



SCALA[®]

Scala MM100 Installation and Setup Guide



Scala Computer Television 





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Scala MM100 Installation and Setup Guide

Welcome to Scala MultiMedia MM100!

This guide will give you instructions on how to install and set up Scala for best performance on your PC.

Installing Scala

Insert the Scala MM100 CD into your CD-ROM drive. The procedure you follow to begin installing Scala varies slightly depending on your operating system. All the following procedures assume that d: is your CD-ROM drive; if not, substitute the correct letter:

- In Windows95, click the *Start* button and choose *Run....*
Then type:
 d:\setup
and click *OK*.
- In Windows 3.1, from the **File** menu, choose *Run...*,
then type:
 d:\setup
and click *OK*.
- In OS/2 Warp, open an OS/2 shell and type:
 d:\install
and press Return.
- In DOS, type:
 d:
 cd \
 install
and press Return.



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Installing Scala

Install options

For Windows95 or Windows 3.1, there are four options in the install/setup program:

- *Compact install*: takes about 15 MB of hard drive space
- *Typical install*: takes about 120 MB of hard drive space
- *Custom install*: can vary from 5 MB (the absolute minimum) to 600 MB (installation of everything on the CD). The Custom install lets you select which backgrounds, clips, music, and demos you wish to load, whereas in the Typical and Compact installations, these choices are already made for you.
- *Full install*: installs the entire CD to your hard drive (requires at least 600 MB of free hard drive space).

The Custom install can be used to install individual scripts and demos from the CD after you have already installed Scala itself. If you start with the Compact or Typical install now, and later decide you wish to load one of the games, you can do so easily with the Custom install.

Scala can be run directly from the CD-ROM. Of course, this will probably be slower than running from hard disk, depending on the speed of your CD-ROM. However, loading a script from the CD is an excellent way to browse the CD for the scripts, backgrounds, etc. that you may wish to install onto your hard drive later.

Choosing a language

The Windows and OS/2 setup programs first ask you to select a language. You may pick English, German, French, Spanish, Italian, Dutch, Danish, Swedish or Norwegian. After you have made your language selection, click *Next* or press Return.

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Installing Scala

Choosing a place for Scala

Next, you need to choose a default drive and directory for Scala. C:\SCALA is the default. You may call the directory something other than "SCALA", or pick a different path for its location. (If you enter a new path, the installer uses the last directory in that path; it does not automatically add "SCALA" at the end.) Click *Next* or press Return to continue.

Then you are asked to choose a Typical, Compact, Custom, or Full install. Choose one and click *Next* or press Return, then click *Yes* to continue. The program will begin the installation and show the progress on the screen as it loads each file. If you don't have enough space on your hard drive, you will be prompted to make another selection. When hard drive space is low, the Custom install is probably the best option.

Additional Scala files

After this is complete, the system will ask you if you would like to read the README file. This file contains notes and last minute changes and updates that could not be included in the manual. This file is saved on your hard drive as C:\SCALA\README.TXT, in case you need to refer to it later, but you should read it now. Close the README window, and you are ready to start Scala by double-clicking on its icon.

The installer also installs the Scala Font Converter, Hardware Diagnostics, and Uninstaller programs, with their attendant icons. The Font Converter is described in detail in the *User's Guide*. The Hardware Diagnostic and Uninstaller programs are described later in this guide.

Installing from floppy disk

If you do not have a CD-ROM drive, we have included two floppy disks with this package, so that you may still install



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Installing Scala

Scala even without a CD-ROM drive. This may also be useful to those who wish to install Scala on a laptop computer, and do not have a CD-ROM drive for their laptop.

The floppy install program is a simplified installer that is compatible with both Windows and DOS. Note that the floppy installation does not include any demo scripts, sound files, clip art or other multimedia content, but does include one background to get started. The floppy installer loads only the minimal number of files for Scala from the two floppies to your hard drive.

Building from a floppy installation

To install other backgrounds and clip art or demos from the CD, you will need to use a serial or parallel port connecting program (such as the Windows95 Parallel Port networking option, or Traveling Software, Inc.'s Laplink™ program) to connect to another computer that does have a CD-ROM drive. You may also install Scala from a networked CD-ROM if you do not have a CD-ROM drive on your local computer.

To install Scala from floppy disk, insert the Scala Disk 1 in the floppy drive, and enter:

```
a:\install
```

at the DOS prompt or in the Windows *Run...* dialog box. (This assumes that the disk is in floppy drive a:.)

