

# Portable Windows 3.1 system with BOWEP/MSCC in DOSBox

## How to install

1-Download DOSBox Portable from PortableApps.com:

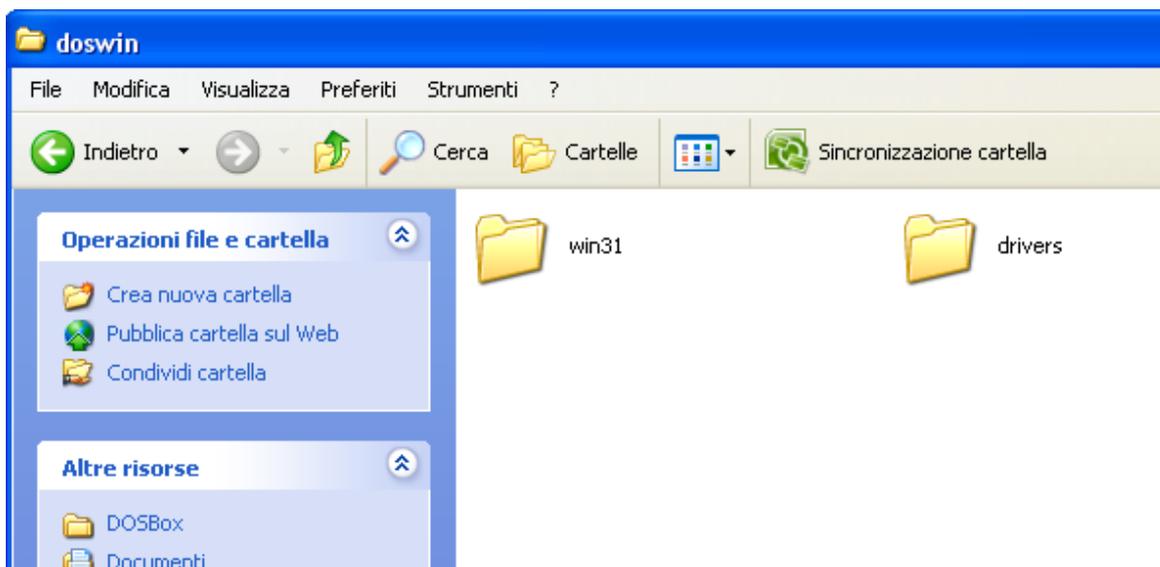
[http://portableapps.com/apps/games/dosbox\\_portable](http://portableapps.com/apps/games/dosbox_portable)

2-Run the setup file you just downloaded and install the program on your Desktop (you can also extract the files in other folders, if you want).

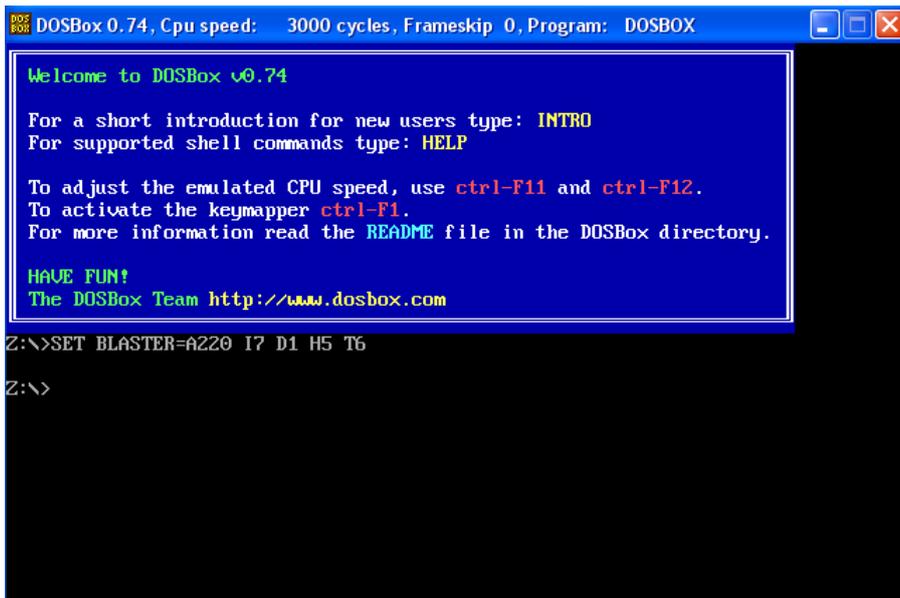
3-A folder named '*DOSBoxPortable*' will be created on your Desktop. Open it.

4-Now go to *App/DosBox* and create a new folder called '*doswin*'. Inside this folder create two sub-folders and name them '*win31*' and '*drivers*'.

5-Now you need an **original copy** of Windows 3.1. Simply put the seven installation disks into your floppy reader (some cheap readers for modern computers can still be found in most I.T. shops) and **copy all the installation files into *App/DosBox/doswin/win31*** (if you already have the files on your computer simply copy them into that folder).



