WEST PENN 99'ERS

VOLUME 1 NUMBER 9 AUGUST 1997

New and Improved MIDI-Master 99
By Bruce Harrison

Okay, MIDI-Master owners, there's something NEW for you. Recently, our friend Mike Maksimik sent me the source code files for MIDI-Master, so that I could adapt the program to work with AMS, thereby allowing much longer works of music to be written and used by those with both MIDI-Master and AMS.

The central problem that had to be tackled first was to find enough room in low memory so that the code to manage the AMS memory could co-exist with a fully-functioning MIDI-Master program. That meant making many small and a few large changes in the original so that it would take less space and perform the same job. At one point, about 800 bytes were freed up, more than enough for the AMS functions. The AMS version at this point has some problems that need fixing, and at this time I'm making no promises as to when those problems will be overcome.

Meanwhile, there were some things about the original that always troubled me (and I'm sure others) which I resolved to fix in a new Non-AMS version for those many owners of the version 2.3 MIDI-Master. Thus was born Version 2.5Z of the program. It is only useful to current owners of the program, as we cannot supply the needed connecting cable for the RS-232 port. The disk contains a matched pair of programs, MASEXA (album) and MASEXB (MIDI-Master).

First priority for change went to the business of saving music in Memory Image (aka Program) file format. It always annoyed me that even a little sixteen bar song would, when saved as Program files, occupy 100 sectors on disk in three files. Why? In Version 2.5Z, that's been changed so that if one saves in Program format, the MIDI-Master program first figures out exactly how much of memory space has been used by the current music in memory, and saves only that much. For example, the old source file BENOT/M on the V.2.3 disk) when compiled and saved in Program form makes ONE file, of only 13 sectors length, instead of three files adding to 100 sectors. Even moderately long pieces will often make only a single program file. This not only saves disk space, but also saves time when loading those files for play.

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WEST PENN 99'ERS CLUB INFO

Next Meeting Date:	August 19, 1997
Meeting Location:	Penns Woods Civic Association Just off Route 30 N. Huntingdon, Pa
Time of Meeting:	7: P.M.

GENERAL ITINERARY OF OUR CLUB'S MEETING

6:45 P.M.	Doors Open
7:00 P.M.	Genrral Meeting
7:45 P.M.	Demos and New Info
8:45 P.M.	Questions and Answers
9:30 P.M.	One on One Help
10:00 P.M.	Socializing
10:00 P.M.	Doors Close

MEETING HIGHLIGHTS FOR THIS MONTH

PAGE PRO TEMPLATES....................	Demo by Paul Brock
PARSEC................................	Demo by Paul Brock
BEYOND PARSEC.........................	Demo by Paul Brock
Help with C 99........................	Demo Norm Rokke
Open Intrest..........................	Demo by Anyone

LIST OF WEST PENN OFFICERS FOR 1997

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1985
WEST PENN 99'ERS
SUPPORTING THE
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COMPUTER

The West Penn 99'ers Users Group is a Non-Profit organization, dedicated to encouraging the continued use of the TI-99/4A home computer.

Our Membership Fee is:

* $15.00 per year for an INDIVIDUAL / FAMILY membership.
* $10.00 per year for a NEWSLETTER ONLY membership

Those having Full memberships are entitled to the many extra benefits our club has to offer.

Some of those benefits are:

* Getting to meet some of the nicest people.
* Demos of the latest TI-99/4A software.
* Free copying of our West Penn 99'ers Disk Library.
* Up date of T.I. news,Local,National,International.
* One on one help / Problem solving.
* Participation in our Module Lending Library.
* Participation in our Video Lending Library.
* Ribbon re-inking- for just $1.00 per ribbon.
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We meet the third Tuesday of each month at the PENNS WOODS CIVIC ASSOCIATION in North Huntingdon,PA. at 7:00 P.M.

If you can't make it to our meetings...at least become a Newsletter member - and enjoy our NEWSLETTER FORMAT- done entirely on a TI-99/4A computer.

SEE PAGE 10 FOR OUR WEST PENN MEMBURSHIP APPLICATION.