You will be presented with three choices: *I* for Install, *U* for Uninstall, or *E* for Exit. Press Return to select *I* for install. The next screen prompts you for the letter of the drive on which you want to install Scala. Normally this is C:. Enter a new letter or press Return to select C: and continue. Now you will need to select the name of the directory for Scala. The default is "\SCALA". If this is acceptable, press Return; otherwise enter a new directory name. To proceed with the installation, press Return or click *Yes*.





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Starting Scala from your hard drive

The installation process starts by copying the two floppies to your hard drive. When prompted, insert Disk 2 of 2 and press Return to continue. Next, the installer asks if you would like to add C:\scala to the path statement in your AUTOEXEC.BAT file. Normally you should, so press Return.

For Windows systems, the installer looks for a WIN.INI file and asks if you would like to make modifications to add a Scala group and MM100 icon to your Windows desktop. If you would like to do this, just press any key to continue. Press Return again to confirm modifications to your WIN.INI file. Press any key again after these changes are made. The program confirms that it has made group icons and that the Scala MM100 group will be added. Press any key to continue.

At this point, you may remove the floppy disk from the floppy drive. Your floppy installation is nearly complete. After exiting to DOS, you may start Windows. You see a dialog asking if you would like to make new Program and Group icons. Click on *Continue* to confirm and again on *OK* to end. You've now installed Scala from floppy.

Starting Scala from your hard drive

To start Scala from Windows95, click the *Start* button, select *Programs* and choose Scala from the menu or double-click the Scala icon from Explorer.

To start Scala from Windows 3.1 or OS/2, double-click the Scala icon.

To start Scala from DOS, enter:

```
cd scala  
mm
```



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Starting Scala directly from a CD or network

Starting Scala directly from a CD or network

Scala may be run directly from the CD, or from a network installation. However, Scala will work best when it is installed and started from your local hard drive. To start Scala from a network or CD from DOS, make the `scala\` directory the current directory, then enter:

```
mm
```

You may also start Scala from Windows by double-clicking on the `MM.PIF` file in the `SCALA` directory from the File Manager or Windows Explorer. Depending on your network, you may have to assign a specific drive letter to the Scala network drive in order to start Scala from DOS on a network.

Running Scala for the first time

The first thing you see when starting Scala is the Scala

Note

The background color of the Scala splash screen is chosen randomly each time you start Scala. We think variety is the spice of life.

“splash” screen, which shows our logo and copyright message. The icons below the logo show the progress as Scala loads into your computer. After everything is loaded, you see the Scala **Main** menu. That’s all there is to it.

Configuring sound for Scala

The first time that Scala runs, it asks you if you would like to configure the sound options. Normally, you will want to do this. Click *Yes*, and you see the Sound Options dialog. If you know the kind of sound card that you have, you may select it directly, otherwise, you can have Scala attempt to automatically detect your sound hardware. Click *Auto Detect* and your system will be scanned for each of the settings. If you have a Creative Labs Sound Blaster™ card, and your machine is relatively new, you probably have a “Sound Blaster 16”. In most PCs, these cards typically use address 220, IRQ 5, and DMA channel 1.



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Starting Scala directly from a CD or network

If your sound card has wavetable synthesis, then you need to make sure that the MIDI options are set correctly. Many wavetable cards support General MIDI/MPU-401 on address 330. The Creative Labs Sound Blaster AWE32 normally uses an address of 620. Please note that Scala does not support the playing of MIDI files unless you have a wavetable card.

Testing your sound settings

When autodetect is finished, you should test the settings to make sure they are correct by clicking the *Test* button. If these settings are incorrect, you will not hear a sound; on rare instances the system could freeze, making it necessary to restart your computer. If you have difficulty getting the settings sorted out for your particular sound card, please consult the hardware manual for your PC or sound card. Before exiting the Sound Options dialog, you should click *Save* so that this configuration is retained for future use.

Compatibility

PLEASE NOTE: Scala currently does not have sound drivers for all makes of sound cards on the market. Scala fully supports the Creative Labs Sound Blaster family of sound cards. Many sound cards made by other manufacturers are "Sound Blaster compatible" and thus can be used with Scala. Unfortunately, this does not imply 100% compatibility. Often, however, the best setting for these cards is "Sound Blaster Pro".

Although this is only an 8-bit mode, it should work if your card is Sound Blaster compatible. Another setting that may work is "Business Audio".

If you do not have a Creative Labs sound card, you may have to experiment with the sound settings to find the combination that works best. Please consult the manual that came with your sound card for information on Sound Blaster com-



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What to do if you have problems

What to do if you have problems

It may happen that you have some initial difficulty with getting your system to work properly with Scala. In most cases, taking care of the problem is a matter of finding the right settings. In some cases, however, you can run up against absolute hardware limitations.