6-Start DOSBox Portable by opening the file '*DOSBoxPortable.exe*'.



```
DOSBox 0.74, Cpu speed: 3000 cycles, Frameskip 0, Program: DOSBOX
Welcome to DOSBox v0.74
For a short introduction for new users type: INTRO
For supported shell commands type: HELP
To adjust the emulated CPU speed, use ctrl-F11 and ctrl-F12.
To activate the keymapper ctrl-F1.
For more information read the README file in the DOSBox directory.
HAVE FUN!
The DOSBox Team http://www.dosbox.com
Z:\>SET BLASTER=A220 I7 D1 H5 T6
Z:\>
```

7-Insert the following commands (every command should always be confirmed by pressing 'Enter'):

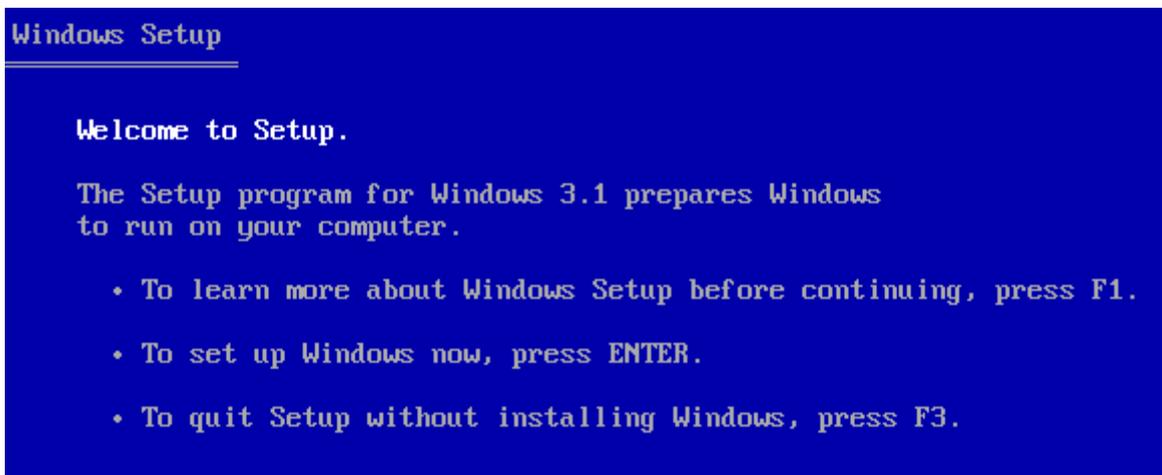
**mount c doswin**

**c:**

**cd win31**

**setup.exe**

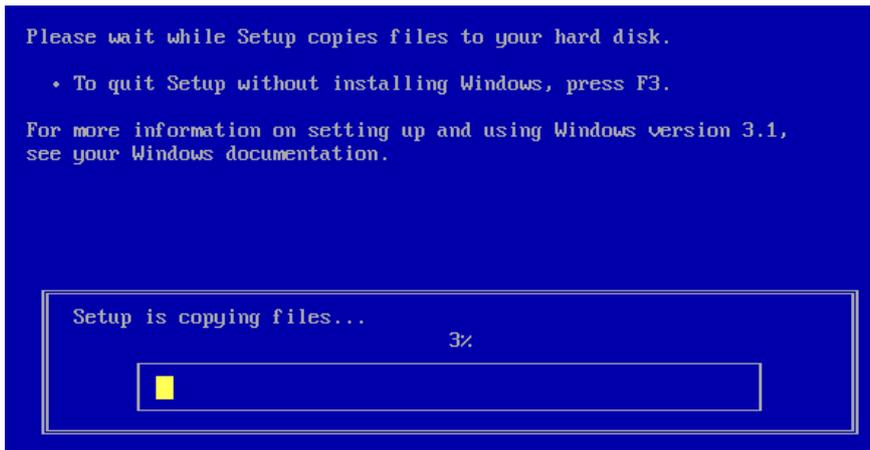
8-Windows Setup will prompt. Press 'Enter'.



```
Windows Setup
-----
Welcome to Setup.
The Setup program for Windows 3.1 prepares Windows
to run on your computer.
• To learn more about Windows Setup before continuing, press F1.
• To set up Windows now, press ENTER.
• To quit Setup without installing Windows, press F3.
```

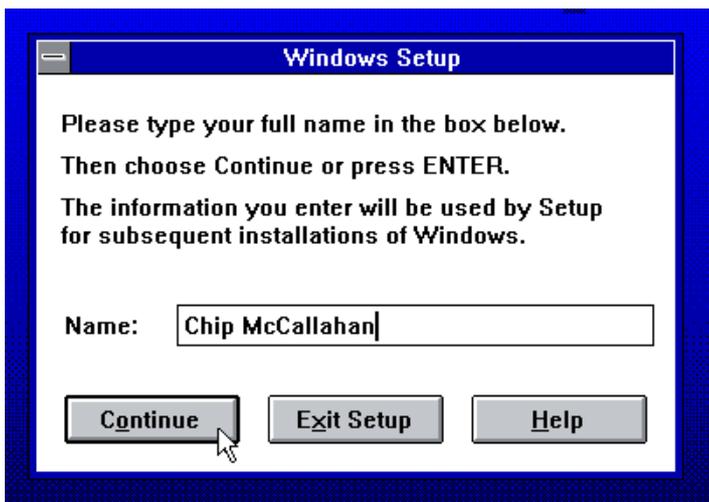
9-Press Enter.

10-Windows Setup will start copying the files.

