

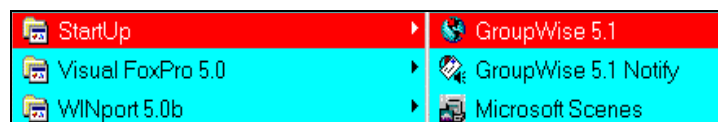
The various ways that programs can be automatically started on Windows 95/98 boot-up.

The following document is a trouble-shooting aid for the advanced user. It is not uncommon for problems, sometimes major problems, to be caused by programs, device drivers, or service tasks that are started automatically when Windows 95/98 starts. Sometimes the program that gets started automatically is easy to locate in the **StartUp** program group; at other times, however it is not as straightforward, hence this document. **This document assumes that the reader possesses advanced technical knowledge of Windows 95/98, and is familiar with .INI files, registry editing, etc...**

In total, there are four different ways in which programs can be made to automatically start-up every time the PC boots up into Windows 95. They are described below :

Windows 95/98 StartUp program group

Programs that are put into the **StartUp** program group, off the Start menu, will automatically start when the PC boots into Windows 95/98. *In the example below, on boot-up GroupWise 5.1, GroupWise 5.1 Notify, and Microsoft Scenes will all start automatically.*



RUN= or LOAD= lines in WIN.INI

Within the **WIN.INI** file in the **C:\Windows** directory, if you add a RUN or LOAD command that points to a specific application, that program will automatic start when the PC boots up into Windows 95. The example below shows a line inserted in WIN.INI by one of the early Windows 95 versions of Seagate Backup for Windows 95 (the later ones use the Registry).

```

NetWarn=0
CoolSwitch=1
device=HP LaserJet 4 Plus/4M Plus,HP PCL5MS,
load=c:\backups\seagate\win3.1\qbwsched.exe

[Desktop]
Pattern=(None)
TitleBarPaper=0

```

DRIVERS= line in SYSTEM.INI

This is one of the least known methods, and dates from Windows 3.1, however some programs still install a DRIVERS= line in the **C:\Windows\System.ini** file. If you add a DRIVERS line in the SYSTEM.INI file and have it point to specific .DLL or .DRV files, then those programs/drivers will automatically start when the PC boots up into Windows 95/98. For example :

```

keyboard.drv=keyboard.drv
system.drv=system.drv
drivers=mmsystem.dll d:\michael\download\adwrap.drv
user.exe=user.exe
gdi.exe=gdi.exe

```

RUN keys in the Windows 95/98 system Registry

Increasingly, the most common way in which installation programs ensure that a program is always started at Windows 95/98 startup, is through the Windows Registry. Using **REGEDIT** the keys to look at are :

```

HKEY_LOCAL_MACHINE\Software\Microsoft\Windows\CurrentVersion\Run
HKEY_LOCAL_MACHINE\Software\Microsoft\Windows\CurrentVersion\RunServices
HKEY_LOCAL_MACHINE\Software\Microsoft\Windows\CurrentVersion\RunOnce
HKEY_LOCAL_MACHINE\Software\Microsoft\Windows\CurrentVersion\RunServicesOnce

```

Note : If your Windows 95/98 PC is configured to have different “personalities” depending on who logs on to it, then you will also need to look at the same registry keys under the **HKEY_CURRENT_USER** and **HKEY_USERS** structures.

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