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Object name: SDK-85 System Design Kit User's Manual

Vintage: c.1978

Synopsis: Intel Corp., Manual for single-board Intel i8085 microcomputer kit, P/N: 9800451B.

Description:

The SDK-85 System Design Kit was manufactured by Intel Corp., 3065 Bowers Avenue, Santa Clara, California 95051, as an aid to designers of systems using Intel i8085 CPUs. It contained all the parts needed to build a single-board computer, plus documentation.

The i8085 was introduced in 1976 as an evolution of the i8080 8-bit CPU, itself an evolution of the i8008 8-bit CPU. The i8085 instruction set was a superset of that of the i8080. It used a single 5V power supply and had improved performance and timing, an internal clock generator, and an 8-bit data bus multiplexed onto the lower 8-bits of its 16-bit address bus for reduced wiring complexity. It also had SID and SOD 110-baud serial data lines for interfacing to a teletype (for an example teletype, see elsewhere in this catalog), plus DMA control signals, three maskable vectored interrupts, a non-maskable interrupt, and the original i8080 interrupt.

The SDK enabled construction of a system with a 3.072MHz Intel i8085 CPU, an Intel i8155 0.25kB static RAM with 14-bit timer and 22-bits I/O, the SDK-85 monitor software in an Intel i8355 or i8755 2kB ROM with 16-bits I/O, an Intel i8279 keyboard/display interface, a hexadecimal keyboard and LED display, a 20mA current loop teletype interface wired to the i8085 SID/SOD pins, and a wire-wrap prototyping area. Up to 38 programmable parallel I/O lines could be used with the prototype circuitry. An extra RAM and/or ROM could be added if so desired, thereby also adding up to 38 more parallel I/O lines. The board needed a power supply of 5V at 1.3A, and also -10V at 0.3A if using the teletype interface.

The hexadecimal keyboard included keys for data entry, as well as *RESET*, *SINGLE-STEP*, *SUBST-MEM*, *NEXT*, *VECT-INTR*, *GO*, *EXAM-REG* and *EXEC* keys. Some of these keys were used in sequence with data keys for access to internal registers like the stack pointer and program counter. The 6-digit 7-segment LED display showed 4 hexadecimal digits of address and 2 hexadecimal digits of data.

The documentation included an *SDK-85 User's Manual*, a *Microcomputer Systems Databook*, an *MCS-85 User's Manual*, and an *8080/8085 Assembly Language Programming Manual*, all published by Intel.

Many thanks to Peter Canavan, Network Manager, Broadcast Operations, Australian Broadcasting Commission (ABC), who donated this item from his personal collection.

The homepage for this catalog is at: <https://www.scss.tcd.ie/SCSSTreasuresCatalog/>
Click '*Accession Index*' (1st column listed) for related folder, or '*About*' for further guidance. Some of the items below may be more properly part of other categories of this catalog, but are listed here for convenience.

Accession Index	Object with Identification
TCD-SCSS-V.20160121.008	Intel SDK-85 System Design Kit User's Manual, Intel Corp., Manual for single-board Intel i8085 microcomputer kit, P/N: 9800451B, P/N: 9800451B, c.1998.