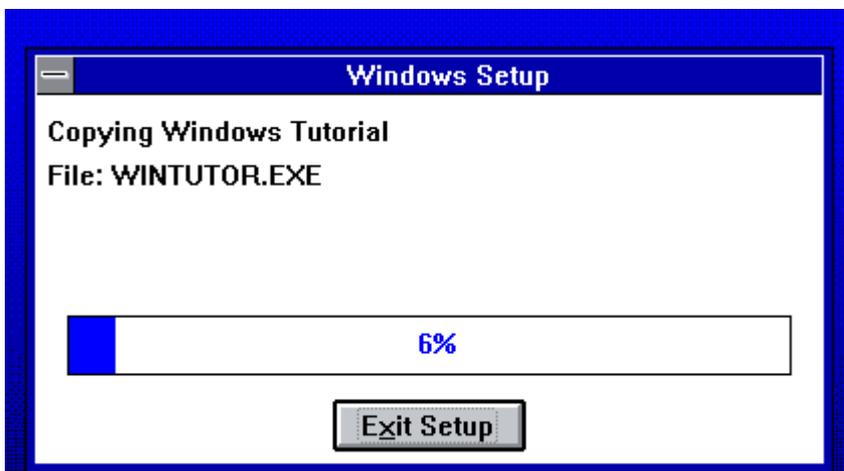


11-After a while the true setup will open and you will be asked to insert your name. Insert your name and click on 'Continue'.

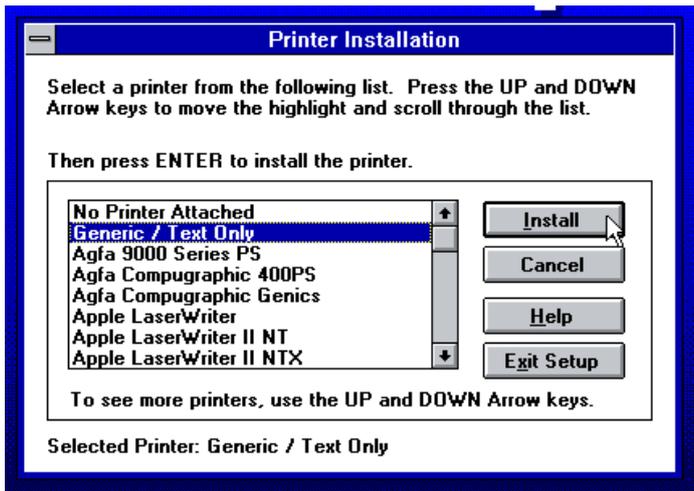
**Important Note:** from now on you need your mouse to be grabbed into DOSBox window. To be able to use your mouse into DOSBox you have to click inside the DOSBox Window. To release the mouse you can always press Ctrl+F10.



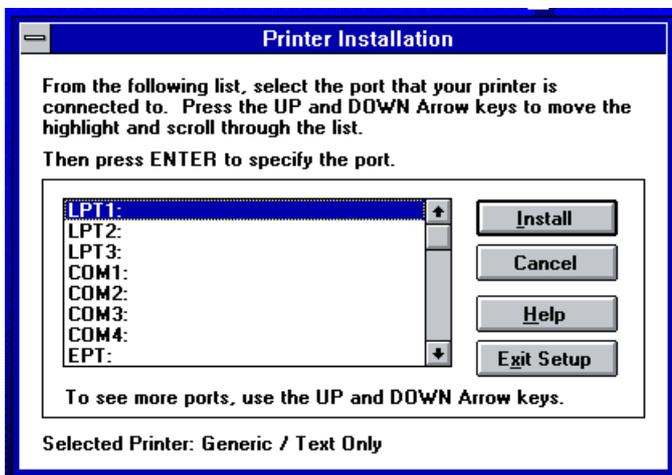
12-Click on 'Continue'. The setup will start copying the system files.



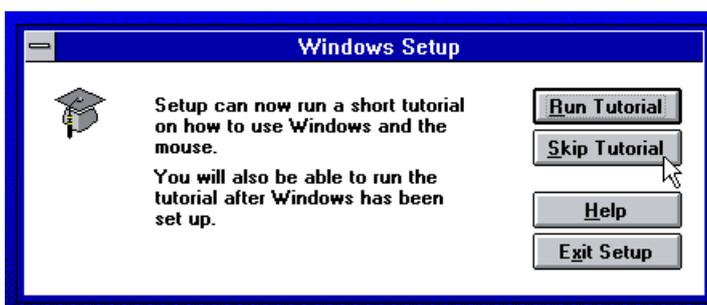
13-As a printer choose 'Generic / Text Only' and click on 'Install'.



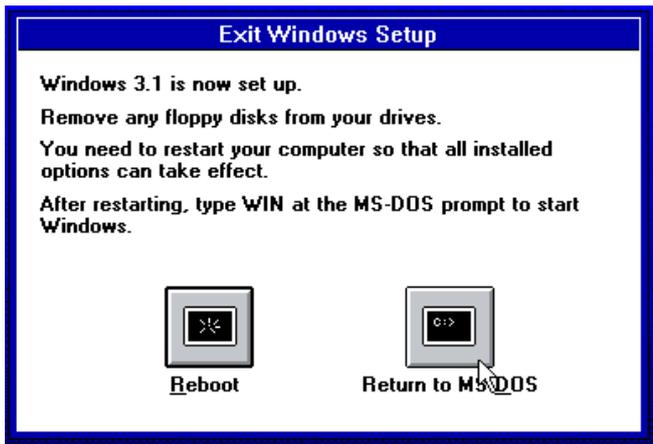
14-Choose 'LPT1:' and click on 'Install' again.



15-Wait while the setup configures your system and when a window about a tutorial pops up click on 'Skip Tutorial'.



16-Click on 'Return to MS-DOS' and insert the command `exit`.