Loading program files in the old program always expected to find three sequential-named files in series. Thus if the piece were in only one file, there would be two error reports on the screen, even though all the music was already loaded. In the new version, the program assumes you know what you're doing, so once it loads the first file, the LOAD function disables error trapping for the second and/or third file. Let's say there were only one file. The new program will load the first one, look on the disk for the second, but if that's not there, it will simply return to the menu so you can play that piece.

While program files are being loaded or saved, the file name on screen will update when a second or third file is being created or loaded. This happens even when loading via Album for play.

During play, the new version reminds you near the bottom of the PLAY screen what file name you're currently playing. This can come in handy. Another big change has been made in PLAY mode, and that concerns the P for Pause or FCTN-9 for exit from what's playing. Most times, we were reluctant to use those things, as the keyboard would be left playing one or more notes until it was turned off or taken out of MIDI mode. NOT ANY MORE! Before doing anything else the program now cycles through a routine called SHUTUP, which silences all notes currently playing on the keyboard. Thus you can PAUSE and enjoy silence until you press C for Continue. FCTN-9 works the same, first using the SHUTUP routine, then going back to the menu.

Along the way, we found an undocumented feature in the PLAY mode. Pressing the 1 key will also stop the piece currently being played. If you're running just MIDI-Master, this will take you back to the menu just like FCTN-9. However, if you're running a series of files out of Album, the current one will stop and Album will load and play the next one in the sequence, unless there are no more left, in which case you'll be back to Album's menu.

The new version of Album we include has a big improvement in its Random play mode. You'll recall that in the original, random meant that one number might play three times in succession, while you could wait all night to hear all of the selected files. In this version, Random means what you probably thought it should mean. Each selected file gets played once and only once, but in random ORDER. Thus you're assured of hearing each one you've selected, but only once. After all have been played in random order, you're back to the Album menu.

---CONTINUED PAGE 4

Little changes have been made too. For example, the cursor now blinks at the same pleasant rate on either TI or Geneve. In version 2.3, the cursor rate would be normal on a Geneve, but painfully slow on a standard TI. The ACCEPT fields have also been supplemented with the actions of FCTN-1 (delete), FCTN-2 (insert), and FCTN-3 (erase entire field). Thus mistakes made in typing into those fields are MUCH easier to correct, either by deletion or insertion or by clearing the field and starting over.

Last, and perhaps most important, this new version allows the musician to control volume on a voice-by-voice basis. Thus the stuff in one voice can be playing softer or louder than what's in another voice. This required an addition to the compiler so that a new and different volume directive could be used. This seems to be the most desired change of all for musicians who have touch-sensitive keyboards that can take full advantage of this feature. (Note: On older Casio models, this won't make any difference, as they do not respond to volume control.)

The new program is compatible with all files used with or created by the old version, with just one exception. The new version must be used with its own CHARA1 file (supplied) and should not be used with the CHARA1 from earlier versions. The OPTIONS file can be copied from your own existing disk, so you get your own color scheme, port selections and patch changes. In other words, the old OPTIONS will work perfectly well with the new version. Similarly, source files and program saved files you used with the old version will still work with the new version.

Best of all, THE PRICE! Present owners of MIDI-Master 99 (remember you need that special cable) can get this new version (V.2.5Z) for just $1.00 from:

Bruce Harrison
5705 40th Place
Hyattsville MD 20781

If you have questions, I can be reached by phone at (301) 277-3467 any day between 9 AM and Midnight Eastern time. Enjoy!

MINUTES for JULY

Minutes for the July meeting will be discused at the Auguest meeting. I had a little difficulty getting there. I got a report from Ed Mandich. There wasn't enough chairs for everyone. Maybe I should miss more often!

C For Yourself

Part 4

Norman Rokke

At the end of the last article I mentioned some improvements that could be made to the program we have been working on. When I wrote that I hadn't yet written the programs to accomplish those improvements. The bad news is that I still haven't written the programs. The good news is that this failure is caused by lack of time to write the programs rather than being unable to make a program work.

Rather than skip a month I thought it might be useful to look a bit more closely at how C lets us use code which is somewhere other than in our own program. The term library functions is used to refer to this kind of code and the files which contain these library functions are called library files.

We have used a number of library functions in previous articles. Functions such as **locate**, **printf**, **chrdef**, **hchar**, **strcpy**, **strcat**, and **segstr** are examples. Although they are all library functions, there are some differences in how they are used.

