





P. D. BOX 896 (205) 773-2758 HARTSELLE, AL 35640

COLOR COMPUTER SOFTWARE

* UNIVERSAL PROGRAM 1 (UP-1) *

UP-1 is known as the program stacker because it allows Programs to be entered into a Color Computer as long as there is additional memory left. You can quickly jump from one program to another by simple one line commands or run a different program by entering EXEC M. Subprograms are included for correcting Basic Programs with formatting or other errors. These include a memory scan program to look for errors and a memory write program to correct errors. Two Vector Programs are included to observe and correct Basic Vectors. The Memory read and write programs can be used as a word processor allowing text to be stored in memory and printed on an external printer.

UP-1 Cassette \$14.95, Cartridge \$24.95

* COLOR COMPUTER DISASSEMBLER - ASSEMBLER (DISASM) *
DISASM is designed to assemble and disassemble Color Computer Machine Codes. For simplicity all entries are made in easy to learn mnemonics with memory locations and branch values in Decimal rather than Hexadecimal notation. DISASM is menue oriented with the user choosing parameters instead of having to remember them. To Assemble Machine Language Programs the memory location is first entered in decimal. Then the Computer asks for the instruction, looks up the Machine Code, and asks for additional data such as values and branch locations. The Computer calculates the appropriate values and stores them in the next memory locations. It is then ready for the next instruction. Applications for DISASM include writing BASIC ML subroutines, complete machine language programs, and disassembling Machine Language Programs and Subroutines. The Disassembler supports an external printer. cassette \$19.95, Cartridge \$29.95

* TERMINAL PROGRAM (DYTERM) *

DYTERM converts a Color Computer into a terminal. Use it to send and receive information from another Computer, another terminal, or for sending and receiving information over telephone lines with a MODEM. DYTERM has adjustable BAUD rates from 300 to 2400 with even, odd, or no parity. DYTERM is a BASIC Program with ML Subroutines. Tape \$14.95, Cart. \$24.95.

EXTENDED BASIC IS NOT REQUIRED UNLESS NOTED. PROGRAMS ARE DISK COMPATIBLE AND ARE SUPPLIED ON TAPE OR IN A CATRIDGE.

* HARDWARE ITEMS *

Increase your Computer's Memory with the following Memory Expansion Kits. No soldering or trace cutting is required and the modifications are reversible. Each kit is warranted for one year. Items followed by a "K" are unsoldered kits. Each Memory Chip in these kits is tested but we can't warranty your soldering. No soldering to the Computer. Instructions are included with each kit or assembly.

ME-1 8-4116 Chips (16K) \$14.75 ME-5 8-4164 (64K) chips \$59.95
16K to 32K upgrades: ME-3 \$39.95 ME-3K \$29.95
F or 285 series to 64K: *ME-4F \$89.95 *ME-4FK \$71.95
D or E series to 64K: *ME-4 \$99.95 *ME-4K \$79.95
*ME-4XX upgrades require a 1.1 ROM. EXEC 41175 to display your BASIC ROM.
We will install our kits in your Computer for \$10 + shipping.

* 128K MEMORY EXPANDERS (new) * Wired Assemblies only

We have left the Competition and developed tomorrows expansion for today. These are solderless assemblies which you can install to give 128K. You will then have 2 banks of 64K memory. Use them with our 96KX for four 32K Memory pages which has the same computing power as four 32K Computers. In addition this assembly draws less power than piggy-backed 32K modifications using 4116 chips (our ME-3). The unused Bank of 64K chips is operated in the Standby mode by the control circuit. In this mode it draws only 1/10 of its normal power and still retains its memory. A 3 position toggle switch is included to allow selecting either of the 64K banks. The unselected bank goes into the reduced power mode. The banks may also be selected with software if the switch is left in the "Center" Position. Software is not included but may be added. The Control board mounts on one of the 6821 PIA Chips. One year Warranty.

F or 285 to 128K	ME-128F	\$259	
6809E Microprocessor Chip	\$24.95	6821 PIA	\$ 6.95
	\$29.95	MC6847 Video Chin	\$24.95

SAM BUFFER (new). Amplifier mounts on SAM CHIP & protects SAM if a short occurs from upgrading Memory or other modifications. Solderless installation. SAM BUFFER \$8.95

VIDEO REVERSER (new)

D & F Computers to 128K MF-128D \$269

The Video Reverser was designed to relieve eye strain from operating Color Computers. The kit comes with an integrated circuit that mounts on the VDG Chip (MC6847). Included is a 3 position toggle switch which you can mount in a 1/4" hole. It mounts easily under the front lip or on the side. Features are as follows:

- Allows Bright Characters, both Upper and Lower Case against a dark background (this is the normal - Reversed mode).
- 2. Displays all characters as capital letters against a dark background.
 This is very useful for finding errors in text.
- 3. Provides the normal power up display.

The integrated circuit mounts on the VDG Chip and draws only a small amount of power from the VDG. Eyelets are mounted to the leads coming from the integrated circuit and these eyelets are slid over 4 pins on the VDG. The VDG is removed from the socket and replaced when the eyelets are slid over the pins. Drill a small hole in the plastic and mount the switch. The solderless installation is completed and you can enjoy your computer without eye strain. Flip the switch to any of the 3 positions for a variety of displays.