17-DOSBox will be closed down. Now we need to edit the 'dosbox.conf' files for the first time (we will edit them again in the near future). These files are located into two different folders: you'll need to edit both the files all the times.

You can find the dosbox.conf files in the following directories:

-App/DefaultData/settings

-Data/settings

Edit the end of both the files (**[autoexec]** section) adding the following lines:

**mount c doswin**

**c:**

**SET PATH=%PATH%;C:\WINDOWS;**

**SET TEMP=C:\WINDOWS\TEMP**

```
[ipx]
# ipx: Enable ipx over UDP/IP emulation.

ipx=false

[autoexec]
# Lines in this section will be run at startup.
mount c doswin
c:
SET PATH=%PATH%;C:\WINDOWS;
SET TEMP=C:\WINDOWS\TEMP
```

18-Download the required drivers from the following links:

[Graphic Card Drivers](#): (I advise you to choose the S3 driver, however you can also use other drivers to make DOSBox emulate other video cards):

S3 Driver (suggested for Chip's Challenge and for general Windows 3.1 use):

<http://dl.dropbox.com/u/7801769/s3drivers.zip>

Tseng 3000 Driver (may cause problem with mouse pointer, not suggested):

<http://dl.dropbox.com/u/7801769/et4win31.zip>

Tseng 4000 Driver (the same as Tseng 3000, not suggested):

<http://dl.dropbox.com/u/7801769/ET40001.zip>

Paradise Graphic Card Driver: <http://dl.dropbox.com/u/7801769/paradise.zip>

#### Other Drivers:

-Joystick Support Driver (not needed – I won't explain how to install it in this guide):

<http://dl.dropbox.com/u/7801769/IBMJOY.zip>

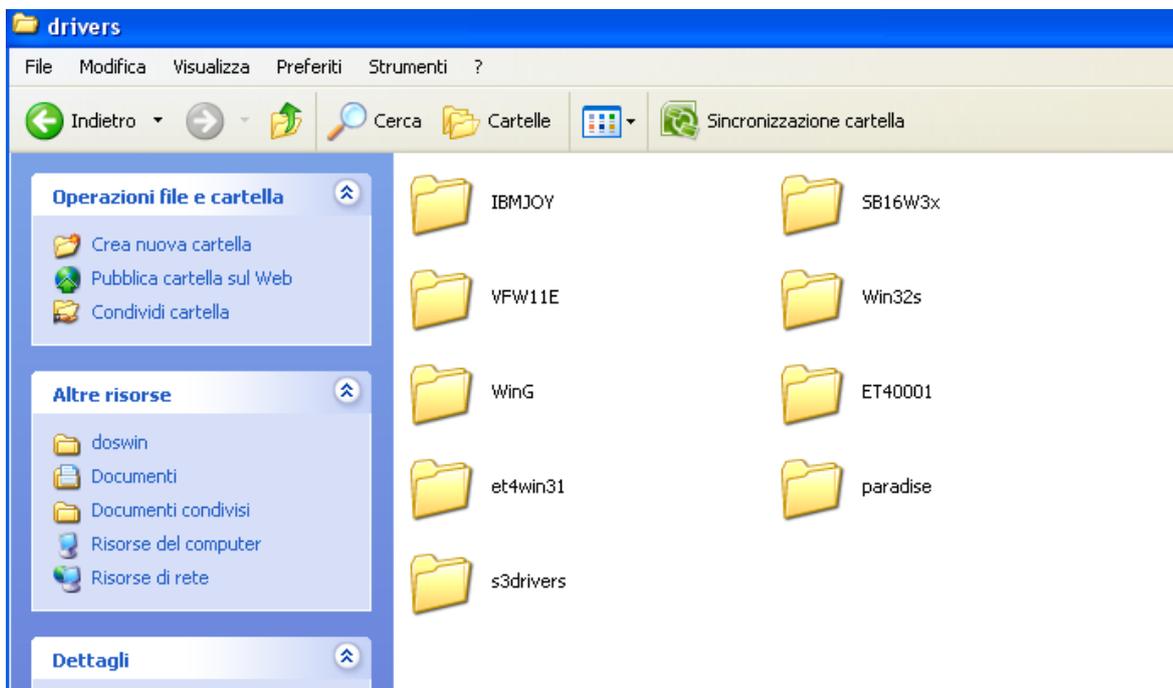
-Soundblaster Driver (very important): <http://dl.dropbox.com/u/7801769/SB16W3x.zip>

-Win32s (not needed but very interesting since it can be used to run some 32 bits applications into Windows 3.1): <http://dl.dropbox.com/u/7801769/Win32s.zip>

-Video for Windows 3.1 (not needed for CC/BOWEP/WEP): <http://dl.dropbox.com/u/7801769/VFW11E.zip>

-WinG (important for good graphic performance): <http://dl.dropbox.com/u/7801769/WinG.zip>

Download all the packages and extract them in the sub-folders with the same name in the folder *App/DOSBox/doswin/drivers*. You should have a situation like the one shown in the image below.



19-Rename the folder 's3drivers' to 's3'.

20-Open DOSBox again ('DOSBoxPortable.exe') and insert the following commands:

**cd windows**

**setup**

21-A setup window will be opened. Scroll up to 'Display:' and press Enter.

