HOW TO RUN MICROSOFT WINDOWS 3.1 UNDER OS/2 2.1 GA

by John Muir
Melbourne, Australia
Internet Email: MUIR@DSTOS3.DSTO.GOV.AU
24 February 1994

This document describes how to run Microsoft Windows 3.1 under OS/2 2.1 GA in both fullscreen and seamless modes. Essentially you will have a common set of Windows files which will run under OS/2 and DOS. Windows when run under DOS will still be able to run the few programs which require VxDs such as Visual C++.

This process is more complex than the alternative of running WINOS2 under DOS (described in file OS2MSWIN.WRI which is also in this archive) since more fiddling with the Windows 3.1 SYSTEM.INI is required. There is also a minor problem with the OS/2 Migrate Applications program as detailed in the section KNOWN PROBLEMS below. I personally prefer the WINOS2 under DOS approach but the end result is the same in both cases - a common set of Windows or WINOS2 files which run under both DOS and OS/2 2.1 GA.

The process assumes that you have WINOS2 installed and fully operational. I have descibed the process in 9 steps which are detailed below. The description assumes that Microsoft Windows is installed in directory C:\WINDOWS and WINOS2 in installed in D:\OS2\MDOS\WINOS2. Just substitute the drive and directory names to match your particular setup.

DISCLAIMER: This procedure works for me (and several collegues) but if it does not work for you, it is your problem - not mine. I bear no responsibility what-so-ever. Nothing. Zilch.

Anyway if you do have problems or suggestions send Internet mail to John Muir at MUIR@DSTOS3.DSTO.GOV.AU and I will try to help.

STEP 1 - INSTALL WINDOWS UNDER DOS

Under MSDOS install Microsoft Windows 3.1 to directory C:\WINDOWS.

Under the C:\WINDOWS\SYSTEM directory create a directory MSDOS and another directory called OS2 as follows.

```
md c:\windows\system\msdos
md c:\windows\system\os2
```

STEP 2 - COPY WINOS2 AND WINDOWS FILES

Copy WINOS2 files from D:\OS2\MDOS\WINOS2 to C:\WINDOWS as shown below (renaming them as indicated).

```
copy d:\os2\mdos\winos2\system\gdi.exe c:\windows\system\os2\os2gdi.exe
copy d:\os2\mdos\winos2\system\os2k386.exe c:\windows\system\os2k386.exe
copy d:\os2\mdos\winos2\system\winsclip.dll
                                    c:\windows\system\winsclip.dll
copy d:\os2\mdos\winos2\system\winsdde.dll c:\windows\system\winsdde.dll
copy d:\os2\mdos\winos2\system\winsmsg.dll c:\windows\system\winsmsg.dll
copy d:\os2\mdos\winos2\winos2.com c:\windows\winos2.com
copy d:\os2\mdos\winos2\win.com c:\windows\system\os2\os2win.com
copy d:\os2\mdos\winos2\winsheld.exe c:\windows\winsheld.exe
copy c:\windows\win.com c:\windows\system\msdos\doswin.com
```

```
copy c:\windows\system\gdi.exe c:\windows\system\msdos\dosgdi.exe
```

STEP 3 - SETUP SEAMLESS VIDEO DRIVER

Look in the [boot] section of D:\OS2\MDOS\WINOS2\SYSTEM.INI for the
entry "sdisplay.drv=". Add this line to the [boot] section of C:\
WINDOWS\SYSTEM.INI. For example, "sdisplay.drv=wspdsbf.drv".

Copy the indicated file from D:\OS2\MDOS\WINOS2\SYSTEM to C:\WINDOWS\
SYSTEM as follows. This is WSPDSBF.DRV for my setup.

```
copy d:\os2\mdos\winos2\system\wspdsbf.drv c:\windows\system\wspdsbf.drv
```

Look in the [boot.description] section of D:\OS2\MDOS\WINOS2\SYSTEM.INI
for the entry "sdisplay.drv=". Add this line to the [boot.description]
section of C:\WINDOWS\SYSTEM.INI. For example,
"sdisplay.drv=1024x768x256 Large fonts 1M ET4000"

STEP 4 - SETUP MOUSE DRIVERS

Windows will not run under OS/2 with the DOS Windows mouse driver nor
will WINOS2 run under DOS with the Windows mouse driver. Therefore look
in the [boot] section of C:\WINDOWS\SYSTEM.INI and copy the file
indicated by "mouse.drv=" to C:\WINDOWS\SYSTEM\MSDOS\DOSMOUSE.DRV. For
example, if you find "mouse.drv=mouse.drv" use the following command.

```
copy c:\windows\system\mouse.drv c:\windows\system\msdos\dosmouse.drv
```

If "mouse.drv=" references a file other than MOUSE.DRV, then edit C:\
WINDOWS\SYSTEM.INI and alter the entry to be "mouse.drv=mouse.drv".

Look in the [boot] section of D:\OS2\MDOS\WINOS2\SYSTEM.INI and copy the
file indicated by "mouse.drv=" to C:\WINDOWS\SYSTEM\OS2\OS2MOUSE.DRV.
For example, if you find "mouse.drv=mouse.drv" use the following
command.

```
copy d:\os2\mdos\winos2\system\mouse.drv
                          c:\windows\system\os2\os2mouse.drv
```

Also copy the WINOS2 MOUSE.INI file (if it exists) from D:\OS2\MDOS\
WINOS2 to C:\WINDOWS as follows.

```
copy d:\os2\mdos\winos2\mouse.ini c:\windows\mouse.ini
```

STEP 5 - MORE CHANGES TO WINDOWS SYSTEM.INI

Add the following to the [boot] section of C:\WINDOWS\SYSTEM.INI

```
        useos2shield=1                <-----------Line added
        os2shield=winsheld.exe        <-----------Line added
        MAVDMApps=                    <-----------Line added
        WAVDMAPPS=                    <-----------Line added
        os2gdi.exe=gdi.exe            <-----------Line added
```

