# MultiModem

## 1200/300 BPS Intelligent Modem

**TR** Term Rdy

**MR** Modem R...

### The New *Multi*Modem
*1200/300 BPS Telecommunications*
*100% Hayes Compatible and More*

Now there's a desktop modem that's designed to rugged industry standards, is competitively priced, and gives you both 1200 and 300 bps operation. The MultiModem is your intelligent doorway to the on-line world of information. It can connect you and your computer to information utilities, corporate databases, and other knowledge resources that will help you grow both personally and professionally.

The thousands of public computerized databases and even more bulletin boards and shopping services will give you information on virtually any topic, ranging from general news to specialized research. Regardless of your career interest, there is an on-line database that's tailored to your profession, that is faster to use, easier to access, and is more current than the more traditional manual methods. And the availability of public domain software through bulletin board services is virtually unlimited, not to mention a tremendous

savings opportunity that can more than offset the cost of the modem.

The MultiModem's choice of 1200 or 300 bps (bits per second) means that you can match your line speed with your application. If you're dialing up friends, using a local bulletin board, or some other casual use, 300 bps may be just fine. 1200 bps, on the other hand, will save you time and line charges when sending or receiving larger volumes of data, such as downloading files. The choice of speeds gives you a choice in applications.

The MultiModem is 100% compatible with the AT (Hayes 1200) command set, while offering more capabilities at a lower price. Features like a memory to store up to ten phone numbers along with option configuration parameters, automatic redialing and number linking, busy signal and dial tone detection, and even help menus are the extras on a MultiModem which mean extra savings and extra versatility.

The MultiModem is suited for both U.S. and international users alike, with both Bell 212A and CCITT V.22 compatibility. It also offers a choice of 110-120 Volt or 220-240 Volt (50 or 60 cycle) power supplies.

With all of its compatibility, extra features, and unsurpassed quality, and a two year warranty backed by a company that's been manufacturing modems for over fifteen years, the MultiModem is still moderately priced. Designed to give top performance to both professional and home users alike, the MultiModem is also easy to install and use. You simply plug in your computer and a standard phone line, and then dial into a whole new world of on-line information and opportunity.

**Multi**Tech
Systems

## Hayes Command Set Compatible.

The reason you need a Hayes compatible modem in the first place is that most popular communications software packages on the market like Data Capture™, Crosstalk XVI™, or our own MultiCom™ use the command set originally developed by Hayes called the AT set. 100% compatibility means that every single command, response and memory register of the Hayes modem are duplicated in the Multi-Modem. With the MultiModem, the commands you use and the responses you receive on your monitor, the way you configure your system, the way you dial and print hard copy is exactly the same as with a Hayes SmartModem 1200™.

But don't confuse compability with equality. Starting the industry standard does not automatically guarantee the best product available. Industry innovators often fail to keep up with the latest technological advances in the preference to volume manufacturing and higher profits.

The MultiModem is superior to the Hayes 1200 plus it's available at a lower price. The features available on a MultiModem allow you to go beyond the performance of Hayes.

## Superior Performance at a Lower Price.

The MultiModem has features that the Hayes 1200 does not like a memory for phone numbers and the ability to automatically detect busy signals and dial tones. These features combine to give you a more versatile and easy to use product. Since the Hayes 1200 can't detect a dial tone, it dials "blind" hoping that the tone is present. The MultiModem detects a dial tone before dialing and if it reaches a busy signal it can dial the same number continuously or dial an alternative or even a string of alternatives in its memory.

## Try Several Utilities—Free.

Since a lot of customers are not aware of the many ways a modem can help them professionally and personally, we include a bonus with each modem to help introduce the new on-line world. Along with each MultiModem you get free introductory subscription offers and/or free time to over ten information utilities. This way you get a chance to try several of them free of charge before choosing the ones which suit you best.

## Multi-Tech Systems Means Quality Communications.

We started building modems in 1970 to help people with computers communicate with each other. Since then we've introduced communications products for businesses, professional and home computer users. Our years of experience in virtually every industry and application means you can have confidence that we've probably met and solved any communication challenges you will encounter.

