

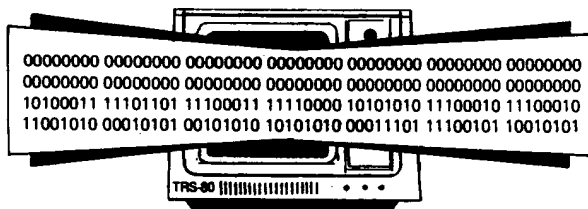
# Instant Software Inc.

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## PROGRAM DOCUMENTATION

Designed  
for use on  
**TRS-80\***  
16K  
Level II

### Cassette Scope



0192R

\* A trademark of Tandy Corporation

## Cassette Scope

### INTRODUCTION

This utility package consists of two separate programs. CASSAD is written in machine-language and will read a SYSTEM tape and display, on the screen, its file name and its load addresses. The TAPE DUMP program is written in BASIC and will "dump" a SYSTEM or BASIC tape (Level I BASIC, Level II BASIC or data) to the screen.

#### 1. CASSAD.

CASSAD is a machine-language utility that will read a SYSTEM tape and display its filename, its load addresses (each continuous block of memory of a machine-language program, in 255 byte chunks or less, has its own load address) and the entry point of the program. (All addresses are displayed in hexadecimal format.) These three functions have a multitude of uses. For example, if you don't know the filename of a SYSTEM tape, you can't load it. Or, if you want to put your SYSTEM tape on disk, you need to know where it loads in memory and its entry point.

### Copyright

This program is protected by copyright. This means that it is illegal to make a copy of the cassette or of a listing of the program. Any copy. We feel strongly enough about this to offer a \$10,000 reward for the conviction of anyone copying this program. This means that when your lifelong friend and bosom buddy asks you to run off a copy for him, you have, at that moment, to decide whether he wants the program or the ten thou. If you do decide to make the copy, you'd better be very nice to said friend from then on.

Better, if someone is insistent, is to give them the money to buy a cassette of their own. It could be cheaper in the long run.

Why the fuss? We want to make sure that programmers are paid for their programs and paid well. The more money we can pay in royalties, the better programs you'll have.

### Improvements

There are very few programs, which cannot be improved. If you work out some improvements to this programs, it could be worth your while to send them in for possible use in an updated version of the program. Those who contribute to an updated program will share in the royalties, which result. Instant Software Inc., Peterborough, NH 03458.

### Disclaimer

Nothing in this world is completely perfect, including this program. I say this despite the yeoman efforts of the programmer who originally wrote and debugged it and the people in the Instant Software lab who worked far into the New Hampshire nights, all toward providing you with the best possible program.

Please enjoy it. If you come up with any improvements, you should let me know so I can pass along your ideas to other users.

Please note that there is no warranty expressed or implied that this program is going to do anything other than load and work. We don't guarantee that you will enjoy the game programs, that you will make or save money with business programs, or learn anything from educational programs. We don't guarantee that you will lose weight with a dieting program or avoid disasters with a biorhythm program. But if any program causes suffering (other than acute aggravation or misfortune, we want to hear about it by mail, not through your lawyer. You are entirely on your own in using the programs.

If you run into problems while using a program, you can communicate with us preferably by mail, and we'll try to help out. If a problem turns out to be commonplace, we'll put the update information in 80 MICROCOMPUTING. You are supposed to read 80 MICROCOMPUTING anyway.

Wayne Green

### LOADING INSTRUCTIONS

There are three versions of Cassad on the tape, one version for each of the three memory sizes – 16K, 32K and 48K. Their respective filenames are CASS16, CASS32, and CASS48. Load the one that matches the memory size of your computer, as follows:

1. Answer the MEM SIZE? prompt by pressing (ENTER).
2. Type SYSTEM and press (ENTER).
3. Answer the \*? prompt by typing the appropriate filename for your memory size. For example, if you have a 32K system, type CASS32 and press (ENTER). Press PLAY on your recorder.
4. When the program has loaded, the following message will be displayed:  
CASSAD COPYRIGHT (C) 1980 BY INSTANT SOFTWARE, INC.  
ALL RIGHTS RESERVED  
READY  
>

You now have a BASIC command called CASSAD. Anytime you want to find the filename or memory addresses of a SYSTEM tape, all you need to do is type CASSAD, put the tape into your tape recorder, press the PLAY button and press (ENTER). The computer will read your tape and display the information on the screen.