Let's start by looking at the function **locate**. The code for this function is in the file CSUP. This file is a DF80 file which contains already assembled code. We have seen how we include this file in our program at the appropriate time. We have also seen that this file **must** be included in every C99 program we write.

Because CSUP must be used with every program that we write, the compiler knows about everything that is in CSUP. Therefore, we do not need to tell the compiler about **locate** by using an extern declaration because the compiler already knows about it.

The files PRINTF, GRF1, and SEGSTR/O also contain already assembled code for library functions that we can use. These files do not need to be used with every program that we write and so the compiler does not know anything about functions like **printf**, **chrdef**, **hchar**, or **segstr**. In order to use these functions in our programs we use the extern declaration to tell the compiler about these functions that are somewhere else outside our program.

In the example programs of previous articles I used extern declarations including only those library functions which would be used in the program. Another way to supply this information is to use what is called a header file. This is a file which contains extern declarations containing all of the library functions in a particular library file.

The file GRF1;H is an example of such a file. This file contains extern declarations listing all of the functions in GRF1 including many which we didn't use such as **screen**, **clear**, **vchar**, and many others. If we put the compiler directive

```
#include DSKn.GRF1;H
```

at the beginning of our program we can use any of the library functions in GRF1 with no worry. The #include directive tells the compiler to find the file GRF1;H on the specified drive and treat the contents of that file just as if they were typed in our program at the point of the #include directive.

I prefer not to use the header file. I like to be able to look at the program code and know what library functions are being used and I can do that when the extern declarations are present in the program. When the header file is used, you can't determine which functions are used unless you examine the code in detail. On the positive side the use of the header file simplifies things and prevents misspelling of function names which would lead to compilation errors. Ultimately, it comes down to a matter of personal preference.

Before we leave library functions which are in DF80 files, let's consider some advantages and disadvantages of these types of library functions. First the advantage of these functions is that we never have to wait for the code which performs these actions to be compiled or assembled. The code is ready to execute and we simply add the necessary library file(s) after we have compiled and assembled our own program.

The possible disadvantage of this method can best be explained by considering the GRF1 library file. As we have seen the functions **grfl**, **chrdef**, and **hchar** are included in this file. However there are also many other functions such as **screen**, **chrset**, **clear**, **key**, as well as numerous sprite functions in GRF1.

When we add the file GRF1 to our program we get the code for these functions as well even though we don't use them. This code takes up memory which is not available for code which we might actually need. This makes the program larger than it needs to be with no benefit. In a very large program we might not have enough memory for our program code because of the memory wasted in storing functions we don't use.

This disadvantage does not apply to all DF80 library files. The files PRINTF and SEGSTR/O each contain only one function (**printf** and **segstr** respectively) and the use of these functions results in no wasted memory.

Before continuing, I'd like to make it clear that I'm not knocking anyone associated with the creation of DF80 library files for C99. I'm simply trying to point out some pros and cons connected with use of these files.

I realize that there may have been some efficiency gained from different library functions in GRF1 using the same code. Also the prospect of having individual files for each of the functions in GRF1 (over 20 in number) is not appealing.

The other type of library file that we can use is a DV80 file which contains C99 code. This code can be added to our program by means of a #include directive. We used this method in Part 3 to add the functions **strcpy** and **strcat** to our program.

These code for these functions is in the file STRINGFNS. This code is C99 code. The #include directive causes the compiler to treat this code just as if it were part of our program file and compile it along with the rest of our program. This means we don't have to go to the effort of retyping this code in our program in order to use it. We simply tell the compiler where to find the code and it does the rest.

Since the code for these two functions is really part of our program we do not have to use extern. These functions are part of our program. The code just happens to be in a separate file.

Now let's look at the advantages and disadvantages of this type of library function. In this case we are not dealing with code that is ready to be executed. The code for these functions must be compiled and assembled along with the rest of our program. Our program will take longer to compile and assemble than it would if we had these functions in DF80 format.

Another possible problem when using these types of library functions is that they may contain symbolic constants such as NULL in the library that we used. When I first tried to use this library, everything went well when I compiled the program but an error occurred when I tried to assemble the program.

When I checked the line that produced the problem, the only thing that looked unusual was the label NULL. I knew that I hadn't used this in any of my code so I checked the file STRINGFNS. In order to use the library functions I needed to know that the symbolic constant needed to be defined with a #define directive. I also needed to know what value needed to be assigned to NULL to make things work properly. Without this knowledge the library functions would be unusable.