22-Scroll down to 'Other' (it is the last option) and press Enter.

```
You have asked to change the type of Display to be installed.

• To select a Display from the following list

  1) Press the UP or DOWN ARROW key to move the highlight to the
    item.
  2) Press ENTER.

• To return to the System Information screen without changing your
  Display type, press ESC.

Video 7 512K, 720x512 256 colors
XGA (640x480, 16 colors)
XGA (640x480, 256 colors)
XGA (Large fonts)
XGA (Small fonts)
Other (Requires disk provided by a hardware manufacturer)

(To see more of the list, press the (↑) arrow key)
ENTER=Continue F1=Help F3=Exit ESC=Cancel
```

23-Insert 'c:\drivers\s3' as a driver directory and press Enter.

24-Now choose 'S3 864 1.41B5 1024x768 – 64K colors SF' and press Enter for two times.

```
You have chosen to install a display driver provided by a hardware
manufacturer.

• To select the display driver you want from the following list
  1) Press the UP or DOWN ARROW key to move the highlight
    to the item.
  2) Press ENTER.

• To return to the System Information screen without changing
  your display driver type, press ESC.

S3 864 1.41B5 1024x768 32K colors SF
S3 864 1.41B5 1024x768 64K colors LF
S3 864 1.41B5 1024x768 64K colors SF
S3 864 1.41B5 1152x864 256 colors LF
S3 864 1.41B5 1152x864 256 colors SF
S3 864 1.41B5 1280x1024 16 colors LF

(To see more of the list, press the (↓) arrow key)
ENTER=Continue F1=Help F3=Exit ESC=Cancel
```

## Windows Setup

If your computer or network appears on the Hardware Compatibility List with an asterisk next to it, press F1 before continuing.

### System Information

Computer: MS-DOS System  
Display: S3 864 1.41B5 1024x768 64K colors SF  
Mouse: Microsoft, or IBM PS/2  
Keyboard: Enhanced 101 or 102 key US and Non US keyboards  
Keyboard Layout: US  
Language: English (American)  
Codepage: English (437)  
Network: No Network Installed

Complete Changes: **Accept the configuration shown above.**

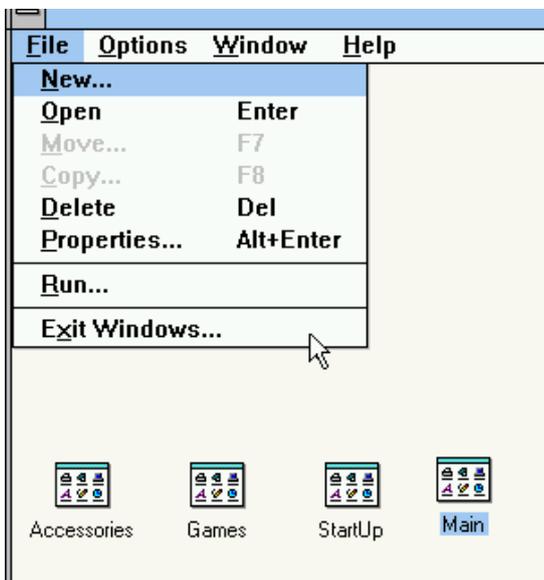
To change a system setting, press the UP or DOWN ARROW key to move the highlight to the setting you want to change. Then press ENTER to see alternatives for that item. When you have finished changing your settings, select the "Complete Changes" option to quit Setup.

ENTER=Continue F1=Help F3=Exit

25-If needed reenter the 'c:\drivers\s3' directory and press Enter.

26-Insert the command **win**. Windows 3.1 will be started up.

27-Click on 'File/Exit Windows' and on 'OK'. Then close DOSBox (using the 'exit' command).



28-Open DOSBox ('DOSBoxPortable.exe').

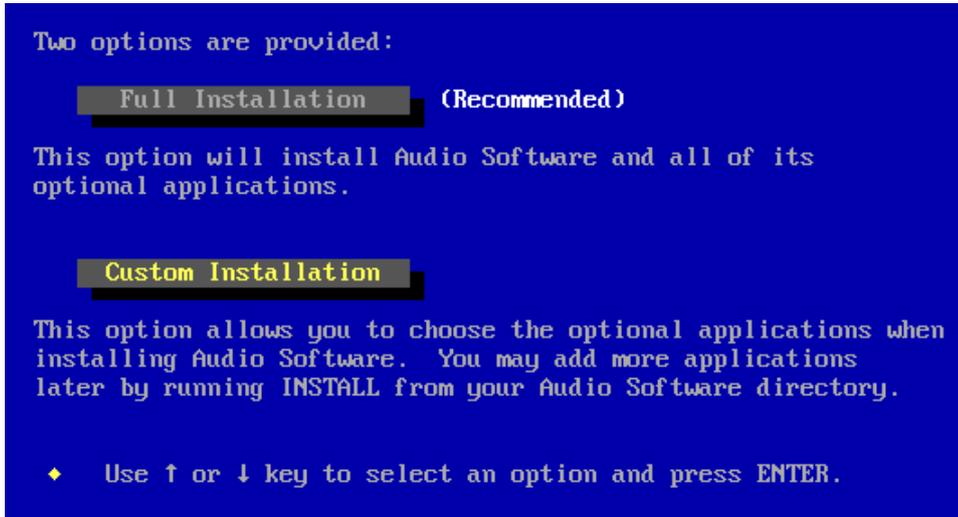
29-Insert the commands:

```
cd c:/drivers/sb16w3x
```

```
install
```