Problem: I get a message on the splash screen saying that Scala could not allocate 5242880 bytes of memory.

Explanation: Scala needs at least 8 MB of memory to run. If you do not have enough free memory, Scala will not start. For larger, more complex productions, we recommend that you have at least 16 MB of memory.

Problem: I do have 8 MB of RAM and I still get this message.

Explanation: The most likely cause is that too much of your memory is being used by the operating system (Windows, DOS, or OS/2). A common PC memory glutton is the SmartDrive disk-caching utility. This often defaults to a rather large setting—up to 2 MB or more—to provide a memory cache for your hard drive. We have found that in most instances, SmartDrive and Scala can get along better if you limit SmartDrive to 512 KB in your AUTOEXEC.BAT. We do not make this change automatically; you need to edit your AUTOEXEC.BAT file yourself. In this file, there probably is a line that reads:

```
SMARTDRIVE .EXE
```

or something similar. We recommend that this be changed to:

```
SMARTDRIVE .EXE 512 128
```

to free up more memory for Scala.

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Scala Hardware Diagnostics HD100 (Diag)

Problem: After loading the EXEs, the screen goes black and does not come back, or the screen is garbled.

Explanation: If this happens and you are running Scala from Windows 3.1, we recommend that you exit fully to DOS, and try again. If you are running Scala from DOS, OS/2 or Windows95, and the **Main** menu still does not come up, you should run the program Scala provides called Diag (Hardware Diagnostics).

Problem: When running Scala under Windows 3.1, the program stops when it encounters sounds, but otherwise works properly.

Explanation: Some Windows 3.1 drivers can conflict with Scala's drivers. You can avoid this by disabling the Sound EX in Scala or the Wave and MIDI drivers in Windows 3.1, or by exiting Windows to DOS and running Scala from DOS.

Scala Hardware Diagnostics HD100 (Diag)

The Diag tool is a sophisticated suite of software tools that can examine and test the hardware in your system. Diag can identify a wide range of popular audio and video hardware for you, can perform definitive tests on the hardware to determine whether it is working correctly, and allows you to set various options that can help improve Scala performance and solve compatibility problems.

Diag uses only standard VGA modes and therefore will work on any VGA system, so even if you cannot boot Scala, Diag will work. If you are using Diag to investigate a problem with sound, be sure that your sound card is working properly outside of Scala, and have it connected to speakers or headphones before you start, so that you can hear the test results.

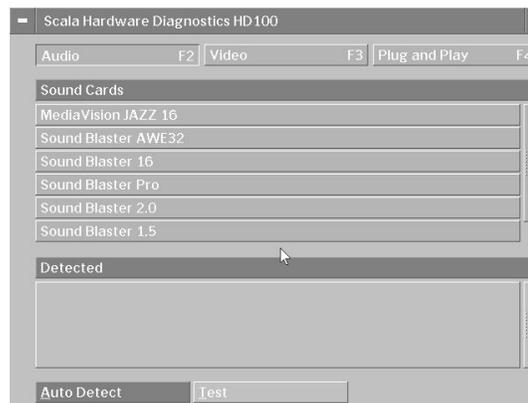
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Testing sound settings

To start Diag, exit Scala, and if necessary exit Windows or OS/2 to DOS (not just a DOS shell) and enter:

```
cd scala
diag
```

When you start Diag, you see a standard Scala “splash” screen followed by the main Diag menu.



Testing sound settings

You can test your sound card here by first clicking the *Auto-Detect* button. Once a sound card has been detected, you can test it by clicking the *Test* button. If the sound card is working and set up correctly, you should hear a voice say “Scala MultiMedia”.

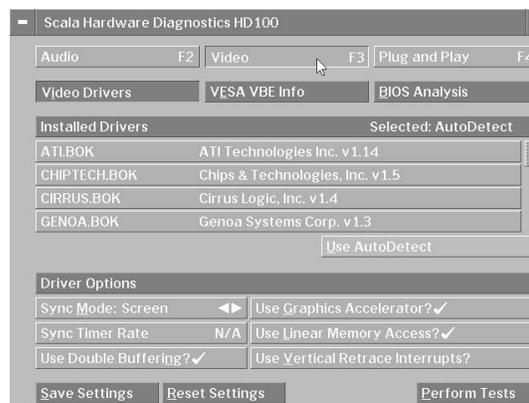
This menu is for testing purposes only. In order to adjust and save your sound settings, you must use the Sound EX configuration dialog in the **Options** menu. This is the same as the Sound dialog you saw during installation. You will need to revisit this if you upgrade your sound card.