It would be very helpful if those who supply library functions containing symbolic constants would include a comment indicating the appropriate #define directive needed to use the library.

Yet another problem with this type of library function is that the library may contain functions that we do not need. That is true of STRINGFNS. We only need 2 of the several functions in this file. Not only do we get executable code which contains code that we never use, but we have to wait for this unused code to be compiled and assembled.

This points to the biggest advantage of this type of library function. We don't have to put up with this wastefulness. Rather than using the entire file STRINGFNS, we can create a file which contains only the code for the functions we need.

To do this load the file STRINGFNS into the editor. We want to save lines 89 to 124 as a separate file. We can do this as follows. Choose SF. Use FCTN 2 to insert 89 124 before the filename and change the filename to CAT+CPY. The line should look like this:

```
89 124 DSK2.CAT+CPY
```

When it does press ENTER to save the file.

We are not quite finished. The file CAT+CPY also contains the code for **stncat** which we do not need. Load in the file CAT+CPY and erase the lines starting with stncat(through the line above strcat(. Then save the file.

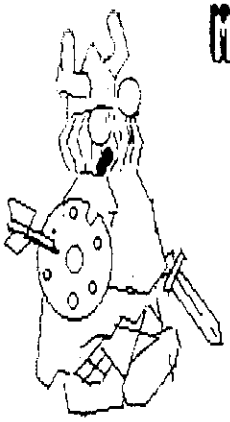
Now if we change the last line of CENTODD2;C to

```
#include "DSK2.CAT+CPY"
```

we will be using only the functions that we need. When you make this change the E/A option 3 program that results is 30 sectors. The file using STRINGFNS was 35 sectors long.

C you next time.

Users groups may reproduce this article provided that they acknowledge the author and indicate that the article appeared originally in the West Penn 99er's Newsletter



MESSAGE FROM THE PRESIDENT & EDITOR

Thanks to Norm Rokke and Bruce Harrison, I can get the Newsletter out. I got information from ED Mandich (thanks Ed). I missed the meeting and became lost as to what was going on.

The following information comes from Micropendium July/August issue. Ed called me and said that there may be some interest. I told him that I had a copy of Micro. and would re write it in this issue of WP.

FEST WEST' 98

100 ROOMS BOOKED AT LUBOCK HOTEL, WEB SITE ORGANIZED

By Tom Wils

Things are moving along with the planning of the "frist" International TI -Fest West-Lubbock on Feb. 14. Arrangements have been made with one hotel for a block of 100 rooms. It is the Sheraton hotel and they have offered a rate of $54 for a single or double room(1 or 2 persons).Each additional person is $10.We are looking at another hotel so we can be assured of enough rooms.That price will be in the same range,except it will be for up to four people.

Airlines serving Lubbock include American Eagle, ASA the Delta Connection,Continental,Southwest and United Express.

One potential fly in the ointment,so to speek, might be transportation to the TI facility.The facility is just outside the city and about five miles from the station.This means we'll need to ask those driving to Lubbock,or those renting cars,to help out by taking a couple additional passengers to the facility.I realy don't think this will be a real problem, but it is best to prepare now.

At a SouthWest Ninety Niners User Group meeting in early June,it was decided to try to make this Fest West less of a buy/sell faair,not that there won't be TI vendors there,but wewant this to be a real "TI experience!"Instead of just woundering around looking at what the vendors have,we want to have things happening in the main hall throughout the day (s).Much of this is still being formulated,but we hope to make this a fair never to be forgotten.

For more information,readers can access Tom Wills' web sitehttp://personal.rvusers.cm/-twills/).___

I have been putting in some serious overtime at the hospital latley,and I haven't had time to do anything on the TI. I wanted to get some hi scores on Cenitipede but time seems to run out. If anyone has any high scores for the international high score let me know.

There is something that I use and thought that it may interest someone else. I found it a few years ago and I posted it next to the computer.

"ONE FINGER ADDER PROGRAM"

```
100  INPUT A        130 PRINT ,B
120  B=B+A          140 GOTO 100
```

Type in the above program. You will see a (?), the numerical prompt,at the bottom left of the screen. type the number you wish to add frist,and press ENTER The (?) appears again. Enter the next number to be added,and press ENTER,the sum will appear to the right of center screen. This program allows you to add numbers using only one finger. The other hand can keep track in a column of numbers.

