

*Hardware And Software
Products*

CATALOG



INTRODUCTION

A computer system is more than a mere machine - it becomes, through the creativity of its designers and users, an integrated whole that can serve any requirement which its user places upon it. But as you are undoubtedly aware, getting from the nuts and bolts stage to the above postulated result is too often a far from simple task.

We at Technical Design Labs are striving to make the achievement of the above goal much easier for the beginner, the advanced amateur, and the industrial user as well. How? By providing industrial quality hardware and software systems at reasonable prices, and by giving you the service and support necessary to get your system up and running.

Applied to our hardware, this involves several factors. First, all TDL products share several factors in common. All boards are FR4 epoxy, have full solder masks, silk-screened component layout diagrams, plated thru holes, gold plated edge fingers and other features that make them exceptional. All the components utilized are first-quality prime only, and often are 100% tested. The documentation is comprehensive, including technical manuals where appropriate, easy to follow assembly instructions, and users' guides aimed at making understanding how the board works a straightforward matter.

IT TAKES SOFTWARE TO MAKE IT

The Z-80, or any other processor, without the software to support it, has no justification for its claims to power. Here at TDL we're preventing this from happening. How? By having established the largest software production facility in the micro-processor industry. The currently available software is covered in depth further on in the catalog. But not listed is the wide variety of upcoming Z80 software and hardware products. In software, upcoming products include a full FORTRAN IV compiler.

Add to this a quick and helpful customer service facility, and you have a well rounded support program designed to help make the reality postulated in the opening paragraph much easier to attain.

Let us know your needs. We're here to serve.

THE ZPU

The ZPU Card is an Altair/IMSAI compatible CPU card featuring the Z-80 Microprocessor produced by Zilog.

The Z-80 offers you the greatest power of any micro - 158 instructions, 696 opcodes, 22 registers, single voltage power requirements, and static operation allowing clock speeds from DC up to 4MHz or greater. (NOTE: Zilog is not yet certifying Z-80 operation above 2.5 MHz. Most Z80s operate up to 4MHz. When certified 4MHz parts are available, they will be included in the ZPU.)

Two major design goals were laid out for our ZPU. Specifically:

1. To allow the Z-80 to exercise its full capabilities in the S-100 bus.
2. To make the ZPU fully compatible with the S100 bus.

These two goals have been achieved. For example:

- All bus signals of your current 8080 processor are present on the bus, so the ZPU is fully compatible.
- The ZPU features 2 separate on-board clocks for maximum versatility. One is a 2MHz crystal clock for simple operation, the other is a highly stable variable oscillator, which may be varied from DC to greater than 4MHz. This clock allows you to "fine tune" your system for absolute maximum performance. No other processor offers this invaluable feature.
- The system clock line is maintained at 2MHz regardless of processor clock speed so that accessory cards requiring a 2MHz signal for proper operation will continue to function normally.
- The Z-80 interrupt lines are treated exactly as their 8080 counterparts. And additionally, the Z-80 non-maskable interrupt pin may be jumpered to pin VI0 of the bus - the highest priority vectored interrupt line.
- All bus lines are fully buffered to prevent static damage to sensitive components, and to reduce bus loading.
- The ZPU typically draws only 600ma from the +8V line - and requires only a single +8 volt source.
- Extensive use of bypass and decoupling capacitors is made to facilitate operation at higher clock speeds.
- As with all TDL products, only the finest industrial grade components are used, sockets are provided for all ICs, the pc board is fully solder masked and silk

screened, and the kit is accompanied by complete documentation which includes the Z-80 CPU Technical Manual by Zilog, and our 1K monitor including the Source Code.

There is no finer possible addition to your computer than the original ZPU.

KIT PRICE: \$269

ASSEMBLED and TESTED: \$345

THE Z16

The Z16 is the most advanced memory module available today. It is loaded with more features and more versatility than any other memory on the market.....at a price that makes it a real bargain.