VIDEO REVERSER only \$19.95

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The 96KX is a plug in cartridge that extends the capability of Color Computers. The Cartridge plugs into the Computer and a Disk Drive or other accessories plug into the output Connector. Also included is a User Programmable Interrupt Switch that allows the Computer to be reset when the normal reset fails or allows any Machine Language (ML) program to be run. Extended Basic is not required and the Cartridge works on all Color Computers. Features are as follows:

- * Uses top unused BK of Memory in ROM PACK area.
- * Disk Drives, Cartridges, or Multipack Expanders plug into 96KX.
- * Software always available for program development or use.
- * Performs HEX to DECIMAL and DECIMAL to HEX CONVERSIONS.
- * Allows data to be stored in memory in Decimal, Hex, or ASCII Characters.
 Also allows Vector Values to be stored with one entry.
- * Retrieves data from memory in Decimal, and/ or Hex and displays
 Characters and Vector Values. Allows values to be easily changed.
- * Displays program Statement Numbers & memory location. Allows Statement Numbers to be changed one at a time.
- * Quickly moves blocks of data from one location to another.
- * Allows Program Statement Vectors to be changed for different locations such as the ROM Port area.
- * Conditions for stacking programs.
- * Gives the Beginning, Ending, & Execute address of ML Programs.
- * Menue selection of interrupt switch options. Select reset for Computer reset when normal reset fails or enter address of ML program.
- * Menue oriented Software is User Friendly.
- * Cartridge accessed from Basic by EXEC 57701 (ENTER).
- * EXTENDED BASIC is not required.

For 64K or larger Color Computers the 96KX allows the second 32K page of RAM to be fully utilized. Run Basic in either page or quickly transfer information from one page to another or within either page.

The 96KX is guaranteed for one year and costs only \$89.95.

WE REPAIR COLOR COMPUTERS

We have complete facilities for repairing Color Computers. Our rate is \$25 + shipping & parts. Most repairs can be done in one hour. Send your computer by UPS to DEI, 2118 Westwood RD, Hartselle, AL 35640

Add \$2 per order for shipping.

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DYNAMIC COLOR NEWS SERVICE (monthly Engineering newsletter +++)

As a service to Color Computer owners we have decided to publish a monthly newsletter. We are committed to Designing Hardware and Software programs for Color Computers and we feel like our friends should receive information that would aid them in using their Computers and expanding them. Our experience in teaching Basic Computer Programming will certainly be an asset in this endeaver.

Most of our Students have had no experience with Computers. The Older Ones, expecially those over 40, really have a hard time understanding how to write programs and use the Computer. Younger students expecially those in their late teens catch on much faster. So we want to give information each month that will help in understanding how a Computer works and how to write programs for it.

Basic is a very powerful language. Each month we want to cover one phase of Basic Programming plus give an example program that you can use by itself or as a part of another program. Have you ever wished you could load several programs into your computer at a time? If you have a 32k Computer and several programs varying in length from 2k to 8k then it certainly seems feasible for all of them to reside in memory at the same time. Wouldn't it be nice if we could access any of these programs quickly? In our first issue we will show how this is done.

Machine Language Programming?

What is Machine Language Programming? We will answer this question and begin exploring the insides of the Color Computer. The Microprocessor is the heart of the Computer and we will explain how it works in non-technical terms. Each month we will extend our discussion so that you will be able to understand how the machine works. Then you will be able to understand how to Assemble and Disassemble Machine Language Programs.

How Can We Upgrade Our Computers?

We have set the pace for Memory Expanders. A 128K Color Computer is being used for this brochure. Since most people are not Electronic Assemblers, Technicians, or Engineers, it is advantageous to have upgrades that do not require soldering or experience. This is the approach we took on our 4 to 64K Memory Expanders and will continue in this direction where possible. We will explain what is involved in making memory or other improvements to your Computer.

What about External Accessories?

The Color Computers have 2 Serial Input/ Output (I/O) Ports plus the Parallel Cartridge Port. This Port is one of the leading advantages of the Color Computers because all of the Signals and voltages are available for external Control or use. The expansion capabilities are limitless.

Are Color Computers Personal or Business Computers?

This question has been asked us many times. The answer is "BOTH". Did you know that Business Computers and Personal Computers use the Same Microprocessors, the same Memory Chips, and the same I/O Chips? Radio Shack introduced the Color Computer as a "game" Computer for Kids to learn on and play preprogrammed games in Cartridges. This was what

was told us by a representative at the Radio Shack Computer Center in Huntsville. There are many businesses both large and small that use the Color Computers. To them it is a "Business" Computer. If you use it for playing games then it is a "Personal" Computer. To us there is no difference. The Color Computers can be made to do anything any other Computer can do.

Consulting Service

Computer Consulting is very expensive. This can run from \$50 an hour up. You can spend a lot of money on equipment you don't need or that doesn't do the job you want. So to answer your questions we will have a Question & Answer section. If you need a quick reply to a specific problem we will serve this need too. Because individual replies to letters take extra time we will charge \$10 for this service. Replies to your questions will be published as soon as possible in the Newsletter.

Discounts on Products

We would like for you to purchase your accessories from us. It is always a good policy to shop for bargains. So we are going to make our products available to DCN Subscribers at special prices. Our hardware items will be at 10% and software at 20% off of our advertised prices. These discounts alone will pay for the cost of the subscription. We will offer "SPECIALS" from time to time at greater discounts.

SUMMARY

The actual direction DCN will take will be influenced by you our subscribers. We are experienced and competent in the field of Electronics and Computers and are willing to provide the service our readers desire. Perhaps you don't know enough to "ask a question". This feeling will disappear after a few issues of DCN. We also want to provide programs that will be useful and helpful as well as teaching programming techniques. For less than \$2 a month we will be available for your use plus you will receive the discounts on our products. You can't loose. So send in your payment and be one of the first to receive the first issue of DYNAMIC COLOR NEWS which will be published in Feb. 1984. Cost is only \$15 a year.

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