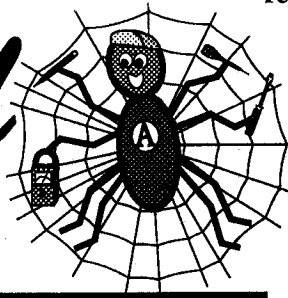


Arachnid Tech. Tips



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A Publication Especially for Operators and Technicians who service Arachnid Products

This publication is provided as an aid for field technicians and operators who troubleshoot, repair, and maintain Arachnid games. It is a technical tool designed to keep all the latest updates, service bulletins, suggestions, and ideas together in one neat package.

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HAVE A TECHNICAL QUESTION OR PROBLEM? Call us at 1-800-435-8319 and ask for Technical Service. We'll be happy to assist you in any way we can.



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Dartman Reports...Customizing Them to your Liking with a Word Processor

Excerpt taken from a paper written by Dave Schultz

The reports that are generated by Dartman III are basic and informative...but we realize they're not exactly works of art. Dartman III does not directly utilize the power of a word processor, but there are ways in which this can be accomplished, with a little experimentation and word processor know-how. If you are trained to use a word processor such as Word Perfect, and are comfortable with importing and modifying files within it, then the steps below may be of interest to you:

1. Decide which fields you wish to include in the report, and which type of report you want to print (player stats, team stats, or location stats) Set up the report as much as possible within Dartman (League Modify - Custom Reports), so that the correct information is there and ready for manipulation.
2. Save the report as a text file. Save to file using (*leaguename*).txt as the file name, then exit Dartman.
3. Initialize the word processor program you will be

using. For this example, we are using Word Perfect 6.1. Choose **Insert**, then from the insert column choose **File**. When the menu box appears, find the directories box; click on **C:**, and find **DM3DATA**. Double-click on **DATA** and find the **.TXT** file you saved. Click on this file name and then click on the **Insert** button.

4. Now the report has been inserted into your word processor. When you look at it, you may find that the rows and columns don't line up. Highlight the entire page and change the font to **New Carrier** and the font size to **8pt**. Everything should line up now...if not go to a smaller point size until it does.

5. Increasing Point Size - By changing the margins on the page you may be able to increase the point size, but you will have to experiment with this. Also you may add size by decreasing the spaces between columns. Unfortunately, this must be done row by row, or you must go back into Custom Reports, modify the spaces, resave the file, and start over.

6. Now you can create special headers, add logos, or whatever you wish within the limitations of your word processor.

This procedure can be used to edit any type of report or list that Dartman generates. You may use almost any word processor, just modify the steps (import commands, font type, point size, etc.) to coincide with the program.

If you have any questions, comments, or suggestions concerning this process, call Arachnid at 1-800-435-8319, and ask for Dave Schultz.

Using the Lookup Table for Handicapping

If you have Dartman III version 1.2, then you have two handicapping options available to you. We talked about both briefly in the previous Tech Tips...let's reiterate:

The Bell Curve method is the original method provided by Arachnid. It is ideal for leagues with unestablished or unranked players, lots of new players, and etc. It takes the stats as they come in, and based on a curve much like the ones your teachers used in school, ranks everyone in the league according to how the whole league is doing. However, like those tests at school, a couple of high ranking players can throw the curve higher, or visa versa. Because of this, the handicap of a player who didn't play in a given week may change for the next week, even though his stats didn't change.

The Lookup Table is good for established leagues. If you know where you want the dividing lines to go, (for example, if everyone with an MPR of 4.00 or higher should get 0 spot darts) then this is the method for you. Once the ranges are entered, the players' handicaps will automatically be updated as soon as stats are loaded each week. This method requires very little intervention from the league coordinator once it is set up, but much more intervention at the beginning.

In an established league, you should already have a solid record of most players within that league. You have an idea what rank constitutes a novice, intermediate, or advanced player. With these ranks in mind, you can make a functional lookup table. Here's how you do it:

You wish to set up a three-dart handicapped league. Using Points Per Dart (PPD) ranking, you have determined that a novice player will have a PPD average of between .1 and 9, an intermediate player will have a PPD average between 9 and 17, an advanced player will have a PPD average between 17 and 22, and anyone with a PPD average of over 22 will be considered a pro caliber player. There will be no exceptions, whatever category the player falls into will be their rank, and will determine how many spot darts they receive. Ok, now here's how you set this up in Dartman's lookup table:

Greater than 0 to 9 = 3 spot darts
 Greater than 9 to 17 = 2 spot darts
 Greater than 17 to 22 = 1 spot darts
 Greater than 22 to 99 = 0 spot darts
 (no one can reach 99)

Now, what about players who have never shot in the league yet, so have a PPD average of 0? You have to decide what to do with them. You can give them 0 spot darts, 1 spot dart, or more if you like. (0 or 1 are the most popular choices.) After they play one week,

they will have an average of some kind, and will begin falling into the other categories.