Just look at these specifications:

- Features a full 16K of memory on one card, but it can be bought in 4K increments - so you can start off at 4K and work your way up to 16K as you need it.
- This board utilizes the fully static EMM SEMI 4200 memory chip which is organized as 4k by 1 bits, and provides a maximum access time of only 200ns. Added to board logic time, this provides board access time below 250ns. No other memory board made to S100 bus specs can match this figure.
- The power consumption specs for the Z16 are outstanding - only 205ma from the +8v, 105ma from the +16v and 25ma from the -16v, for a FULL 16K!
- The Z16 can be a full 16K of memory, but is expandable from a minimum of 4K to 16K in 4K increments. You only buy what you need now, but expansion later is easy - with an already tested board.
- Each 4K block may be individually addressed at any 4K page border, so you have the versatility of most 4K boards in your 16K package. Address changes are very easily accomplished using a simple jumper scheme.
- Each 4K block may be individually protected by a switch.
- The Z16 uses only the very finest components, and features a fully solder masked and silk screened board, sockets for all ICs, and comes with complete and easy to follow documentation which includes the source code for a comprehensive memory test program,

and a paper tape of this program.

That covers it - the Z16 is loaded with features
Price?

KIT: 4K - \$169; 8K - \$295; 12K - \$435; 16K - \$574; 4K
expansion kits - \$140

THE SYSTEM MONITOR BOARD

This single board, in conjunction with your processor and memory, provides all the support that your system needs to get up and running in a sophisticated but easy to use configuration.

Using other boards to duplicate the functions of the System Monitor Board isn't easy - it requires at least 4 other boards, several hundreds more dollars in cost, and a good bit of expertise to create an equivalent fully integrated operating system. The System Monitor Board does it for you.

What exactly does it do? Well, look at these features:

- It features the Zapple Monitor in 2K of ROM. This system executive is designed to give you complete control - directly from your keyboard. (See the software section for a write-up on its capabilities.) The ROM features a 450ns access time, so no long wait states are needed. The ROM is addressed at F000 (hex) so that it's up "out-of-the-way".
- 2K of RAM is located on board, addressed at F800 to FFFF hex. These are the state-of-the-art EMM SEMI 4804 1K x 4 static memory chips, which have an access time below 450ns and very low power consumption. This 2K of RAM can be used as workspace, but most importantly, serves as a space where your own "add-on" monitor routines can be located - out of the way of the processor stack.
- Three serial I/O ports are located on board, with three separate ACIAs used. Two of these may be configured for any baud rate between 110 and 9600, in either RS232 or Current Loop configurations. and the third is dedicated to the Cassette interface.
- One 8 bit parallel I/O port is provided, providing you a place to interface a reader, keyboard, or any other parallel device of your choosing. This port (as all the others) is addressable directly from the monitor - so that a very powerful system architecture

is built in.

- A simple, but reliable and highly (10%) speed variation tolerant audio cassette interface is included on board, which operates at 1200 baud. And, all TDL software is available in this cassette format. (NOTE: this format is NOT compatible with that of any other manufacturer. Compatability has been sacrificed for increased reliability.)

- The board also features power on reset start-up - no need to bitswitch into your system. But, this may be disabled if so desired.

That's what it does.... you get the equivalent of a 2K ROM board, 2K of RAM, a sophisticated I/O board, and a high-speed audio cassette interface - in one fully integrated system control center!

Additional features include 5 volt only operation (12 volts used only for 20ma. current loop drivers), the finest quality components, full solder mask and silk screen, easy to follow assembly and operation instructions, and complete documentation including software listings of the Zapple Monitor.

Kit Price: \$295

Assembled and Tested: \$395

XITAN SYSTEMS

This is the first official announcement of our system mainframe family; XITAN MICROS (pronounced ZY-TAN). A number of variations of the system are currently in development which feature different mainframe and accessory options. The first two of these are designed to fill the needs of the personal computing and small business user.

