



CS1*FINDEX DOCUMENTATION

INTRODUCTION

Cassettes are among the cheapest way to store computer programs. Almost everyone has used cassettes from the very first day after buying their computer. Also, most people buy standard 60 min tapes, such as TDK or MAXWELL. The only trouble with 60 minute or even 30 minute tapes is that you often would overwrite another program already on the tape. That was because you could store ten or twelve programs on one side. Also you might forget to keep a record of the programs on the cassette or lose it (like I did). If you had a counter you might be able to remember to always set it to zero and then write down the numbers (I would always forget). Some people don't even have that luck, not even having a counter, and worse yet others don't even have a compatible recorder.

Well, by now you get a fairly good idea of why everybody wants a Disk drive. BUT, not everybody can afford one. They love their TI-99/4A, but wish that there was some way to emulate a Disk system. To that aim is my program CS1*FINDEX devoted.

PROGRAM DESIGN

CS1*FINDEX is designed to automatically locate up to 10 programs per side of a 60 min cassette tape. It also will create and file a catalog of the contents on the tape. The locate routine is designed to allow even non compatible recorders to be used. Last of all the program is small, just about 4K of memory. The best reason for the small program other than quick loading, is that it can be stored in the MINIMEMORY MODULE (MMM). This is not necessary for the programs operation! However it allows the user to treat the program like a module (will explain more later). So here is the design--- Compact size (4K) Auto locate catalog of cassette.

COMPACT DESIGN

Design was two fold. One, to be quickly loaded and two, fit the MINIMEMORY MODULE's 4K of ram. Now if you don't have a MMM, the program works just as well. The difference is in time. Without the MMM you will have to reload the CS1*FINDEX through the >OLD CS1< routine. This will take about one and a half minutes. With The MMM you will only use about 1 sec of time. The procedure is very simple. Load 'CS1*FINDEX' into computer memory >OLD CS1<. Then (have the MMM inserted) type >SAVE MINIMEM< (remember to >CALL INIT< first). That will take about 1 second. When you want to use the program, simply type >OLD MINIMEM<. It will seem like it takes longer to load, but actually that is the pre scan time you get when any program is first loaded into memory. The actual loading was less than a second. There, now I hope that was fairly clear. Remember you don't need the MINIMEMORY MODULE to use the program. The MINIMEMORY MODULE is simply a storage base like a disk or tape.

SEARCH

This is the heart of the CS1*FINDEX program. Some explanation is in order here. the location or search routine is in truth a record search of a cassette file. I had wrote a program to write the program names into a record of a file on tape, in other words a catalog for the cassette. I noticed that as the computer wrote the data the cassette recorder would stop each time and then start up again as each record was written. It was then that I realized that I could take advantage of this action by using the fast forward instead of the

record on the recorder. The important thing was the timing, would it be too little or too much. Well it was just right. It was then just a matter of writing a program to take advantage of this idea. I tell you all this because there are some things about the cassette file routines that most beginners and maybe even some old pros don't know. The one that I found to be the most troublesome is the pause after you start the recorder reading or recording. Nothing seems to happen for several seconds (seems like forever). Then the screen will scroll up 1 line when the computer starts to process the file. If you had been watching the recorder you would have seen the reels start to turn at the moment you pushed enter, but nothing on the screen would indicate any action was taking place. This is mentioned because it caused me some confusion when I was a new user. There are two places in which you will be asked >WHAT LOCATION<. When you first run the program you will be asked >DO YOU WANT A LOCATION SEARCH ?<. The second time will be when you select the >SEARCH< routine from the menu. The reason for the first time is that as you become more used to the program you will save time by simply doing a location search. This will become evident as you use the program. Which ever time you use the >SEARCH< routine, it will always be the same. The screen will go black for a couple seconds, then the instructions will pop on the screen. The screen should be gray. There will be a >press any key to cont.< at the top on the screen with the instructions following. Read them CAREFULLY. When you understand them then push any key to proceed. The screen will turn green, letting you know that you have started the search routine. The first instruction is the rewind cassette then push enter. The second instruction is push fast forward then enter. It is at this point you will experience the delay time I discussed earlier. Simply watch your cassette recorder, if it starts then the routine has started. Up to this time the screen has been green. When the SEARCH gets to the program just before the one that you're searching for, the screen turns yellow. When the routine locates the program your looking for it will turn red! If you are using a non compatible recorder you should push your stop button when it turns RED!! The program will then display the name of the located program (if a catalog was used). Also the very important instruction >DO NOT REWIND!!<. After all the whole purpose of this routine was to locate this point on the tape. Now you can type OLD CS1 to load whatever program is there into memory. Remember to not rewind the tape when the rewind prompt is given, OR you could type SAVE CS1. You would then remove this tape being careful not to disturb the location. Put into memory what ever you want to. reinsert the located tape and type SAVE CS1. Remember DO NOT REWIND. The drawback is that if you want to check the saved program, you can't, too well. My recorder is dependable enough that it is not a problem, but there is a way to check it out. the first is to do a quick locate search (see why the mmm is handy) back to that location and do a OLD CS1 if it plays in ok then you've got it. If not simply do a quick locate again and make what ever adjustments that are needed, and proceed as before. If your recorder has a counter, simply remember the counter location, run the tape back, and do the usual check routine. The first procedure is best for noncounter recorders. The last instruction on the screen is CON. What I've done here is a programmed a BREAK point. If you decided to do something else & you wanted to update the catalog or whatever, this will allow you to restart the program without a loss of data. That is if you haven't done an OLD CS1 or SAVE CS1. That should get you started on the road to using the program.