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Using the video diagnostics

Using the video diagnostics

To work with the video diagnostics, click *Video* at the top of the screen or press F3 to see the **Video** menu.



The *Video* button actually leads to three menus: the **Video Drivers** menu shown here, the **VESA VBE Info** menu, and the **BIOS Analysis** menu. The VESA and BIOS menus only display information that Diag has learned about your system. The Video Drivers menu, however, also lets you change and save options that affect Scala's performance.

If the Video Drivers menu doesn't appear

If you don't see the above menu, click the *Plug and Play* button. Most video drivers use the Plug and Play methods to detect the video hardware, and going to the **Plug and Play** menu forces these methods to be used. Then try to enter the Video menu again.

If you still have a problem, you should disable the Plug and Play mechanism by adding the following line to your AUTOEXEC.BAT:

```
set SCALA_PNP=NO
```



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Using the video diagnostics

After adding this line and saving AUTOEXEC.BAT, reboot your computer, and then try to load the Diag program again and click the *Video* button.

Using the Video Drivers menu

The Video Drivers menu lists the video drivers that are available to Scala. Diag can probe the hardware to determine which video chip your graphics card uses, and thus what driver it needs. Diag can auto-detect by testing for each chip set, or, if you know the make of graphics chip your system uses, it can check only for that chip. Once the correct driver is established, you can test your graphics card's operation and set options for it.

Testing

AutoDetect is selected by default. To begin the test, click the *Perform Tests* button in the lower right corner of the screen. You see a dialog that allows you to change from fully automatic detection to single step detection. Normally, automatic detection should be used. Click *OK* to begin the testing. You see the screen go black for several seconds and then Diag shows you which video chip it has detected and the name of the Scala driver. Please make note of what video chip has been detected and the name of the video driver.

Scala directly supports chips from the manufacturers of most popular graphics chips, including ATI, Cirrus Logic, and S3. A complete list of supported chips is at the end of this guide.

Choosing a resolution to test

To the right of the driver name, the *Select Mode* column shows the resolution modes available with this chip and driver. Press a number to test the corresponding resolution. This lets you check that each video mode is properly supported for Scala to take maximum advantage of your hardware.





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Using the video diagnostics

The tests

The video tests Diag performs are in two groups. Between the tests in each group, press any key to continue. For each test, note any abnormalities.

Full-screen scrolling

Press "1" to start the tests. Diag loads a pattern, then scrolls the full screen. You should see line numbers scrolling upwards. Depending on how much video memory you have and what video mode you are in, this test may scroll a lot, or hardly at all.

Double-buffering

Diag displays a rapidly increasing number on a colored background. The background color should remain the same around the numbers as elsewhere.

Next, press "2" to begin the second set of tests.

Bitmap display

Diag fills the screen with the Scala logo.

Rectangle fill

Diag very quickly covers the screen with randomly sized rectangles.

Fill accuracy

Diag draws a solid gray rectangle with white frame in the middle of the screen. When you press a key, a solid black rectangle is drawn where the grey rectangle was. It should not affect the white frame.

Rectangle precision

Diag draws a triangular pattern of many dots (actually 1-pixel rectangles) within a large black rectangle.





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Using the video diagnostics

Copy accuracy

Diag draws a Scala logo in the upper left hand corner of the screen. When you press a key, the entire screen should fill with copies of this logo.

Overlapping copy

Diag scrolls two rectangular regions in the middle of the screen in opposite directions. The left side scrolls down and the right side scrolls up. The rectangles should be all white when this test is complete.

Transparent copy

On a patterned background, Diag draws a gray and black curve in a rectangle on the left side of the screen. When you press a key, just the gray area should be copied to the right hand side of the screen. The area that was black on the left side should be showing the background pattern.

Reading and writing

Next, we have a little fun: Diag shows a small race car going around a race track. It should show scrolling in both directions and not leave any visual artifacts behind. (Note that this test is not available in all resolution modes.) This is the last test.

You should repeat these tests, taking notes of any problems, for each of the resolutions listed (press 3 to change resolution modes). Problems are generally obvious: the screen image flashes or becomes unstable, random-looking video “trash” or discoloration appears, or the machine freezes.

When you are done, press Esc to get back to the main Video menu. If all tests appeared to work properly, click on *Save Settings* before exiting Diag.



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Using the video diagnostics

Options to correct problems

If you do encounter problems, you can try the following:

1. Try turning off the *Graphics Accelerator?* and/or *Linear Memory Access?* options at the bottom of the Diag's main Video menu. These are common techniques used in graphics cards today to speed up graphics performance, at the cost of also increasing potential compatibility problems.