XITAN ALPHA SERIES

The Xitan Alpha series features a compact and attractive mainframe which may serve a multitude of purposes while remaining very cost effective for the user.

TECHNICAL DESCRIPTION:

The XITAN ALPHA mainframe meets the following technical specifications:

- The cabinet measures 12" by 12" by 7" high, and is constructed of .093 aluminum throughout.

- It features an 8 slot motherboard and cardcage, with 2 or 3 (depending on which system package you order) edge connectors and cardguides included.
- Logic circuitry is built onto the motherboard which provides reset circuitry, generates the necessary memory write signals, and an 8-position dip switch on the motherboard serves as "sense switches" which are occasionally necessary in software.
- The "front panel" consists of a solitary RESET switch. System control is affected through the powerful Zapple Monitor which is part of the System Monitor Board.
- The Xitan Alpha utilizes a rugged pre-assembled commercial power supply which provides 6 amps on the plus 8 volt line, and 1 amp on both the plus and minus 16 volt supplies- more than enough for a complete 64K system utilizing TDL's state-of-the-art accessory modules. Additionally, the +8 ,+16 and -16 volt lines are individually fused for system protection.
- Of course, as with all other TDL products, only the finest components are utilized throughout. Complete documentation is included with each box.

SYSTEM PACKAGES

XITAN ALPHA 1

The Alpha 1 package features the Xitan Alpha mainframe, along with the now-famous ZPU, and the fantastic system Monitor Board. This provides the user with everything he needs for a functional system. Just add any Serial I/O device (RS232 or current loop) or a video board, and you have a complete computer system. It's perfect for the beginner who wants to get a functional minimum system that he can learn with, but which is of high quality and easily expandable. It also serves as an excellent "second system" for the more advanced user.

KIT PRICE: \$769

ASSEMBLED AND TESTED \$1039

XITAN ALPHA 2

The Alpha 2 expands the Alpha 1 by including a 216 memory module and the PACKAGE A software on cassette. This package provides the user with a complete and very powerful microcomputer system which includes 18K of RAM, 2K of ROM, 2 serial I/O ports, 1 parallel I/O port, our 1200 baud audio cassette interface, plus a tremendously powerful software package including 8K Basic, the Text Output Processor, the Zapple Text Editor and the Relocating Macro-Assembler. Add your own I/O device and GO - with the most powerful micro-computer package ever offered!

KIT PRICE: \$1369

ASSEMBLED AND TESTED \$1749

THE ZAPPLE MONITOR

The Zapple Monitor is designed to allow the user the maximum in versatility and system executive control. It is capable of supporting 4 logical devices (Console, Reader, Punch and List Device) each of which supports 4 alternate I/O devices including N number of user defined devices. The reader and punch may be any device - cassette, memory, disk, etc.

The Zapple Monitor is also efficient, providing 27 commands (3 of which are user defined) while occupying only 2K of core. Additionally, ZAPPLE is relocatable, romable, and expandable due to its modular organization. The documentation includes the complete source listing as well as a comprehensive user guide. The monitor is initially configured to the "old" MITS standard (SIOA REV1.0). Reconfiguring to other standards is straightforward, and once done, makes ALL other TDL software compatible with your system.

The following is a brief description of its command set:

- A - Assign Reader, Punch, Console or List device options from the console.
- B - Bye (system shut down).
- C - Compare the contents of memory with the reader input and display any differences.
- D - Display the contents of a defined memory block in hex.
- E - End of File statement generator.
- F - Fill a defined block of memory with a constant.
- G - Go to an address and execute from that address. Includes multiple breakpointing.
- H - Hexadecimal arithmetic.
- J - Non-destructive memory test of any defined memory block.
- L - Load a Binary Tape.
- M - Move a defined block of memory to a defined starting address.
- N - Punch Nulls to the punch device.
- P - Put ASCII characters into memory from the keyboard.
- Q - Query any I/O port for its value and output to any I/O port any value.
- R - Read a hex file (including offset and relocating parameters for TDL relocatable hex files).
- S - Examine and substitute any hex value at any address.
- T - Displays the contents of memory for a defined block in their ASCII equivalent.
- U - Punch a binary tape.
- V - Verify that the contents of a defined memory block match another block and display any discrepancies.
- W - Punch a hex file.