NON COMPATIBLE RECORDERS

As I pointed out in the last section the non compatible recorder was not left out. This program always starts out by being rewound. What ever you are doing, reading the catalog file or locating a program. Simply hit your stop button on the red screen. The only other time I can think of that would be a problem, is the start of the file routine and the search locate routine. At these two times push both the enter and the play or fast forward at the same time!

CATALOG FILE

Now we come to the catalog for the cassette. This program is designed to locate 10 locations on one side of a 60 minute tape (thus 20 programs/tape). The catalog is designed to hold ten program names and three remarks. 12 characters are allowed for each. A sample catalog may look like this:

```
CATALOG

NUM PROGRAMS
1  LANDER_____
2  WHO'S WHO____
3  RAIDERS_____
4  _____
5  _____
6  DUNGEONS2____
7  _____
8  _____
9  _____
10 RACE CARS____
    REMARKS
11 R GAMES_____
12 R XBASIC_____
13 R TAPE #10A____
```

The programs are not in alphabetical order and do not need to be. The remarks should follow a pattern, such as I've shown on the sample. where you place a program on the tape is important to some degree on it's size. I suggest that you keep shorter programs to the front and longer ones to the back.

USING THE PROGRAM

When the program first starts the title screen will show on briefly and then the screen will clear. You will then be asked if you want to do a location search that we have already discussed. The next question >DOES TAPE HAVE A CATALOG?<, is answer with a Y>yes or N>no. If you say yes the program will proceed to the read catalog routine, otherwise you will be directed to the new catalog routine. On entering this routine the first prompt lets you start the catalog. It always starts with the first position of the catalog. If you desire a different position simply press enter. A dummy catalog will scroll onto the screen. It will contain any input you have entered or have fed in from the cassette file. Another prompt will ask about changes. Say yes. Now you can select either a remark or a program number of your choice. Spend a little time going through the prompts, you will find them user friendly.

You also have the option to make a hardcopy printout if you have a printer. You may need to change the specifications to fit your printer. (see line 820)

HINTS

Now some user advice. The catalog file should always!! go to the front of the tape. This allows for quick and easy access to the catalog file. Because of the long pause before the first location is found, there is a long length of tape used up. I call this DEAD SPACE. I store the actual 'CS1*FINDEX' in this area.

GRAPHICAL REPRESENTATION

```
FILE-|-CS1*FINDEX-----|
1ST PRGM-----|
2ND PRGM-----|
3RD PRGM-----|
4TH PRGM-----|
5TH PRGM-----|
6TH PRGM-----|
7TH PRGM-----|
8TH PRGM-----|
9TH PRGM-----|
10TH PRGM-----|
```

TYPICAL PROCEDURE

1. RECORD YOUR CATALOG FILE
2. GO PAST THE STORED FILE INTO DEAD AREA AND STORE CS1*FINDEX

Remember to keep shorter programs to the front and longer ones to the back.

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