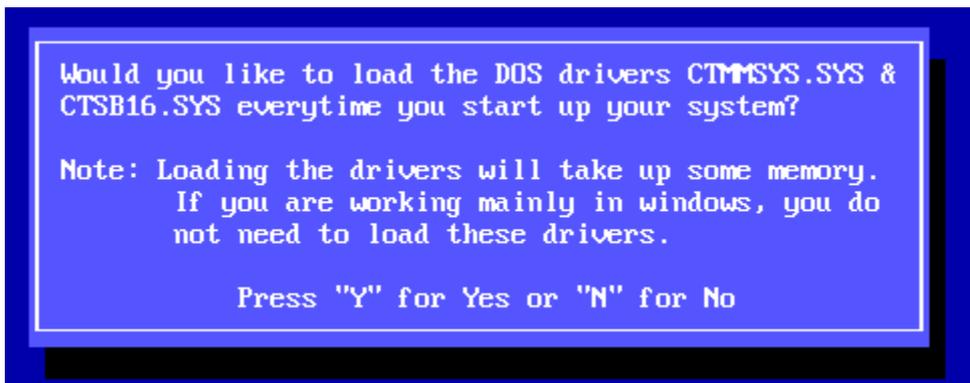
30-Press Enter.

31-Select 'Custom installation' and press Enter.

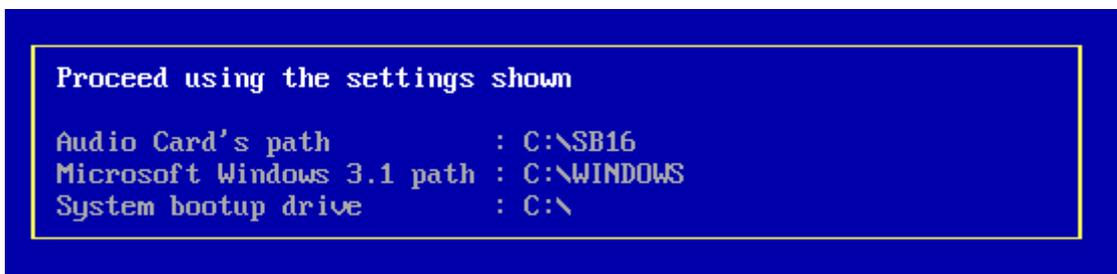


32-Press Enter.

33-Press 'N' (you don't need to use the drivers the setup wants to load).



34-Check that the directories are the same as the ones shown in the image (if they aren't, edit them):



35-Press Enter.

36-Scroll down to 'Interrupt setting' and press Enter.

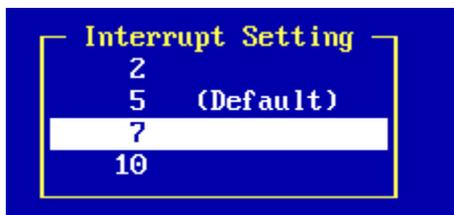
The following settings will be used for installing the Audio Software.

Proceed using the settings shown

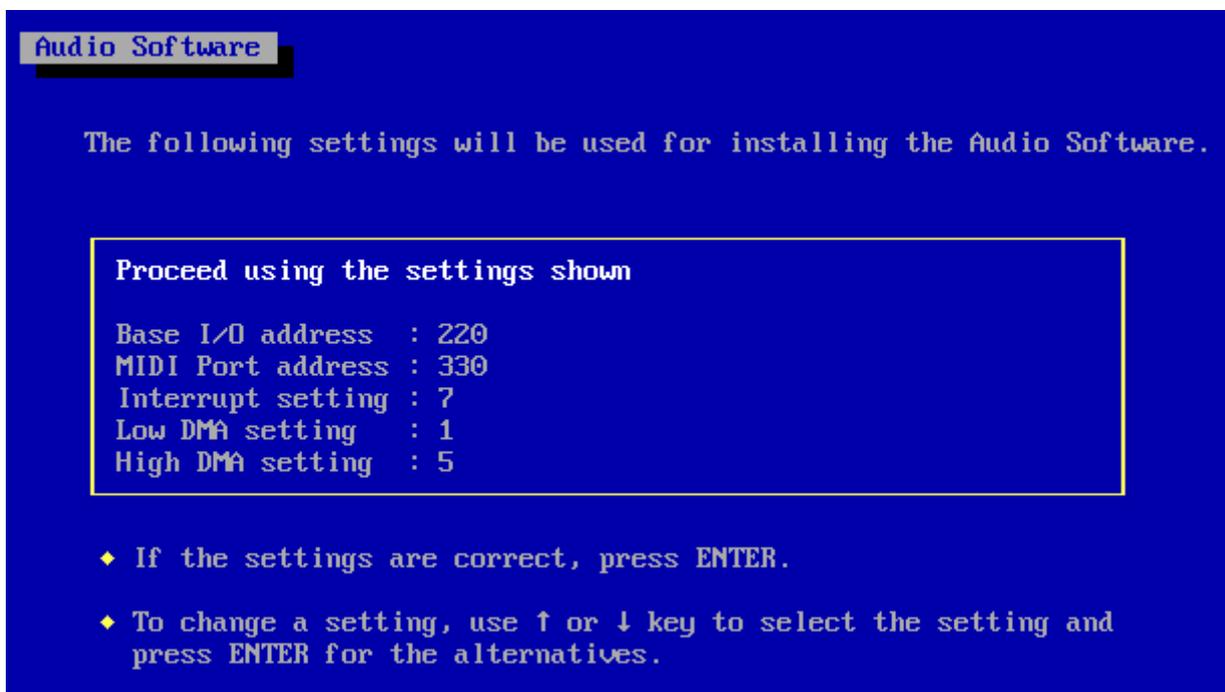
Base I/O address : 220  
MIDI Port address : 330  
Interrupt setting : 5  
Low DMA setting : 1  
High DMA setting : 5

- ◆ If the settings are correct, press ENTER.
- ◆ To change a setting, use ↑ or ↓ key to select the setting and press ENTER for the alternatives.