Multi-Tech Products include a full line of 300, 1200 and 2400 bps intelligent modems, multiple rack-mounted modems for central site applications, 1200 and 2400 bps leased line modems, communications software, statistical multiplexers, acoustic couplers, and RS232C breakout boxes.

## Technical Specifications.

Data Format: serial, binary, asynchronous • Data Rate: 1200 bps (+ 1%, − 2.5%) or 0-300 bps, Bell 212A and 103/113 compatible • Mode of Operation: 2-wire, half- or full-duplex; auto-originate or auto-answer • Intelligent Features: microprocessor-controlled, with storage of up to ten 37-digit phone numbers in RAM memory backed by a 7-year lithium battery, manual and automatic redial, pulse or tone dialing, automatic parity and data-rate selection, command-controlled modem options, number linking, modem detection of dial tones and busy signals, Hayes commands, several other intelligent features • Hayes Smartmodem 1200 command compatibility: All commands plus 6 more, all 6 responses plus 3 more, all 16 S-Registers • Modulation: 4-level Phase Shift Keyed (PSK) at 1200 bps, Frequency Shift Keyed (FSK) at 300 bps • Character Length (Async 1200): 10 bits (7 data bits, 1 or 2 stop bits, odd, even, or fixed parity; or 8 data bits, 1 or 2 stop bits, no parity) • Carrier Frequencies, 1200 bps: Transmit Originate & Receive Answer—1200 Hz; Transmit Answer & Receive Originate—2400 Hz • Carrier Frequencies, 300 bps: Transmit Originate & Receive Answer—1270 Hz mark, 1070 Hz space; Transmit Answer & Receive Originate—2225 Hz mark, 2025 Hz space • Transmit Level: − 9 dbm • Frequency Stability: ± 0.01% (crystal-controlled) • Frequency Tolerance, 300 bps: ± .3% • Receiver Sensitivity: − 40 dbm (under worst-case conditions) • AGC Dynamic Range: 35 dbm • Receive Data Rate to Terminal: 1219 bps, ± .01% (in high-speed mode) • Power Requirements: 115VAC, 60 Hz, 1/10 amp (outlet-mount transformer converts 115 VAC to 15 VAC) • Environmental Temperature Range: 0° to 50° C (32° to 122° F) • Answerback Tone: 2232 Hz • Interface: EIA RS23SC • Connectors on Modem: two RJ11 jacks, for phone line and telephone set; RS232C female connector (DB25S-type); socket for power cable • Cables Provided: RJ11 phone line cable; electric power cable (with AC transformer) • Cables Not Provided: RS232C cable, cord to telephone set • Diagnostics: Local Analog Loopback • Indicators: 7 LEDs for Receive Data, Transmit Data, Carrier Detect, High Speed, Off Hook, Data Terminal Ready, Modem Ready • Audio Monitor: two-inch cone speaker with pot volume adjustment • Dimensions: 7.3" wide x 11.0" long x 1.6" high • Weight: 2.3 lbs without power transformer; 2.7 lbs with power transformer • FCC Registration Number: AU792U-69454-DM-E • Ringer Equivalence: 0.3B. • Phone Jacks: RJ11C or RJ11W • Modem Model Number: MT212AH2.

**Trademarks** • MultiModem, MultiModem HC, MultiCom PC: Multi-Tech Systems, Inc. • CompuServe: CompuServe Information Services, and H & R Block company • Newsnet: NewsNet, Inc. • Smartmodem 1200, Smartcom II: Hayes Microcomputer Products, Inc. • Valdocs: Epson America, Inc. • Touch-Tone: AT&T • Crosstalk XVI: Microstuf, Inc. • ASCII Express: Southwestern Data Systems/Roger Wagner Publishing, Inc. • Data Capture: Southeastern Software • The Source: Source Telecomputing Corp., a subsidiary of The Readers Digest • Dow Jones News/Retrieval Service: Dow Jones & Company, Inc.

# MultiTech ● Systems

## The right answer every time.

Multi-Tech Systems, Inc.
82 Second Ave. S.E., New Brighton, MN 55112
(612) 631-3550, TWX: 910-563-3610