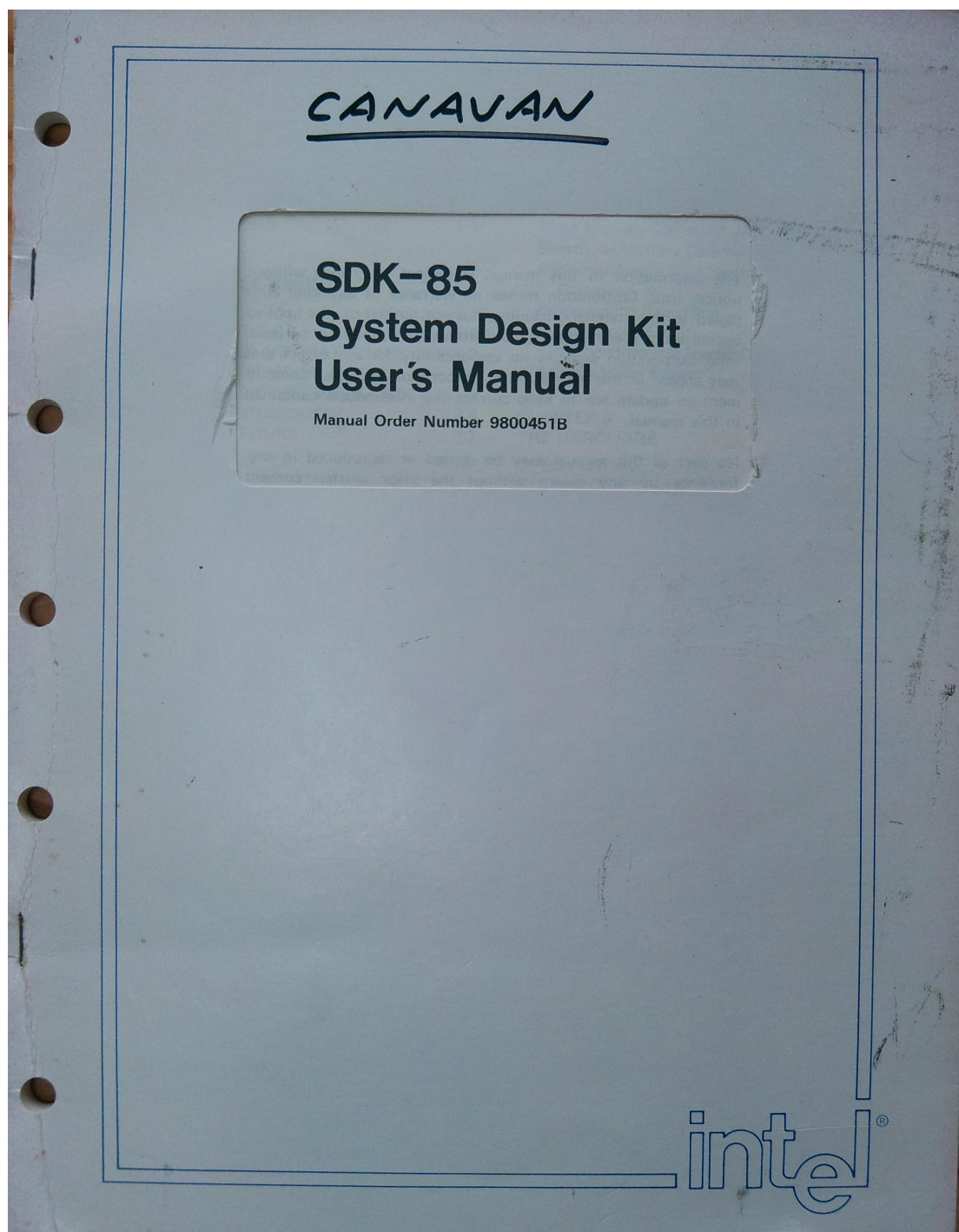


Figure 1: SDK-85 System Design Kit User's Manual front cover



Figure 2: SDK-85 System Design Kit User's Manual rear cover

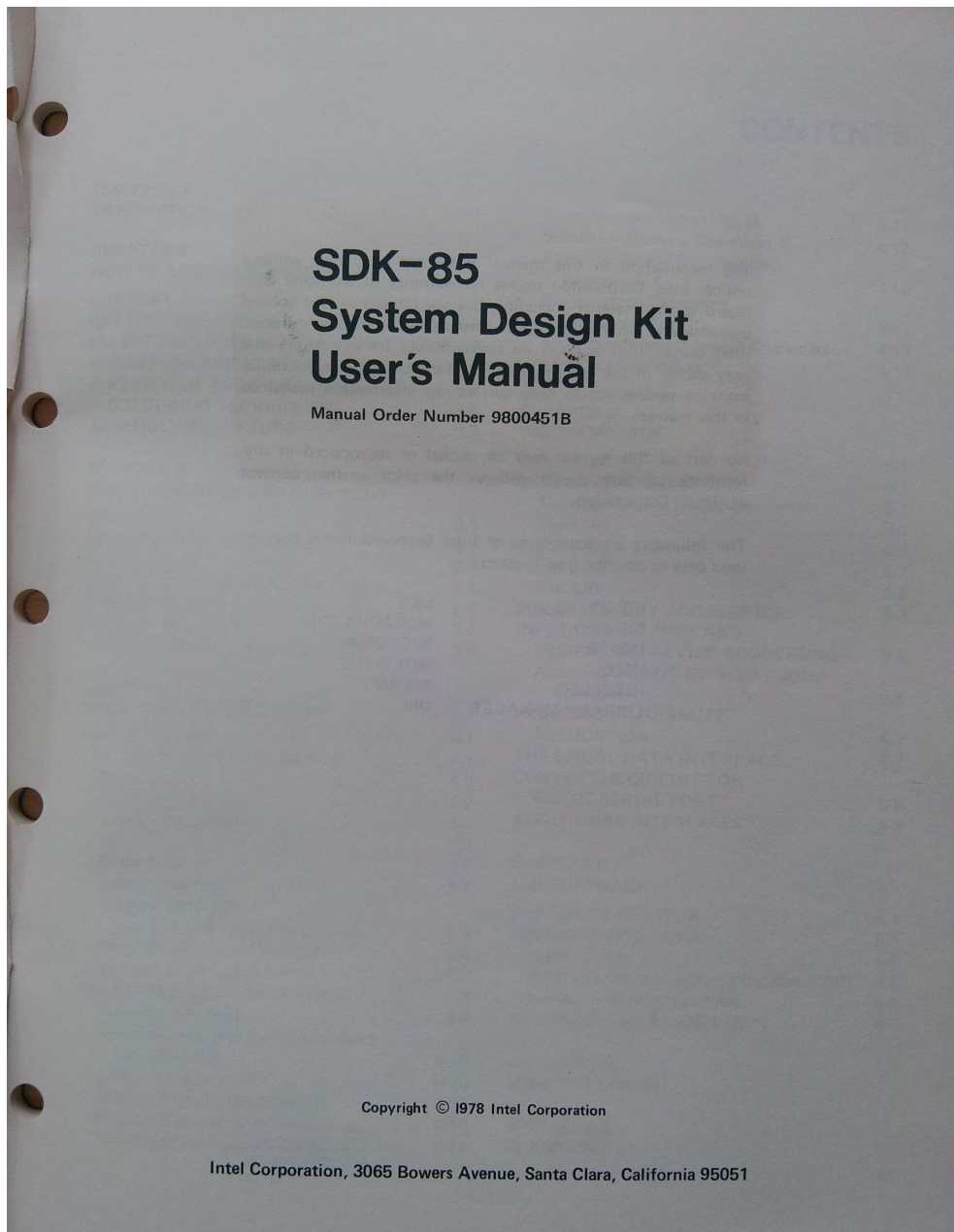


Figure 3: SDK-85 System Design Kit User's Manual title page

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Figure 4: SDK-85 System Design Kit User's Manual publishers page

CONTENTS

CHAPTER 1	
DESCRIPTION	1-1
CHAPTER 2	
HOW TO ASSEMBLE THE KIT	
GENERAL	2-1
GETTING ORGANIZED	2-1
SELECTING TOOLS AND MATERIALS	2-2
UNPACKING AND SORTING PARTS	2-3
A REVIEW OF BASIC ASSEMBLY AND	
SOLDERING TECHNIQUES	2-6
ASSEMBLY PROCEDURE	2-7
CHAPTER 3	
FINAL ASSEMBLY AND CHECKOUT	
GENERAL	3-1
STRAPPING OPTIONS	3-1
POWER SUPPLY WIRING	3-1
INSTALLING LARGE IC DEVICES	3-4
STARTING THE FIRST TIME	3-6
WHAT IF IT DOESN'T?	3-7
CONNECTING A TELETYPEWRITER	3-8
CHAPTER 4	
OPERATING INSTRUCTIONS	
WHAT IT DOES	4-1
THE BUTTONS AND DISPLAYS	4-1
Reset	4-2
Substitute Memory	4-2
Examine Registers	4-4
Go	4-6
Single Step	4-8
Vector Interrupt	4-9
Program Debugging —	
The Use of Breakpoints	4-9
Error Conditions — Illegal Key	4-9
Memory Substitution Errors	4-9