- X - Examine and modify any and all registers including the Z-80 registers.
- Y - Search memory for defined byte strings and display all the addresses where they are found.
- Z - Locate and display the highest address in memory.

Since all TDL software uses the monitor for its I/O handling, it should be clear that the Zapple Monitor gives TDL's software the most powerful I/O handling and operational capability available for a micro-processor.

THE ZAPPLE TEXT EDITOR

The Zapple Text Editor is a most versatile tool for both the programmer who requires manipulative ability when writing assembly language programs and in general word processing applications.

It is both line and character oriented. It features an internal pointer that can be moved through the text line by line and character by character. Wherever the pointer is located, both characters and lines may be inserted, deleted or changed at will, in both forward and backward directions.

Like all TDL software, the Zapple Text Editor is relocatable, uses either the Zap or Zapple Monitors for its I/O handling, and is supplied on paper tape complete with a user guide.

Even though space limitations restrict the following list of commands and functions to the minimum, it should serve to illustrate the power which this program provides.

- A - Append 50 lines of text from the system reader to the end of the buffer.
- B - Move the pointer to the beginning of the buffer.
- C - Move the pointer + or - N characters.
- D - Delete + or - N characters.
- E - End of File - Dumps the buffer to the punch device.
- F - Find a string and position the pointer after it.
- I - Insert a string of text at the location of the pointer.
- J - Identifies and prints out (in Hex) the location of the pointer.
- K - Kill N number of lines on either side of the pointer.
- L - Move the pointer from the beginning of one line to another.
- M - Prints the remaining unused workspace.
- N - Punches 60 nulls to the punch device.
- O - Inserts rubouts (N number) after a carriage return.
- P - Pauses in the editing function (much as a breakpoint).

- Q - Rings the bell. (useful to know when a lengthy cycle is complete.)
- R - Indicates the pointer position by a line number.
- S - Search for a string and substitute another string in its place.
- T - Type on the console N number of lines above or below the pointer.
- U - Dumps the contents of the buffer to the punch.
- V - Tells how many characters of text the buffer contains.
- W - Writes N number of lines from the buffer to the punch and deletes them from the buffer.
- X - Exit back to the monitor.
- Y - Identifies the end of the buffer (in Hex).
- Z - Moves the pointer to the bottom of the buffer.

THE RELOCATING MACRO ASSEMBLER

TDL's relocating macro-assembler is by far the most sophisticated programming tool yet developed for a micro-processor. In terms of number of functions, scope of abilities, and usefulness, it has no comparison.

Here are some of its features:

- Generates fully relocatable object code - so that the programs you write are fully relocatable anywhere in memory. Moreover, it is a straightforward matter to reassemble your old 8080 source programs so that they too are fully relocatable.
- Has complete macro generation capability - with infinite nesting of macros.
- Utilizes an opcode set for the Z-80 developed by TDL's software engineers to facilitate ease of learning and optimum 8080 compatibility. The 8080 subset of the Z-80's instructions have the same opcodes as the familiar INTEL mnemonics, and where specific Z-80 functions resemble these functions, the TDL mnemonics are logical extensions of these. For example, the 8080 opcode "load H&L direct" has as its mnemonic "LHLD". The Z80 has a special opcode "Load B&C Direct" to which we have given the mnemonic "LBCD". Similarly "Load D&E Direct" is "LDED". Only where no real similarity of operation exists are these Z80 opcodes unfamiliar. In those instances, the Zilog opcodes are generally used. A primary advantage of this approach is that your current 8080 source can be directly reassembled by this assembler, with only minor text editing necessary.
- The Macro-Assembler contains a "switch" which can be set to "8080 opcodes only" - thus it can generate 8080 software directly with no worry that Z-80 opcodes can

be slipped in.