EXTRA Here is a list of words that I found that may be of interest to the bigenner.

Back Door- A way of gaining entry to a protected program.Usually planted by the programer.

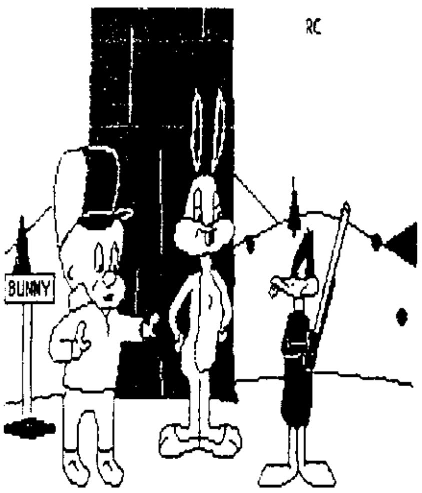
Boot- Start up a computer system. Also a trunk in a British car.

Bug_ A malfunction of software.Usually the falt of the programmer. Also when you have a LOCK-UP.

Crash- Sudden failure of a program,or your disk case of 100 disks falls on the floor.

Lockup-The computer refuses to respond to any command but quit,and the men in white come for you.

HAPPY BIRTHDAY TI'er where ever you are!!



SHAKESPEAR ON THE TI-99/4A

Adaped from the official computer hakers handbook by Ed Machonis.

On the TI Pullout:

"The evil that men do lives after them......
Juilus Casser, III,1

Upon reading the E/A Manual:

"Though this be madness, yet there is method in it."
Hamlet, II, 2

Upon writing his frist program:

"An ill-favoured thing, sir, but mine own."
As you like it, V.4

On user groupes:

"Misery aquaints a man with strange bedfellows."
The Tempest, II, 2

Upon blowing his last back- up disk:

"If you have tears, prepare to shed then now."
Julius Casser, III,2

On programing Speech Synthesizers:

"Speek the speech, I pary you, as I pronounce it to you, trippingly on the tounge."
Hamlet, III.2

On the price of peripharals:

"Costly thy habit as thy purse can buy.....
Hamlet, I,3

On his subscription Home Computer Magazine:

"Oh what a goodly outside falsehood hath."
Marchant of Venice, I,3

On TI's packaging a SSDD drive with a DSSD controller:

"Something is rotten in the state....of the art."
Hamlet, I,4

Whilst playing an Adventure game:

" Is this a dagger which I see before me.......?
Macbeth, II,1

After losing a night's work to the Quit key (FCTN =):

"O villian, villian, smilling dammed villian."
Hamlet, I,5

13 Ways to Kill your user's group

1> Do not attend meetings. If you do arrive late.
2> Be certian to leave before the meeting is over.
3> Never offer your opinion at the meeting. Wait untill you get outside, where it will make a difference.
4> At the meetings, vote to do everything, then go home and do nothing.
5> The next day find faults with your officers and fellow members. Openly criticize them without offering to assist them.
6> Take no part in the groups affairs.
7> Sit in the back and start your own meeting with others. If you speek quietly no one will notice.
8> Take all your group can give,but give nothing in return.
9> Talk about cooperation, but never comprimise.
10> Threaten to resign when things don't go your way.
11> Never ask anyone to join the group.
12> Never accept an office. Better to criticise, than be criticized.
13> Do not give anything more than you have to, regardles of what it is.

My four year old grandson told me he could spell his name. When asked to do so, the boy responded, "T-O-D, Enter."

WEST PENN 99'ERS
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Newsletter Editors

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and up date your mailing list

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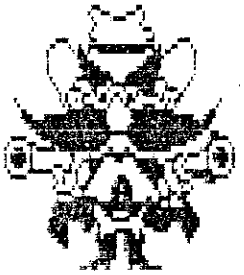

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NEXT

MEETING AUGUST 19th. 7:00 PM

WP MEMBERSHIP APPLICATION

Name______________________________
Address____________________________
City__________State__________Zip__________

Please check one

□ Newsletter membership
No library privileges
$10.00 Per year

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