE FEATURES

BP Microsystems' highly acclaimed control software is versatile, powerful, and intuitive. The software is easy to use for both novices and experts. Automatic package selection allows you to change the programming socket without having to power down or change the software configuration. Since the entire software package consists of a single file, companies with many users on a network can upgrade quickly by replacing a single file.

The optional Advanced Feature Software takes the 1200 a step beyond competing programmers by providing special features for production, QC, and engineering. Including complex and simple serialization. Also, users can put serial numbers or other information into devices automatically. Verify and functional test Vcc voltages can be set or swept to find device margins.

The 1200 also comes with BP JobMaster™ software—a powerful tool that incorporates the use of ".bp" files. A feature exclusive to BP programmers, ".bp" files are valuable for both production and engineering departments, by ensuring proper job setup and secure data. The JobMaster files enable a user to easily transfer any ".bp" file, even by e-mail. This allows BP customers to easily share data securely around the world, transfer designs between engineering and manufacturing, and share programming files between customers and programming centers. JobMaster ".bp" files are error checked automatically, and aid to reduce or eliminate human error by only running jobs which have been tested and verified by a supervisor. The ".bp" files cannot be used if they have been modified inadvertently.

HARDWARE FEATURES

The 1200's state-of-the-art performance is based on solid modular hardware and innovative design. Clean signals and low ground bounce allow for high programming yields. The 1200 comes with 48 or 84 pin drivers, depending on your needs. The 1200 with 48 pins can easily be upgraded to 84 pins in the field.

The 1200 connects to any PC's standard parallel printer port, so it is both portable and fast. Since the programmer is controlled directly by your PC, you can load files directly from your hard disk or network in seconds, eliminating the slow task of downloading your file to the programmer before you can commence with programming. Also, the programmer utilizes your PC's memory, so you will not have to buy expensive RAM upgrades.

To help ensure reliable programming and the quick diagnosis of problems, the 1200 automatically performs many test and protection functions. When you place a part in the socket, every pin is tested for proper continuity. Any pin that is not connected is listed on the screen so you can identify bent pins easily. The 1200 protects any device in the socket from damage caused by a power failure. During operation, each pin driver is continuously monitored and calibrated by a special supervisory circuit. After programming, both verify and test passes are performed at high and low Vcc to guarantee an operating margin. The built-in self test will verify correct operation of the pin drivers, power supply, CPU, memory, and communications.

FUNCTIONAL TEST

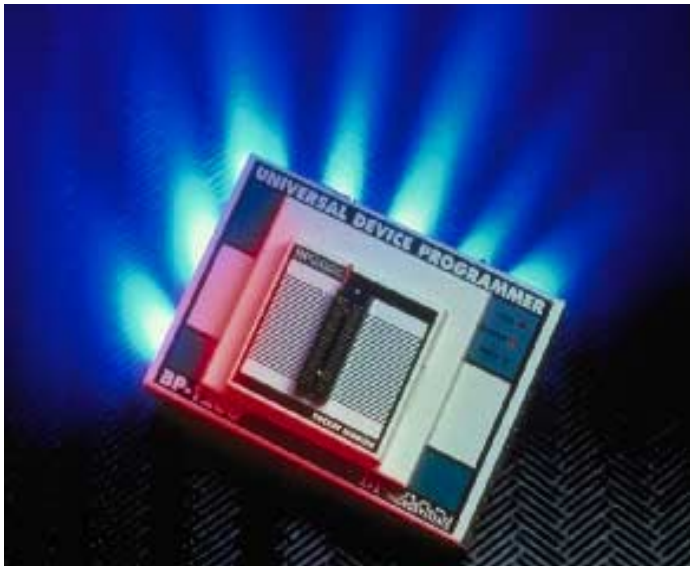
The 1200 was designed to enable trouble-free test vector operation. Ground bounce, which limits many programmers' ability to test high-speed parts and achieve high programming yields, is carefully controlled on the 1200, improving both test results and programming yields. Short DUT trace lengths, excellent grounds at the socket, and fast rise and fall times (t_r < 1 ns) allow programming and testing the fastest parts without trouble.

Testing asynchronous and synchronous designs with multiple clocks is made possible by switching multiple pins simultaneously. Unlike many competing programmers, the 1200 can apply two clocks or an entire test vector simultaneously, eliminating a source of confusion and errors.

SUPPORT

BP Microsystems, the leading worldwide manufacturer of device programmers, provides support that is second to none. We provide free telephone support and free software updates for the life of the programmers, and we continue to support every programmer we have ever made.

Free technical support is available at 1-800-225-2102 or at 713-688-4600. Most problems are solved with a single phone call and perhaps a free software update. Outside the United States, BP Microsystems' local representatives also provide technical support. A support contract is also available after warranty expiration. The contract covers labor and parts for any repair to your programmer.



Specifications

SOFTWARE

File Types: binary, Intel, JEDEC, Motorola, POF, straight hex, hex-space, Texhex, Extended Texhex, and others

File Size: limited by hard disk

Test Vectors: limited by hard disk

Device Commands: blank, check sum, compare, options, program, test, verify

Features: data editor, revision history, session logging, on-line help, device and algorithm information

Installation: automatic (just copy the file to your hard disk)

HARDWARE

CPU: 80286, 16MHz, with proprietary hardware accelerator

RAM: does not limit device or file size

Calibration: automatic self-calibration

Diagnostics: pin continuity test, RAM, ROM, CPU, pin drives, power supply, communications, cable, calibration, timing, ADC, DAC

Communications: Centronics parallel, up to 1Mbps

PIN DRIVERS

Analog & Digital: up to 48, located on 6 circuit boards

Digital: up to 36, located in small chassis on top of BP-1200

Vpp range: 0-25V in 25mV steps

Ipp range: 0-70mA continuous, 250mA peak

Vcc range: 0-12V

Icc range: 0-1A, 12µA resolution

Vih: 4.5V

Slew rate: 0.001 to 2500V/µs

Timing: 1µs - 1s, +1µs, +0.01%

Clocks: 1MHz to 16 MHz, any pin

Protection: overcurrent shutdown, power failure shutdown

Independence: each analog pin may be set to a different voltage

GENERAL

Size: 24cm L x 17.5cm D x 12.7cm H; 9.5" L x 7" D x 5" H

Mass: 2.7kg, 6 lbs.

Power: 90 - 260 VAC, 47 - 63 Hz, 80 VA, IEC inlet

Maintenance: none required

COMPUTER

Operating System: MSDOS, MS Windows

Port: parallel printer port (standard, bi-directional, or enhanced)

Memory: 4MB required, 200K base required (EMS optional, will improve performance on large files)

Disk: 1.2M or 1.44M floppy, hard disk or network recommended

CPU: 8286 to Pentium

STANDARD ACCESSORIES

software disk including entire device library
user manual
power cable
data cable
SM48D (48-pin DIP socket module)

OPTIONS

Pin Drivers: 48 or 84

Socket Modules: Universal PLCC, standard PLCC, PGA, QFP, SOIC, TSOP, LCC, µBGA, PCMCIA amoung others

Software: Advanced Feature Software, JobMaster control software for DOS

Support: service contract

Features and specifications are subject to change without notice

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