The implementation of the Macro-assembler is similar to the Intel Macro - the exceptions being that of relocatability, a powerful set of conditional assembly switches, full paging, and a symbol table.

Functionally, the Assembler utilizes either the ZAP or ZAPPLE monitors for all of its I/O handling. Thus it achieves the same degree of hardware independence that all other TDL software shares. Additionally, the Assembler requires free-formatted source, and requests it from the monitor system on a character by character basis. (A controlled reader is necessary.)

The Macro assembler occupies roughly 9K of core. It is supplied in relocatable hex format on paper tape complete with a comprehensive user's guide and manual.

ZAPPLE BASIC

Here's something you've been waiting for - Zapple Basic! It can hold its head up among the finest Basic interpreters ever written - backed by the speed and power of the Z-80. And it works.....

Zapple Basic occupies 8K of core, and in common with all TDL software, utilizes the I/O handling of the Zap or Zapple Monitor routines. Therefore you get unequalled I/O handling versatility and a large degree of hardware independence. Of course, Zapple Basic is relocatable - so you can load it anywhere in memory. (Minimum loading address 200 hex - to allow a fixed buffer from 100H to 1FFH.)

Take a look at these commands:

ABS	AND	ASC	ATN	CHR\$	CLEAR
CONTINUE	COS	DATA	DEF	DELETE	DIM
EDIT	ELSE	END	EXP	FN	FOR
FRE	GOSUB	GOTO	IF	INP	INPUT
INT	LEFT\$	LEN	LET	LIST	LLIST
LLVAR	LNULL	LOAD	LOG	LPOS	LPRINT
LTRACE	LVAR	LWIDTH	MID\$	NEW	NEXT
NOT	NULL	ON	OR	OUT	PEEK
POKE	POS	PRINT	RANDOMIZE	READ	REM
RENUMBER	RESTORE	RETURN	RIGHT\$	RND	RUN
SAVE	SGN	SIN	SPC	SQR	STEP
STOP	STR\$	SWITCH	TAB	TAN	THEN
TO	TRACE	USR	VAL	WAIT	WIDTH

As you can see from the above list, this is a very complete Basic - moreso than any other 8K Basic. And, we've written it so that it maintains a high degree of compatability with the Basics already available and in wide

use - so most of your programs will run without modification.

But, in addition to what you're used to as "standard fare", there are innovative functions implemented for increased programming ease. Among these are:

TRACE: Allows visual display of line numbers being executed - as they are being executed.

SWITCH: allows the user to switch directly between various I/O devices directly in the program, or from the keyboard.

RENUMBER: allows the numbered line statements as well as the internal references to line numbers to be renumbered, upward or downward, at any defined interval.

LVAR: List Variables - does just that. On command you get a complete list of the variables in your program and their values at that moment.

LLVAR: Same as the above, but outputs the information to your hardcopy device. (Most commands preceded by an L share this feature.)

EDIT: An edit feature is not unique, but it is for an 8k Basic. And its powerful line editor allows you to change the internal structure of a line using the "delete" command.

There's much more to tell, but only use will allow you to fully appreciate how versatile and powerful this Basic is. In addition to all of the above, Zapple Basic is fast - 10 to 20% faster than other comparable Basics.

SUPER-BASIC

One of the latest additions to the fantastic software offerings by TDL is our new Z-80 SUPER-BASIC. This is a powerful 12K Basic Interpreter which has all the features of ZAPPLE 8K BASIC, with the following additions:

- Allows up to 11 DIGIT PRECISION, including all built-in functions such as SIN, ARCTAN, etc.
- Multi-line RECURSIVE USER DEFINED FUNCTIONS with any number and type of parameters and returning either string or numeric values.
- The RENUMBER command has been expanded for more versatility.
- EDITING and PROGRAM LOAD ROUTINES are greatly improved.
- HORIZONTAL TABS may be used to format statement lines.
- SINGLE STATEMENTS may be spread over successive lines, and any statement may contain up to 255 characters.
- An APOSTROPHE may be used to put a REM on each statement.