TELETYPEWRITER OPERATION	4-9
Console Commands	4-9
Use of the Monitor for Programming	
and Checkout	4-10
Command Structure	4-10
Display Memory Command, D	4-10
Program Execute Command, G	4-10
Insert Instructions into RAM, I	4-11
Move Memory Command, M	4-11
Substitute Memory Command, S	4-12
Examine/Modify CPU Registers	
Command, X	4-12
Programming Debugging —	
Breakpoint Facility	4-13
Error Conditions — Invalid Characters	4-13
Address Value Errors	4-13
CHAPTER 5	
THE HARDWARE	
OVERVIEW	5-1
SYSTEM COMPONENTS	5-1
The 8085 CPU & The System Buses	5-1
The 8155	5-1
The 8355 & 8755	5-2
The 8279	5-2
The 8205	5-2
SDK-85 MEMORY ADDRESSING	5-3
INPUT/OUTPUT PORT AND	
PERIPHERAL DEVICE ADDRESSING	5-5
Accessing the 8279 Keyboard/Display	
Controller	5-5
PROCESSOR INTERRUPT	
ALLOCATION	5-7
THE SERIAL DATA INTERFACE	5-7
CONVERTER CIRCUIT FOR	
RS232C SERIAL PORT	5-8
ADDITIONAL INTERFACES	5-8
CHAPTER 6	
THE SOFTWARE	
THE SDK-85 MONITOR	6-1
PROGRAMMING HINTS	6-1
Stack Pointer	6-1
RAM-I/O Command Status Register (CSR)	6-1
Access to Monitor Routines	6-1
PROGRAMMING EXAMPLES	6-1
APPENDIX A	
MONITOR LISTING	
APPENDIX B	
DIAGRAMS	