STEP 6 - ADOBE TYPE MANAGER (OPTIONAL)

If you want to use Adobe Type Manager under Windows then copy the Adobe
Type Manage files from D:\OS2\MDOS\WINOS2 to C:\WINDOWS

```
copy d:\os2\mdos\winos2\atmcntrl.exe        c:\windows\atmcntrl.exe
copy d:\os2\mdos\winos2\atm.ini             c:\windows\atm.ini
copy d:\os2\mdos\winos2\system\atm16.dll    c:\windows\system\atm16.dll
copy d:\os2\mdos\winos2\system\atm32.dll    c:\windows\system\atm32.dll
copy d:\os2\mdos\winos2\system\atmsys.drv   c:\windows\system\atmsys.drv
```

Make the following changes to the [boot] section of c:\WINDOWS\
SYSTEM.INI

```
        system.drv=atmsys.drv            <-----------Line changed
        atm.system.drv=system.drv        <-----------Line added
```


STEP 7 - EDIT OS/2 CONFIG.SYS AND AUTOEXEC.BAT

Edit the OS/2 CONFIG.SYS file and change the references to D:\OS2\MDOS\
WINOS2 in the SET PATH= and SET DPATH= statements to point to C:\WINDOWS
instead.

Also add the following lines to the start. Starting OS/2 will now
restore the original WINOS2 files that are required for Windows to run
under OS/2 (each command is on a single line, not two as shown).

```
call=d:\os2\xcopy.exe c:\windows\system\os2\os2mouse.drv
                                      c:\windows\system\mouse.drv
call=d:\os2\xcopy.exe c:\windows\system\os2\os2win.com
                                      c:\windows\win.com
call=d:\os2\xcopy.exe c:\windows\system\os2\os2gdi.exe
                                      c:\windows\system\gdi.exe
```

Edit the AUTOEXEC.BAT (on OS/2 boot drive) which OS/2 executes when
starting a DOS box (also any other OS/2 autoexec.bat you have manually
setup for different programs) and change references to D:\OS\MDOS\WINOS2
in the PATH= statement to C:\WINDOWS.

STEP 8 - EDIT DOS AUTOEXEC.BAT

Edit the DOS AUTOEXEC.BAT (on drive C:) and add the following lines.
This restores Windows to its original setup when DOS is started.

```
copy c:\windows\system\msdos\dosmouse.drv c:\windows\system\mouse.drv
copy c:\windows\system\msdos\doswin.com   c:\windows\win.com
copy c:\windows\system\msdos\dosgdi.exe   c:\windows\system\gdi.exe
```

STEP 9 - TESTING

Reboot the machine under DOS, making sure the changes made in step 8 are
executed correctly.

Run WIN.COM to verify that Windows still works under DOS in both
standard and enhanced modes.

Boot OS/2 and make sure the CALL= statements added in step 7 are
executed correctly. Windows should run under OS/2 in both enhanced and
standard modes and full screen and seamless modes. Make sure the object
you use to test seamless mode is actually pointing to the WINDOWS
directory and not WINOS2.

ADDITIONAL NOTES

If you experience jerky mouse movement when running WINOS2 full screen try setting IDLE_SECONDS to 3.

Add ATMCNTRL.EXE to the Windows program manager in the MAIN group and run it to check that Adobe fonts are available when running Windows under DOS.

Note that if you change video resolutions Windows WIN.COM will be rebuilt, so issue the following command to ensure there is a copy to restore when DOS is booted.

copy c:\windows\win.com c:\windows\system\msdos\doswin.com

The [boot] and [boot.description] sections of my C:\WINDOWS\SYSTEM.INI now look like this.

```
[boot]
shell=progman.exe
mouse.drv=mouse.drv              <----- May need to change to this
network.drv=
language.dll=langeng.dll
sound.drv=mmsound.drv
comm.drv=comm.drv
keyboard.drv=keyboard.drv
386grabber=V7VGA.3GR
oemfonts.fon=8514OEM.FON
286grabber=VGACOLRX.GR2
fixedfon.fon=8514FIX.FON
fonts.fon=8514SYS.FON
display.drv=VGA478.DRV
drivers=mmsystem.dll
SCRNSAVE.EXE=(None)
sdisplay.drv=wspdsbf.drv         <-----------Line added
useos2shield=1                   <-----------Line added
os2shield=winsheld.exe           <-----------Line added
MAVDMApps=                       <-----------Line added
WAVDMAPPS=                       <-----------Line added
os2gdi.exe=gdi.exe               <-----------Line added
system.drv=atmsys.drv            <-----------Line changed
atm.system.drv=system.drv        <-----------Line added

[boot.description]
keyboard.typ=Enhanced 101 or 102 key US and Non US keyboards
mouse.drv=Microsoft, or IBM PS/2
network.drv=No Network Installed
language.dll=English (International)
system.drv=MS-DOS System
codepage=437
woafont.fon=English (437)
aspect=100,120,120
display.drv=ET4000 1024x768    256 col. (Large fonts)
sdisplay.drv=ET4000 1024x768    256 col. (Large fonts)<-Line added
```

KNOWN PROBLEMS

OS/2 Migrate Applications will not copy WINDOWS Main and Accessories contents to OS/2 Desktop Folder "WIN-OS2 Groups". It is hard coded in MIGRATE.EXE to migrate from the directory OS2\MDOS\WINOS2.

I have experienced one machine which would not run Adobe Type Manager with Windows under OS/2 but works fine with Windows under DOS. It was using the very first production release on Windows 3.1 which may have caused problems. If you have a similar experience let me know.