- COPY allows sections of a program to be shifted around.
- AUTO automatically inserts line numbers into the program when a carriage return line feed is hit.
- LOAD and MERGE commands are extended to work with either controlled or uncontrolled readers.
- A PRINT USING statement is included which allows the format to be specified as either a string or a statement number.
- PRECISION allows change of the default PRINT precision for numeric outputs.
- EXCHANGE allows high speed exchange of the values of two variables.
- KILL frees up unused matrix space.
- LINE INPUT allows the inputting of an entire string with no formatting.
- LOADGO allows one program to call another in and execute it.
- CALL allows you to call multiple assembly language subroutines with any number of numeric arguments.

There's much more, but the above should illustrate some of the impressive power which SUPER-BASIC provides. It is the finest Basic available for a micro-processor today. And, as with all TDL software, it's relocatable, uses the ZAPPLE MONITOR for its I/O handling, and comes with a complete user's manual. SUPER-BASIC occupies 12K of core.

TEXT OUTPUT PROCESSOR

The TDL Text Output Processor is a general purpose WORD-PROCESSOR for the Z-80. It occupies 3K of core. It is used in conjunction with the Text-Editor and Monitor to provide a POWERFUL word-processing capability.

What can it do? Well, this entire catalog was prepared using the Text Output Processor. The numbers at the top of the page, the concatenation, justification, and other formatting which you see is entirely controlled by the Processor.

The use of the Processor is very straightforward.

The Text Output Processor has numerous commands which you simply enter into the text while you are text editing. Then, you take the output of the editor, run it through the Processor, and its output will be formatted EXACTLY as you have commanded.

The variety of possible applications for this sort of word-processing power are limited only by your imagination.

SOFTWARE PACKAGES

Three software packages are currently being offered, which represent tremendous computing power to the user, at considerable cost savings.

These will be offered on both paper tape and cassette, and are accompanied by a full complement of user manuals. Note that the packages on cassette are NOT accompanied by the Zapple Monitor, as the cassettes offered are compatible ONLY with TDL's System Monitor Board which features the Zapple Monitor in ROM.

PACKAGE A - Consists of the Zapple Monitor, Zapple Text Editor, Macro-Assembler, The Text Output Processor, and either the 8K Basic or SUPER-BASIC.

PACKAGE B - The Word-Processing Package; consists of the Zapple Monitor, the Text Output Processor and the Zapple Text Editor.

PACKAGE C - The Software Development Package; consists of the Zapple Monitor, Zapple Text Editor, and the Relocating Macro-Assembler.

DISK SOFTWARE

Now, for the first time, ALL TDL software is available on disk! We are currently making available, a disk software package which contains the following:

- A special ICOM compatible Z-80 FDOS
- The ZAPPLE MONITOR
- The ZAPPLE TEXT EDITOR
- The RELOCATING MACRO-ASSEMBLER
- The TEXT OUTPUT PROCESSOR
- And either 8K BASIC or SUPER-BASIC

All the software is integrated into the Z-80 FDOS, which is fully compatible with ICOM disk systems. Note however that the BASIC programs are NOT "disk-Basics". They are resident Basics, and may only load and save programs via the disk, not data.

TDL WARRANTY

TECHNICAL DESIGN LABS INC., in recognition of its responsibility to provide quality components and adequate instructions for their proper assembly and use, makes the following limited warranty:

All components sold by Technical Design Labs Inc., (hereinafter referred to as TDL) are first quality prime and are procured from reputable distributors and/or factories and their representatives, and any part which fails because of defects in manufacture or material will be replaced at no charge for a period of 3 months for kits, and one year for assembled products following the date of purchase as shown on the customer's invoice. For replacement, the defective part must be returned to TDL postpaid within the warranty period.

