Common System Problems

There are a number of problems which can, and often do, occur when trying to run programs on a computer, especially some of the more impressive games with high resolution graphics.

The most common problems encountered with programs are:

1. Not Enough Memory;

2. System Configured Incorrectly (or not in a standard fashion);

3. Sound not working or locking system;

4. Trying to save your data or otherwise write to the CD Rom disc (impossible) but many people still try.

Problem #1: Not Enough Memory

The most common reason a DOS based program doesn't start is that there is not enough conventional RAM memory. A DOS based computer (IBM PC or compatible) has inherent limits for DOS applications (programs) regarding memory access.

You may have heard of the "640K barrier," which is what NORMAL DOS is limited to... 640,000 bytes of "conventional memory." With DOS 5 and above, or using a special memory enhancement program (such as QEMM), there is another 384K of upper memory if made available... but difficult for the average user to configure correctly.

No matter how much memory a DOS based computer has, the limits on conventional memory is still 640+384 (max) minus xxK being used by the programs and environment being loaded at start up by the Autoexec.Bat and Config.Sys files... even with 16 Megabytes or more.

Using memory managers is possible (and usually easy) to do. Some basic changes may be required to enhance your systems ability to recognize more of its memory. DOS v6 shipped with MEMMAKER. This program can be very beneficial if you are NOT on a network and don't have any unique cards in your system. I wouldn't recommend using it, except as a last resort and knowing that there is a chance it could make matters worse (although less than 20% likely).

Problem #2 - System Configured Incorrectly (or not in a

standard fashion);

If you purchased a computer completely set up, with all the programs and special cards (i.e., sound cards, modems, and scanners, etc.) then you run a slight risk that the person which set up your system didn't do it quite right, and/or had optimized it for the programs they used most often... not for YOUR needs. You may need to have a trained computer technician make such changes & optimize the system for your specific needs. We do NOT recommend the use of MEMMAKER (supplied with DOS v6 and higher) as a cure. MEMMAKER does NOT take a few very important factors into account, and can actually HURT or WORSEN the problems. *Please make a BACKUP of the following files: Autoexec.Bat and Config.Sys before attempting to change them (whether manually or using a program like MEMMAKER).

Problem #3 - Sound not working or locking up the system;

There are dozens of different sound cards on the market. Some have a lot of features, others are limited. In the Windows world, Microsoft Windows controls the sound (video, mouse, printer, etc.) which means that if a device works in one Windows program, it will automatically work with all such programs. DOS, however, isn't that standard or automatic. Each DOS program must use it's own video drivers, sound drivers, etc. therefore incompatibilities are not only possible, but also probable if your system is slightly out of the "ordinary," or "tweaked" with non-standard and/or high-end components.

The most common things you can check (and try) regarding any problems with your sound card are:

a) Are your speakers plugged in and powered on? This is suprisingly common.

b) Run the test for 8-bit, 16-bit, and FM sounds from DOS - NOT WINDOWS! Just because sound works in Windows it doesn't mean DOS is configured correctly. Most all Sound cards ship with a Sound Test program, or have a "Test Sound" in their configuration file. If it doesn't work here, NO DOS game (program) can work effectively.

c) Look in your Autoexec.Bat and Config.Sys files, verify the settings. A220, D1, and I7(or 5) are the most common settings for Sound Blaster and compatibles (A=Address, D=DMA Channel, and I=IRQ or Interrupt).

d) Verify that the program is set correctly. Some programs have a "Setup" or configure on the main menu, other programs have it accessible through another program, you may have to look and see for EACH program you are having trouble with. Also, remember, if the program was intended to run directly from a CD Rom disc, and the setup program is not on the main menu (i.e., a separate program) you will probably have to INSTALL the program to your hard disc drive to make it run, as the new settings can't be saved to the CD Rom disc.

e) If your system starts the sound, THEN locks up, chances are you are either getting power feed back from amplified speakers, or having a problem with the 16-bit compatibility. Try selecting regular Sound Blaster (not SB 16 or SB Pro). You may set the IRQ to 7 rather than 5. IRQ 5 began with the release of SB 16, and many older 8 bit card and 16 bit compatibles can't access IRQ 5 correctly. If that doesn't work please consult your sound card manual or a local technician.

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Some basic hints and tips
(NOT FOR WINDOWS 95)

(if you are brave enough to try modifying or optimizing
your system... at your own risk)

The following commands should be in the top three lines of your CONFIG.SYS file (with few exceptions) to optimize most DOS programs:

```
DEVICE=C:\DOS\HIMEM.SYS
DOS=HIGH,UMB
DEVICE=C:\DOS\EMM386.EXE M9 2048 RAM
```

The first two lines tell your computer to use the high memory... the memory BETWEEN the 640K barrier and the 1024K (first megabyte) which normally is un-used and sits idle. The third line loads a memory manager (supplied with your DOS and Windows).

NOTE: On some systems the "M9" switch will need to be removed from the command line, as it CAN lock your system. However, if it doesn't lock your
system it should give you an additional 64K block of upper memory (one page frame normally reserved for EGA, for the techies).

The "2048 RAM" section tells the computer to set up 2 Megs of EMS memory (which many DOS programs can access and use). You will see "NOEMS" in here
if the computer has been optimized for Windows use. Consider a Multiple Boot set-up. It should solve most all of your problems for your current
computer software (if done correctly) however, will require a little more manual effort when installing programs that try to change your start-up
files (i.e., Autoexec.Bat & Config.Sys).