Figure 5: SDK-85 System Design Kit User's Manual table of contents



Figure 6: SDK-85 System Design Kit package contents

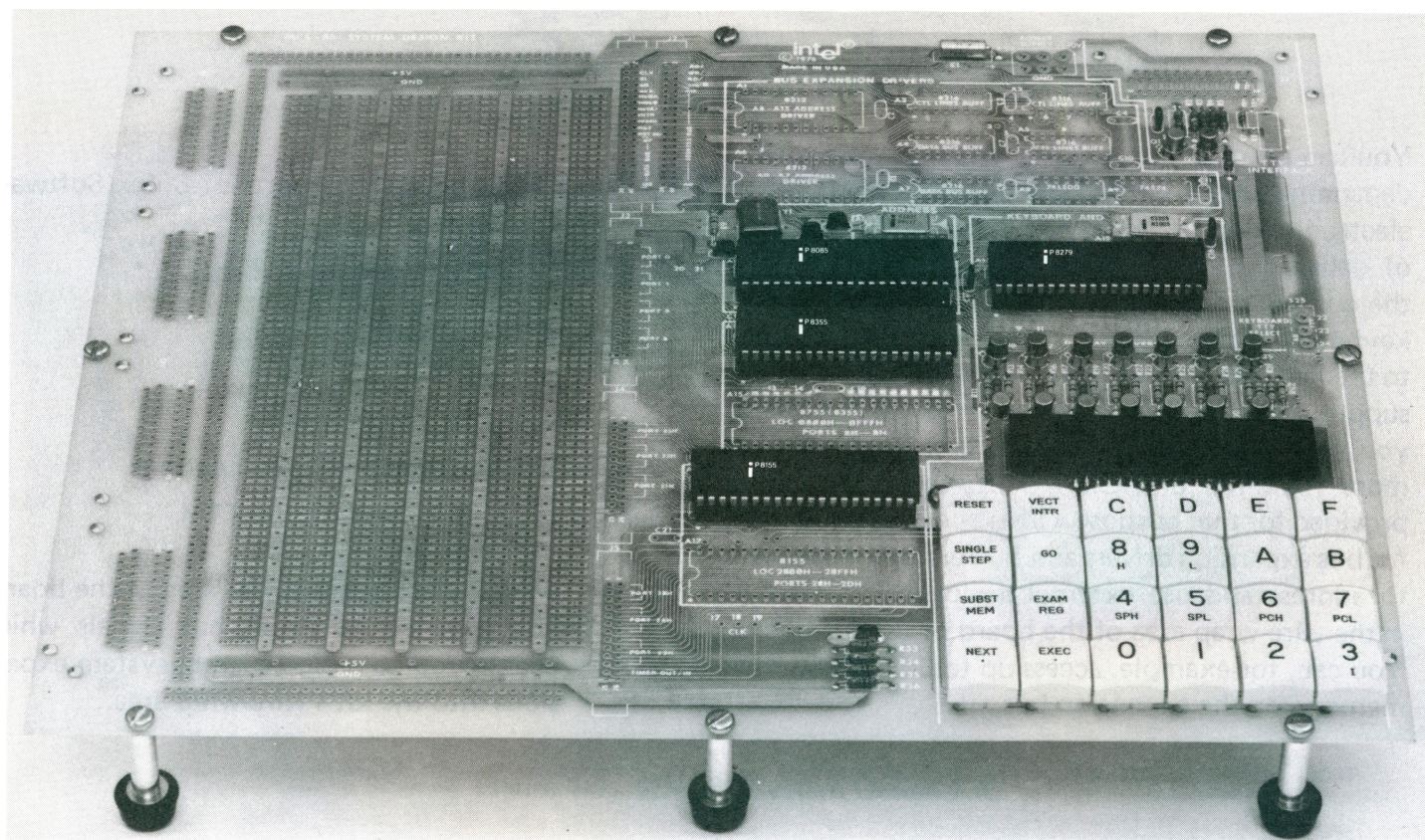


Figure 7: Completed SDK-85 System Design Kit