Let's say you decide to allow unranked players 1 spot dart their first week to start them off. So you need another category that will read:

Greater than -1 to 0 = 1 spot dart

Dartman uses the "GREATER THAN" method to avoid players falling into more than one category. This makes it easy for you...you don't have to put in numbers like "1 to 4.99". The only odd entry is the negative number needed to create a range for players with no average.

When using the lookup table for handicapping, there is nothing at all to do after it is setup, other than collect stats and print your regular reports! When stats are collected each week, the spot dart allowances are automatically updated using the new information and reflected on your report...its that simple!

The Lookup Table feature is only available in Dartman III Version 1.2, so if you haven't upgraded to this version yet, and are interested in utilizing this feature, please contact your distributor or call Arachnid, at 1-800-435-8319 if you have any questions.



SERIOUS COMPUTING" Increasing Conventional (Lower) Memory... Using DOS

Type "MEM" at your DOS prompt, what do you see? How much "Conventional" memory is there? What is your largest executable program size?

Do you occasionally have trouble with memory errors while running Dartman III or any other programs (either in or out of Windows)? If so, then you may have a problem with the amount of conventional, or lower memory available. MS-DOS V6.2 and Windows 95 DOS both provide the user with a handy utility program called "Memmaker" which really does help increase the size of available Conventional memory by loading some drivers (TSR's) into Upper memory. It may do enough to keep those errors at bay, so by all means try this first and see. If however, you still have problems, you may need to move the TSR's manually using your "config.sys" file. We're going to explain to you how to do this here.

Dartman III requires AT LEAST 590K of conventional memory free to execute properly. If your largest executable program size is less than this, then you already have or will have problems browsing, printing, etc. Depending on the size of your leagues, this may be anything from an occasional annoyance to a serious problem.

Running Memmaker may be enough to give you the memory you need, but it is not as efficient as it could be. Type "MEM/C/P" at the DOS prompt. This will give you a detailed list of the drivers (TSR's) currently running on your system, and where they are located. Print this screen for later reference.

How Does the Computer determine whether to use Upper or Lower Memory?

Upper memory is configured in 64Kbyte blocks (or pages). Drivers (TSR's) when they are loaded, cannot cross over a 64 Kbyte boundary, so they cannot be larger than 64K. Let's say you have a TSR that is 18K in size, and one that is 48K in size. The 18K TSR loads into an empty 64K block, and then the 48K TSR tries to load. It can't fit into the remaining 46K, so it has to go into the next block. Now the next TSR's will load in the same uncontrolled manner. What just happened is that a 46K block of unused space was trapped between two TSR's, and this pattern will continue on until all Upper memory is used up. Then the computer will start using the Conventional (lower) memory areas to store the remaining TSR's, thus eating up Conventional memory space, which is also used for running programs like Dartman.

What Can I do About This?

The key is in the order. The easiest way to gain maximum conventional memory is to load the largest TSR's first. When DEVICES are loaded High (e.g. DEVICEHIGH=), the TSR's are loaded in upper memory in the exact order they are listed in the config.sys file. If you list the smaller files first, then there isn't enough room in the memory blocks to load the larger files within the same 64K block. Use DOS EDIT to make the changes to your config.sys file. **Before making any changes, copy your Config.sys and Autoexec.bat files to a floppy for safekeeping.** If there is a problem with an altered file, you can always copy the old file back, with no harm done.

Getting Even More Memory

Using DOS's Edit command at the root directory, edit the Config.sys file, and look for a line that is similar to; DEVICE=C:\DOS\EMM386.EXE etc. Add the commands; NOEMS HIGHSCAN to the end of this line (see line 2 of the sample below).

CONFIG.SYS (sample of a good setup)

```
DEVICE=C:\HIMEM.SYS\SHADOWRAM:OFF/TESTMEM:OFF
DEVICE=C:\EMM386.EXE NOEMS HIGHSCAN
DOS=HIGH,UMB
DEVICEHIGH=C:\NOMEGA\DOSOAD.SYS /L=001
DEVICEHIGH=C:\MSMOUSEMOUSE.SYS/P1
DEVICEHIGH=C:\DOS\DBLSPACE.SYS /MOVE
DEVICEHIGH=C:\DOS\RAMDRIVE.SYS 4800 512 300 /E
DEVICEHIGH=C:\DOS\SETVER.EXE
DEVICEHIGH=C:\SS24\EANSI.SYS
COMSPEC=C:\DOS\COMMAND.COM
FILES=70
BUFFERS=30
STACKS=0,0
LASTDRIVE=E
```

If your EMM386 driver has the words RAM, I:E000-F000, PAGE FRAME< E000, or something similar after it, remove it and add the NOEMS and HIGHSCAN switches as above. These commands will help fill holes in your Upper memory areas. Make sure all your drivers (TSR's) are loaded high in order of size, except for HIMEM,EMM386, MSDOS, and COMMAND, which should be left alone.