If the tape being examined is not a SYSTEM tape, or if a checksum occurs, then the appropriate error message will be displayed.

If you wish to put CASSAD on a disk, use the following procedure:

Using the TAPEDISK command, load the proper program for your memory configuration into the computer with TAPEDISK'S "C" command. Make sure you have pressed PLAY on the tape recorder. When the program has loaded, you'll need to type:

```
F CASS16/CMD:0 7E80 7FD2 402D
```

```
F CASS32/CMD:0 BE00 BF52 402D
```

```
F CASS48/CMD:0 FE00 FF52 402D
```

(Choose the one appropriate for your machine.)

Press (ENTER)

Type E to return to DOS.

To use the program, type CASS(N) where N is for your system, press (ENTER) then load disk-BASIC as follows: You are now in DOS, so type BASIC. Press (ENTER) for HOW MANY FILES? and then protect the following memory:

```
CASS16 - 32384 Entry point 32398
```

```
CASS32 - 48640 Entry point 48654
```

```
CASS48 - 65024 Entry point 65038
```

Press (ENTER) Next, type SYSTEM and press (ENTER). To the \*? prompt, reply '/' (slash) Entry point (see above) and press (ENTER). The READY prompt will now appear to which you type CASSAD to call the program. To

ensure that your load is a good one, type LIST100-210 and press (ENTER).

After the program is loaded, type RUN and press (ENTER). The screen will clear and the word BINARY? will appear. If you want the data displayed in binary form, type Y (yes) or, if not, type N (no) and press (ENTER). The program will now ask, ALPHANUMERIC? If you answered the first question Yes, then answer this one NO. If you answer both questions No, you'll get an alphanumeric display only. The computer now needs to know, LEVEL II? If you wish to read any 500 baud Level II tape, answer Yes. If you want to read a 250 baud Level I tape, answer No. The screen will clear and the program is now ready to read your tape.

Rewind the tape and press the PLAY button on your recorder. When the information on the tape is located, it will be "dumped" to the screen as it loads into memory. To freeze the display while the tape is being "dumped", simply stop the tape. To resume, press PLAY again. Press BREAK to return to the READY mode while the tape is being "dumped" or after it has been stopped. If you elected to have the information displayed in binary format, the screen will resemble figure 1.

When the screen is full, the next row of data will overwrite the data displayed at the top of the screen. The data will not be scrolled up as in a normal display.

If you elected to have the data displayed in alphanumeric format, the screen will display BASIC tapes in a combination of alphanumeric characters mixed with TRS-80 graphic characters. This is the result of a compression of the line numbers and commands when the tape was recorded Data tapes, however, are displayed in alphanumeric characters only. As with the binary format, when the screen is full, new data will overwrite the data already on the screen.

```
00000000 00000000 00000000 00000000 00000000 00000000 00000000
00000000 00000000 00000000 00000000 00000000 00000000 00000000
10100011 11101101 11100011 11110000 10101010 11100010 11100010
11001010 00010101 00101010 10101010 00011101 11100101 10010101
```

**Figure 1.**

## 2. TAPEDUMP

This BASIC program is loaded via the CLOAD command and will execute in any memory configuration, including disk-BASIC. This program is short and will load in about 30 seconds. NOTE: This program will NOT list on

your screen like a normal BASIC program. In fact, if you execute a LIST command, the screen display will resemble that of a bad load. However, lines 100 through the end of the program will list properly.