37-Choose '7' and press Enter to change the interrupt setting.



38-Press Enter to proceed with the setup process.



39-Wait till the setup has installed all the files (it may take some minutes). When a red window about the MIDI mapper appears, select 'Proceed' and press Enter.

40-When the setup is complete, press Enter.

41-Close DOSBox with the 'exit' command.

42-Open DOSBox and insert the command **win**.

43-Now wait a few seconds (the sound driver will finish the setup process) and shut down the system (follow [point 27](#)).

44-Close DOSBox with the 'exit' command.

45-Create the folder '*App/DOSBox/mydocs*'.

46-Now edit the two dosbox.conf files for the second time (see [point 17](#)), adding the following lines (replace the lines you added when you edited the files for the first time):

**mount c doswin**

**mount d mydocs**

**c:**

**SET PATH=%PATH%;C:\WINDOWS;**

**SET TEMP=C:\WINDOWS\TEMP**

**win**

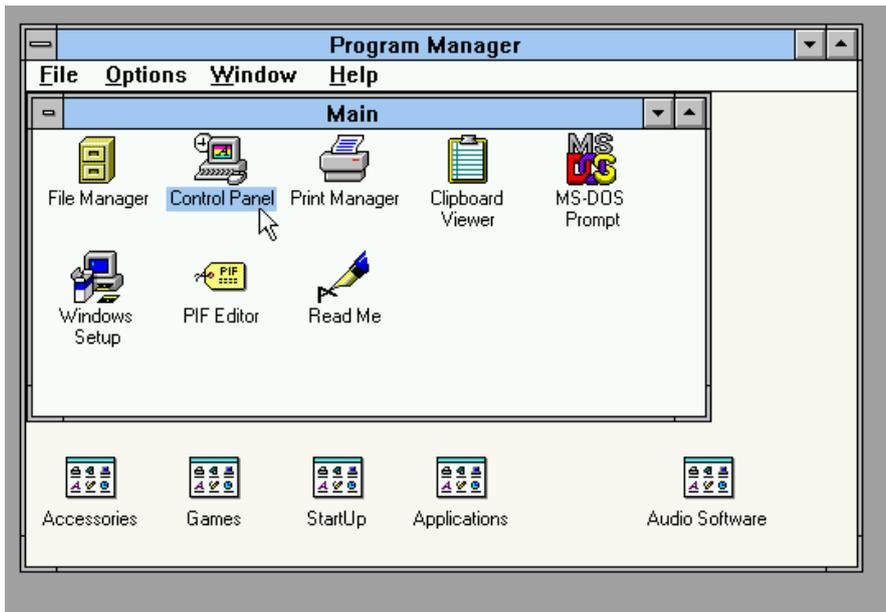
```
30 [autoexec]
31 # Lines in this section will be run at startup.
32 mount c doswin
33 mount d mydocs
34 c:
35 SET PATH=%PATH%;C:\WINDOWS;
36 SET TEMP=C:\WINDOWS\TEMP
37 win
```

47-Download the 'tada.wav' audio file: <http://www.ibiblio.org/pub/multimedia/pc-sounds/tada.wav>

Rename it to 'TADA.WAV' (capital letters) and copy it to *App/DOSBox/doswin/WINDOWS*.

48-Open DOSBox Portable. Windows 3.1 will open inside the DOSBox window.

49-Double click on 'Main' and then on 'Control Panel'.



50-Double click on 'Sound'.

51-Click on 'Windows Start'->'tada.wav'->'OK'.

52-Close all the opened windows and exit windows. Then close DOSBox (always use the 'exit' command to do so).

53-Now you need to install Bowep. Create the folder 'App/DOSBox/doswin/bowepst/disk1' and copy the Bowep installation files (you need the original ones; unfortunately I cannot give you any link to them since they are still copyrighted by Microsoft Corp. They can be actually found on the net but I was lucky enough to have a copy of an original floppy disk which came with my very old Windows 3.1 PC) inside this directory.

*Note: If you already have BOWEP/Chip's Challenge files (and you don't have the original setup) on your computer, just copy the files into 'App/DOSBox/doswin/BOWEP' (create this folder before copying the files into it).*

54-Open DOSBox (Windows 3.1 will be started up) and install Win32s (highly suggested) by opening the File Manager (Main folder) and manually running 'c:\drivers\win32s\setup.exe'. Follow the instructions given (if an error about SHARE.EXE appears simply ignore it).

55-Windows 3.1 will be automatically rebooted after Win32s setup. Install the WinG runtime (Main->File Manager, open 'c:\drivers\wing\wsetup.exe'). Windows 3.1 will be rebooted again (you have to follow the instruction given and choose to reboot the system after the installation).

56-Exit Windows ([point 27](#)) and close DOSBox. Then open it again.