If you type MEM /C at the DOS prompt (C:\>) your memory usage will be displayed. Check you memory BEFORE and AFTER you make changes. Pay
attention to the lines (toward the bottom) that says, "Largest Exectutable Program Size." The number in the parens (XXXK) is the answer. Some
programs won't run unless that number is as much as 605K! The individual program should tell you what is required.

There are a number of things you can try. But, unless you are comfortable editing system files, have a computer technician set up a Multi-Config
(different ways your computer can start up, depending on what you want it to do at that time). This person will also be able to (if they are good)
optimize your system for you, both memory & data. Have them check for fragments, and things which would speed up your system. This is generally
the least stressful and smartest move. If you want to try this task on your own, use the following resources:

Dan Gookin's DOS for Dummies
Your DOS manual
Try typing HELP at the DOS prompt

If all else fails, invest in a good tech to solve your problems for you, and to answer your questions in a "hands on" fashion.

Enjoy these Programs...
They are some of the best ever created...
```
                        --------------------------------------------------------------------
                        --------------------------------------------------------------------
```

For the truly brave and curious...
(**NOT RUNNING WINDOWS 95**! which has different rules)

Here is an example of a Multi-Configboot which I use on one of my computers. I'm NOT going to explain it. Ifyou don't understand it, then I suggest finding a smart friend locally to help you understand this process. NOTE: My device drivers and actual programs WILL differ from yours. Make a back up of your Autoexec.bat & Config.sys files, and proceed with caution!!!

```
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Now the Config.sys - which works in conjunction with the Autoexec.bat
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```

```
[Menu]
menucolor=7,1
menuitem=Mitsumi, Standard DOS & Windows Install w/CD Rom
menuitem=Virtual,Load the Default Virtual R: Drive & DOS
menuitem=CDBurner, Load the Burner... the Money Maker
menuitem=Defrag, Defragment ALL Hard Drives
menuitem=Tape, To connect the External Tape Backup
menudefault=mitsumi,,5

[Common]
DEVICE=C:\DOS\HIMEM.SYS
DOS=HIGH,UMB
DEVICE=C:\DOS\EMM386.EXE M9 NOEMS
DEVICEhigh=C:\STACKER\CLOAKING\CLOAKING.EXE
LASTDRIVE=Z
FILES=30
BUFFERS=10
STACKS=9,256
SHELL=C:\DOS\COMMAND.COM C:\DOS\ /E:256 /p
DEVICE=C:\STACKER\DPMS.EXE
DEVICEHIGH=C:\STACKER\STACHIGH.SYS

[Scanner]
rem ** The following command loads the Scanner Driver
DEVICEHIGH=C:\MSCSI.SYS

[CDBurner]
DEVICEHIGH=C:\CDPRO\ASPI4DOS.SYS /D /I
rem DEVICEHIGH=C:\CDPRO\CDR.SYS /H:0 /T:0 /N:1 /D:MSCD001
DEVICEHIGH=C:\CDPRO\ASPICD.SYS /D:MSCD001

[Mitsumi]
DEVICEHIGH=C:\SCSI2DRV\BTDOSM.SYS /P130 /D
DEVICE=C:\MAD16\cdsetup.sys /T:X
DEVICEHIGH=C:\MTM\MTMCDAI.SYS /D:MTMIDE01
DEVICEhigh=C:\DOS\SETVER.EXE
```

```
DEVICE=C:\STACKER\CLOAKING\MOUSECLK.EXE AHIGH CSLOW

[Virtual]

[Defrag]

[Tape]

[Common]

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Now the Autoexec.bat - which works in conjunction with the Config.sys
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@REM THE CHECK LINE BELOW PROVIDES ADDITIONAL SAFETY FOR STACKER
DRIVES.
@REM PLEASE DO NOT REMOVE IT.
@C:\STACKER\CHECK /WP

@ECHO OFF
PROMPT $p$g
SET path=C:\BATS;C:\STACKER;C:\WIN31;C:\DOS;C:\STACKER\CLOAKING
SET TEMP=C:\DOS\TEMP
SET MAD16=C:\MAD16
C:\MAD16\sndinit /b
GOTO %CONFIG%

:Virtual
VIRTUAL.BAT
GOTO CONTINUE

:MITSUMI
LH C:\STACKER\CLOAKING\MSCDEX.EXE /D:MTMIDE01 /L:M
C:\STACKER\CLOAKING\CACHECLK.EXE K=2048 WK=2048 WB=8
GOTO CONTINUE

:NEXT
Echo.
Echo.
rem --------------------- MTM ATAPI CD-ROM ---------------------
Echo Press M to Load MSCDEX by Microsoft /D:MTMIDE01
Echo Press S to Load SuperCDX by American Info Sciences
Echo.
Choice /cMS /tM,2
If errorlevel 2 goto SU
If errorlevel 1 goto MS

:MS
LH C:\DOS\MSCDEX /D:MTMIDE01 /L:M /M:20
goto continue

:SU
LH C:\CDPRO\SUPER218 /D:MTMIDE01 /a
goto end

:CDBurner
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```
LH C:\DOS\DOSKEY.COM
pause
rem choice /cyn /ty,100
WIN
goto end

:DEFRAG
CLEANUP

:TAPE
BACKUP
GOTO CONTINUE

:CONTINUE
rem LH C:\DOS\SMARTDRV.EXE /L /X
rem NOTE... Do Not run smartdrv with cloaking turned on!
LH C:\DOS\SHARE.EXE /L:500 /F:5100
LH C:\DOS\DOSKEY.COM
GOTO END

:END
SET BLASTER=A220 I5 D1 T4
```

The END - I added this example ONLY because of requests received from our customers.
Remember, you can access HELP on any DOS command by typing HELP
from the DOS prompt.

Thanks again, and enjoy our products...

The End