AUTOEXEC.BAT (sample of a good setup)

```
ECHO OFF
CLS
PROMPT $p$g
PATH=C:\DOS;C:\BAT;C:\WINDOWS;C:\UTIL;C:\NORTON
SET TEMP=C:\
SET DIRCMD =/O
SET OAD_DRIVER = C:\NOMEGA
SET OAD_UTILITY = C:\NOMEGA
LH \DOS\SMARTDRV.EXE 1024 /X A- B-
LH C:\DOS\SHARE.EXE
MENU
```

A few more things...for ultimate Dartman performance, in your Config.sys, set files=70, buffers=30, and the stacks=0,0. That's it...now check your new memory configuration by rebooting, and running MEM/C/P. It should look comparable to the sample below. Run Memmaker again to see if it can do any more for you, but chances are it will say your system is already optimized. (Please note - the last two entries are not loaded by size because they are loaded from the Autoexec.bat file...which is read after the Config.sys is finished.)

MEM/C/P (sample of a good setup)

	TOTAL	=	CONVENTIONAL	+	UPPER MEMORY
MSDOS	16,685 (16K)		16,685 (16K)		0 (0K)
HIMEM	1,168 (1K)		1,168 (1K)		0 (0K)
EMM386	3,120 (3K)		3,120 (3K)		0 (0K)
COMMAND	3,232 (16K)		16,685 (16K)		0 (0K)
DBLSPACE	39,312 (38K)		0 (0K)		39,312 (39K)
VIBRA16	39,312 (38K)		0 (0K)		39,312 (39K)
MOUSE	24,608 (24K)		272 (0K)		24,336 (24K)
DOSOAD	24,544 (24K)		0 (0K)		24,544 (24K)
CTMMSYS	10,544 (10K)		0 (0K)		10,544 (10K)
EANSI	1,920 (2K)		0 (0K)		2,016 (2K)
RAMDRIVE	1,200 (1K)		0 (0K)		1,200 (1K)
SETVER	720 (1K)		0 (0K)		720 (1K)
SMARTDRV	29,024 (29K)		0 (0K)		29,024 (29K)
SHARE	17,904 (17K)		0 (0K)		17,904 (17K)
Free	666,256 (651K)		630,528 (616K)		35,728 (35K)

Memory Summary:

Type of Memory	Total	=	Used	+	Free
Conventional	655,360		24,832		630,528
Upper	191,440		155,712		35,728
Reserved	393,216		393,216		0
Extended (XMS)	32,314,416		7,615,536		24,698,880
Total memory	33,554,432		8,189,296		25,365,136
Total under 1MB	846,800		180,544		666,256

Largest executable program size 630,416 (616K)

Largest free upper memory bock 22,176 (22K)

MS-DOS is resident in the high memory area.

The Archives: Service Information, Past and Present... for Galaxies and older Dart Game Models



Using Phone Line Simulators and Laptop Computers for Troubleshooting



Take the guesswork out of wiring a location with a laptop computer and a phone line simulator. You can use these devices as tools to test the phone lines at almost any point, from the service entrance to the game itself, thus enabling you to eliminate line problems quickly. They can minimize how often you'll need to have a person waiting to make calls for you to check the phone lines at the home office as well. Dartman is initiated from the laptop which is plugged into the simulator, which goes to the dart game, modem, line jack, or service jack. Stats can then be collected from all the dart games on location.

If a location isn't collecting properly, or if it is a new installation, you can use the phone line simulator to eliminate the outside phone line, thus assuring that your wiring is working properly. The simulator allows two way communication between any telecommunications products, such as modems, fax machines, and single line telephones. All this can be done without disrupting the locations' phone service, because it takes the place of the existing line (unless you are testing the line itself at the main feed). The simulator provides a ring back signal to the game's modem, without disturbing the establishment.

You can also perform phone line tests using the simulator

at your home office. It can be plugged directly into a computer or at any point in the phone line system to test communications within your building.

All these procedures can help you to pinpoint phone line problems. If the problem is with the service line, then you can notify the telephone company of their responsibility. Otherwise, you can determine right down to the specific run where your problem is occurring.

ANOTHER USE - The laptop/simulator combination can be used as a training tool for employees and dart players. You can demonstrate the entire system at one location, which will help everyone to understand it better. It can be done at the captain's meeting, for example. It is an excellent way to train technicians who will be programming and installing the games and lines, as they need to know the results of their installation in order to properly service the games. Likewise, league coordinators also need to have some knowledge of the hardware side so they can better diagnose problems they may see from their computers.

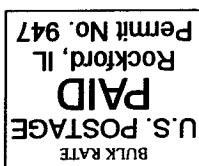
WHAT to BUY - A phone line simulator that Arachnid has used successfully is the DLE-200B by VIKING. It is small in size (smaller than a modem), lightweight, and reliable. It is available from **Jensen Electronics** - call 800-426-1194 or visit www.jensentools.com for a catalog.

Free Binders are available to keep Tech Tips issues together. Write, call, or E-mail us to request one.

IN THE NEXT ISSUE OF TECH. TIPS: Fall Leagues are Coming // Check those Phone Lines // The "League Practice Pricing" Tool // and Much More !!!

Arachnid Tech. Tips

Please Forward to your Technical Staff and Dartman Users



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