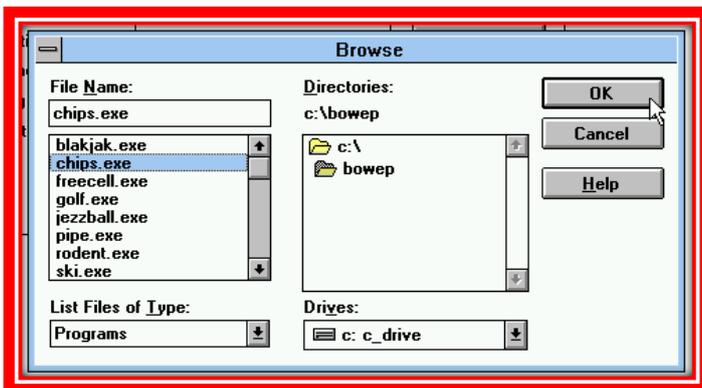
57-Start Bowep setup (Main->File Manager, open 'c:\bowepst\disk1\setup.exe').

*Note: If you have directly copied BOWEP/CC files directly to 'App/DOSBox/doswin/BOWEP' (see the [note in point 53](#)), go to [point 58's note](#).*

58-Follow the instructions given (choose as an install directory 'C:\BOWEP').

*Note: If you were redirected to this note from [point 57](#), click on 'File->New->Program Group->OK' in the Program Manager. Enter the group name (which should be 'BOWEP' or 'Best of Windows Entertainment Pack' or even 'Chip's Challenge' if you don't own the whole BOWEP package) in the 'Description:' field and click on 'OK'. The new program group will be opened. Now click on 'File->New->Program Item->OK' in the Program Manager.*

*Insert the program name (for example 'Chip's Challenge') in the 'Description:' field; click on browse and navigate to c:\bowep, then choose the application you want to create the link to (for example 'chips.exe') from the area in the left; after that click on OK (see the image below).*



*Then click on OK again and repeat the whole process for all the BOWEP applications (not necessary if you only have 'CHIPS.EXE').*

59-After the installation exit Windows ([point 27](#)) and close DOSBox. Then open it again.

60-Now you can run Chip's Challenge in an original Windows 3.1 environment! Happy Chipping!

*Note (1): the MIDI files will play with a different tone that usual. That happen (and happened in non-emulated Windows 3.x systems with SB Driver) because the SoundBlaster MIDI Mapper (which is the best for DOSBox emulation) is slightly different from the modern ones and plays some notes in a different way.*

*Note (2): you may notice that the sound effects are played with a very little lag. This won't affect the game which will run perfectly with no lag at all (as far as I was able to test it).*

*However this should happen only in some computers.*

*Note (3): always shut down the system correctly before closing DOSBox!*

*Note (4): DOSBox cannot emulate and Internet connection for Windows 3.x systems.*

*Note (5): Tile Word cannot be run from Windows 3.1 since it's a 32 bit/64 bit application.*



You can also explore the Windows 3.1 system and enjoy yourself installing other programs. In order to share files between the host system (let's say, for example, Windows XP) and Windows 3.1 you simply have to put these files into the folder 'App/DOSBox/mydocs'. Your files will appear in Windows 3.1 in the 'd:' drive. It's highly suggested not to touch the *doswin* folder (which is drive 'c:' in Windows 3.1) anymore, unless you really need to install new drivers/specific software or to back up your *entpack.ini* file from the host system. I also recommend to save your files in drive 'd:'.

Don't touch the files in drive 'z:', too.

This very interesting site also contains some links to free Windows 3.x software:

<http://www.win31.de/esoft.htm> (for QuickTime, if you want to install it, follow this link:

<http://dl.dropbox.com/u/7801769/qteasy16.exe>).

If you want to play other level packs (CCLP2.DAT or CCLP3.DAT for example) or to play with edited CHIPS.EXE files, I suggest to close DOSBox and copy the folder 'App/DOSBox/doswin/BOWEP' into 'App/DOSBox/mydocs'. You can freely edit your files (including, of course, the .DAT/.CCL files) with the host system if they are in that folder. Then you can open DOSBox and play with Windows 3.1.

You'll be able to access these files from the File Manager: they will appear in drive 'd:'.

61-I almost forgot the most important thing...

**...HAVE FUN!**

*One last note: You can rename the folder 'DOSBoxPortable' to 'Windows31' (or any other name) and copy it to any flash drive. Since you're using a portable version of DOSBox you can run it (and consequently run the emulated Windows 3.1 OS) from any PC or USB drive.*

## **APPENDIX A – THANKS TO...**

This guide has been created by ChipHome5.

A great thank to the user "Dominus" in the VOGONS forums who wrote a very interesting guide on how to install Windows 3.1 into DOSBox. This guide is heavily inspired from that one. All the links also comes from VOGONS forums.

## **APPENDIX B – WHY DOSBOX?**

You may think this is almost the same as setting up a Windows 3.1 Virtual Machine in software like VirtualBox. This is not since there are lots of advantages in the use of DOSBox:

- It is a very light and fast application (Windows 3.1 speed is much higher if run is DOSBox than in other – heavy – virtual machines softwares).
- It is fully portable and can be run from any computer or USB drive without leaving any trace on the host system. This portability also offers a better speed.
- All the OS+DOSBox takes less than 100 Mb in your disk/USB drive.
- Since DOSBox is a DOS emulator you do not need to install DOS 6.22 before installing Windows 3.1. You also don't have to configure anything before installing Windows 3.1.
- Working and high quality drivers are available for DOSBox, which can emulated a wide range of hardware with no need by the user to change any setting.
- It works on almost every MS system: from Windows 98/ME to Windows 7.
- DOSBox is a fast and light way to run 16 bit games (such as MSCC) on 64 bit systems.