

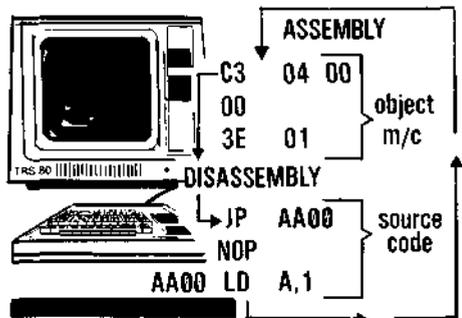
# Instant Software Inc.

Peterborough, N.H. 03458 603-924-7296

## PROGRAM DOCUMENTATION

Designed  
for  
TRS-80\*  
16K  
LEVEL II

### The Disassembler



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0232R

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# The Disassembler

This program is a single-pass, hex-notation type disassembler with options for either tape or lineprinter (Radio Shack parallel port) output. The tape output is directly compatible with Radio Shack's EDTASM™. Thus you can take an object code tape, disassemble the program and output it to tape. You can then use EDTASM to add, delete, change, and even reassemble your new version.

The Disassembler program also displays the displacement and absolute address of any relative jumps made by the disassembled program.

There is a comments column used to display any ASCII characters used in a LD or CP opcode (see sample output Figure 1).

Since The Disassembler works only on in-memory programs, it has been made relocatable so that you may move it around in memory to avoid the program you wish to disassemble. As an added option you may also jump to memory locations and transfer control between The Disassembler and other utility programs in your computer.

To load The Disassembler, use the SYSTEM command. The file name is DIS and the entry point is 28672.

The Disassembler is a load-and-go type program, and will initialize itself upon completion of its tape loading.

While The Disassembler is waiting for input, an asterisk (\*) is displayed.

### DISASSEMBLER INPUT COMMANDS

- \*DXXXX/YYYY/Z
- XXXX is the HEX address at which you want to start disassembly.
  - YYYY is the HEX address at which you want to stop disassembly.
  - Z is an optional code.  
Enter: T for disassembly to tape;  
P for disassembly to printer;  
(blank) for disassembly to video.

\*RXXXX

-XXXX is the HEX address to which you want The Disassembler relocated. If relocation is successful an immediate jump is made to the new entry point, otherwise the message "ERROR" is displayed.

\*GXXXX

-XXXX jump to this HEX address.

\*B

-exit to BASIC (re-boot the computer).

The printing of the disassembly may be temporarily halted by using (SHIFT) @ (as in BASIC), or it may be ended by pressing the (BREAK) key.

Relative jumps are displayed as the current location counter plus or minus (+/-) the displacement (in HEX),

which will help in subsequent relocation. The absolute address of the jump is displayed in the comments column.

ASCII characters loaded or compared in the registers are also displayed in the comments column.

When using the tape output option, the tape should be loaded and ready to record. The Disassembler will automatically start the tape recorder, and output to both the tape and the screen. If the (BREAK) key is pressed, an END statement will be written to the tape before The Disassembler stops.

If you want to store The Disassembler on disk, use the following addresses for either the TAPEDISK program or for the DOS DUMP command (see your DOS manual for instructions):

Disassembler start=7000H, end=7BOAH, transfer=7000H (H=HEX).

SAMPLE OUTPUT FROM THE DISASSEMBLER

BYTE NUM.	MACHINE CODE	LINE NUM.	MNEMONIC	COMMENTS COL.
706E	22057B	00053	LD	(7B05H),HL
7071	183B	00054	JR	\$+3DH ;70AEH
7073	FE52	00055	CP	52H ;="R"
7075	2007	00056	JR	NZ,\$+09H ;707EH
7077	CD8F70	00057	CALL	708FH
707A	EB	00058	EX	DE,HL
707B	C30878	00059	JP	7808H
707E	FE47	00060	CP	47H ;="G"
7080	2005	00061	JR	NZ,\$+07H ;7087H

FIGURE 1

H means the number is HEX.  
\$ means current location counter.

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