Scala tries to take advantage of these options when they are available. You can repeat the tests above after disabling one or more options and see if there is any difference. (Some graphics cards require linear memory access to be on, so you may not be able to switch that option off.) When you get the system to work correctly for you, be sure to choose *Save Settings* so that your computer will remember this for later. Disabling these features may slow down the performance of Scala, but it can often get around a particular problem in trying to run Scala.

2. Try adjusting the *Sync Mode* options (these include the *Sync Timer Rate* and *Use Double Buffering?* options.) These options also are available in the Scala MultiMedia **Options** menu and thus are described in chapter 16 of the *User's Guide*.
3. You will get bad results if the wrong video driver is used. Instead of using *AutoDetect*, you may select a particular video driver manually by clicking on that driver and saving the settings. If you don't know what chip you have on your graphics card, you can use the **BIOS Analysis** menu to tell you.
4. If none of the chip-specific drivers work for your system, you can use the VESA driver. VESA is a standard video driver, which most cards support in their BIOS. By



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Using the video diagnostics

clicking on the *VESA VBE Info* button, you can check to see if your card has a VESA BIOS. If it does, you can go back to the video settings and manually choose *VESA* and then *Save Settings*. If you do not have a VESA driver for your card installed, you should check the software that may have come with your computer or graphics card. You may want to contact the graphics card manufacturer and request a VESA driver for the card.

5. If you are running Scala from Windows or OS/2, the drivers these operating systems provide for your graphics card may not support the advanced graphics features that Scala uses. If you are able to run Scala from DOS, but not from Windows or OS/2, or your Windows screen is garbled after running Scala, you should contact your graphics card vendor to see if they have an updated Windows or OS/2 video driver for your card.

Often you can work around these features by disabling the advanced features such as *Graphics Accelerator?*, *Linear Memory?*, and/or *Use Double Buffering?*, but your performance will suffer. The best solution is to get an updated video driver for your card, or to run Scala straight from DOS. Information on video drivers is often available from CompuServe®, America Online™, or the manufacturer. Diag can display the telephone and fax number of most manufacturers in the **BIOS Analysis** menu, as well as the BBS number, FTP address, and World Wide Web address of many. If you have a problem, check to see that you have the latest driver from the manufacturer.

6. If none of the Scala video drivers seems to work for you, and your card does not have a VESA BIOS, you should try the Universal VESA BIOS Extension (UniVBE) driver.





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The Uninstaller

Scala will automatically default to using UniVBE only if it cannot detect a known video chip or VESA driver. UniVBE will attempt to detect your video chip automatically. If this does not work, you may manually run a program called UVCONFIG in the \SCALA\CONFIG directory. Enter

```
uvconfig -?
```

for instructions on how to set up the UniVBE driver manually.

If you have tried all of the above and are still not able to get things to work, contact Scala at the phone, fax, and email, and FTP addresses listed on the separate card in the Scala package. Scala's World Wide Web address is:

<http://www.scala.com>

Additional information for advanced users is available in the README.TXT file on the CD, or at our Web site.

The Uninstaller

If for any reason it becomes necessary to remove Scala from your system, you can use the Uninstaller program. It removes only the files that were part of the original Scala installation. Nothing in the Scala directory that was added after installation, and nothing outside the Scala directory, is affected.



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Scala video drivers

Scala video drivers

Scala has specific drivers (<driver>.BOK) for the following video chips:

ATI Technologies, Inc.

(ATI.BOK)

68800 'Mach 32'

88000 'Mach 64'

Chips & Technologies, Inc.

(CHIPTECH.BOK)

F65510

F65520

F65530

F65545

Cirrus Logic, Inc. (CIRRUS.BOK)

GD5420

GD5422

GD5424

GD5426

GD5428

GD5429

GD5430

GD5432

GD5434

GD6205

GD6215

GD6225

GD6235

GD6245

Genoa Systems Corp.

(GENOA.BOK)

GVGA

Integrated Information

Technologies, Inc. (IIT.BOK)

AGX-15

AGX-16

S3, Inc. (S3.BOK)

86C911

86C924

86C928

86C801

86C805

Vision864

Vision964

Vision868

Vision968

Trio32

Trio64

Tseng Labs, Inc. (TSENG.BOK)

ET3000

ET4000

ET4000/W32

ET4000/W32i

ET4000/W32p

Weitek Corp. (WEITEK.BOK)

5086

5186

5286

P9100

Western Digital Corp.

(WESTERN.BOK)

90C00

90C10

90C11

90C20

90C22

90C24

90C26

90C30

90C31

90C33