Any malfunctioning unit or subunit, purchased as a kit and returned to TDL within the 3 month warranty period, which in the judgement of TDL has been constructed with care, and has not been subject to electrical or mechanical abuse, will be restored to proper operating condition or replaced at TDL's discretion and returned, with a minimal charge to cover postage.

Any units or subunits purchased as a kit and returned to TDL within the 3 month warranty period, which in the opinion of TDL is not covered by the above conditions will be repaired and returned at a cost commensurate with the work required. In no case will this charge exceed \$30.00 without prior notification and approval of the owner.

Any unit or subunit, purchased as assembled units are guaranteed to meet the specifications in effect at the time of manufacture for a period of one year following purchase. These units are additionally guaranteed against defects in materials or workmanship for the same one year period. All warranted factory assembled units returned to TDL postpaid will be repaired and returned without charge providing only that no evidence of electrical or mechanical abuse exists.

This warranty is made in lieu of all other warranties expressed or implied and is limited in any case to the repair or replacement of the unit or subunit involved.

TDL PRICE LIST
(Effective 15 March 1977)

Module prices include all relevant manuals

ITEM	KIT	ASSEMBLED AND TESTED
ZPU Card	\$269	\$345
Z4K	\$169	\$245
Z8K	\$295	\$375
Z12K	\$435	\$535
Z16K	\$574	\$699
4K Expansion kit	\$140	-
SYSTEM MONITOR BOARD	\$295	\$395
XITAN ALPHA 1	\$769	\$1037
XITAN ALPHA 2	\$1369	\$1749
100 Pin Edge Connectors	\$7	\$14
KIT MANUALS (w/o Software listings) (each)	-	\$20
SOFTWARE MANUALS (each)	-	\$15
Z80 Technical Manual	-	\$7.50

SOFTWARE PRICING

PACKAGE	PAPER TAPE	CASSETTE	DISK
8K BASIC	\$50	\$40	-
SUPER-BASIC	\$95	\$79	-
ZAPPLE MONITOR	\$25	\$20	-
TEXT EDITOR	\$35	\$30	-
MACRO-ASSEMBLER	\$50	\$40	-
TEXT OUTPUT PROCESSOR	\$50	\$40	-
PACKAGE A (Basic, Zapple Monitor, Text Editor, Macro-Assembler, Output Processor (Cassette w/o Monitor)	\$169	\$149	\$189
PACKAGE A (w/Super-Basic)	\$199	\$179	\$229
PACKAGE B (Output Processor, Text Editor, and the Zapple Monitor)	\$85	\$60	-
PACKAGE C (The Macro-Assembler, Monitor, and Text Editor)	\$85	\$60	-

SPECIAL: Order software worth \$50 or more, and get the Zapple Monitor for only \$15!

ORDERING INFORMATION

Send cash, check or money order along with your order and your order is shipped postpaid. Shipment is normally via UPS or UPS Blue Label. If other arrangements are required please specify.

COD orders are accepted, but your order must be

accompanied by a 25% deposit, which is non-refundable and the shipping charges will be COD as well.

Bankamericard and Mastercharge orders are acceptable and are handled as cash orders. Be sure to include your card number, expiration date, and your order must be signed.

Prices and specifications are subject to change without notice.

DELIVERY

To date our delivery record is excellent - the vast majority of orders have been filled within 30 days after receipt of the order, and this will continue to be the case. We're proud of this record, and we're smoothing out the flow lines to improve our speed of delivery even more.

However, we occasionally find ourselves at the mercy of suppliers. Lead times on state-of-the-art components can stretch out to 8 weeks or more, and so your tremendous demand for our products can temporarily push delivery on a product back to as much as 60 days.

Therefore, our delivery schedule is now stated as being 60 days after receipt of order. Of course, most orders will continue to be filled in less than 30 days, but please call us for current delivery quotes on any given product.

In-as-much-as we process orders ONLY on a first-come-first-serve basis, ordering early will always be your best guarantee of rapid delivery.