

Ultima[®] Underworld

The Stygian Abyss

INSTALL GUIDE CD-ROM

IBM-PC 386SX+
& 100% compatibles

NOTE: Steps 1-4 in the "Starting the Game" section of the Player's Guide are for floppy disk users.
- Use this Install Guide for CD-ROM. -

SYSTEM REQUIREMENTS

Computer. A 386SX or higher IBM-PC or 100% compatible system.

Video Card. An IBM VGA or compatible video card with at least 256K of video ram. (Note: MCGA, as found on the PS/2 model 25 and model 30, will not work).

Free RAM. You must have at least 640K of low RAM (memory) to play *ULTIMA Underworld*. Of that 640K, at least 522K of low memory must be available at the DOS prompt to run the *minimum* game configuration. Other configurations may require as much as 557K free.

EMS. In addition to 522-557K of free RAM, you must have at least 1024K (1,048,576 bytes) of *expanded memory* available at the DOS prompt. The game won't run with less than that.

Hard Disk. You must have at least 2 megabytes of hard disk space available.

temporary storage and for saving your game. Simply use the up/down arrows to select the correct drive and press the **[Enter]** key (most users should select Drive C:).

6. After selecting a storage drive, you will be asked several questions regarding your hardware configuration. Read the on-screen instructions and answer the questions for your type of system configuration. See the **CHANGING YOUR CONFIGURATION** section of this manual for more information regarding configuring your system correctly.

7. The first configuration option is *Sound System Installation*. This determines how music and sound effects are played. Your choices are:

None
PC Speaker
Ad Lib Music Card
Sound Blaster
Roland MT-32 or LAPC-1

Highlight the sound board you have (or "None" or "PC Speaker" if you don't have a sound board) and press **[Enter]**.

8. The next option is *Speech Selection*. At this point, you are given the option to turn speech of or on. If you have a 100% compatible Sound Blaster card, you can hear digitized speech.

9. When the *Confirm Selections* screen appears, if the configuration on the left is correct, select "Yes" to continue. If the configuration is incorrect, select "No" and you will begin again, from the Sound System Installation screen.

10. When you select "Yes," the installation program saves the information to your hard disk.

INSTALLATION

1. Make sure you have approximately 2 megabytes of free disk space on your hard drive. Your hard drive is used as temporary storage during game play, plus is used to store your save game files.

2. Insert the CD-ROM disk into your CD-ROM drive. Some drives require that you insert the disk into a CD caddy before inserting it into the drive.

3. Log onto your CD-ROM drive by typing its drive letter followed by a colon (ie., 'D:') and pressing the **[Enter]** key.

4. Type **UINSTALL** and press the **[Enter]** key. (When you want to play the game without reconfiguring, simply type **UW** and the **[Enter]** key and you will be taken straight into the game.)

5. The first time you run **UINSTALL**, you will be asked which drive you want to use for

11. When installation is complete, you automatically return to DOS. To play, type "UW."

12. If you have never played *ULTIMA Underworld* before, consult the Player's Guide. This begins with a tutorial that explains everything you need to know to get started. If you encounter any difficulties, consult the TROUBLESHOOTING section of this Install Guide. If problems persist, call ORIGIN Customer Service.

CHANGING YOUR CONFIGURATION

Follow the reinstallation instructions below if you ever add a sound card (or change from one sound card to another).

Return to the Root directory of your CD-ROM drive and type "Uinstall." This allows you to change any or all of the selections you made when you originally installed *ULTIMA Underworld*. Simply select the options that reflect your current hardware configuration. (See the installation instructions, above.)

MEMORY USAGE

Requirements

ULTIMA Underworld requires 640K of main RAM and at least 1024K expanded memory. Of the 640K, at least 522K must be available at the system prompt. The game will not run with less.

- *Music and sound effects* alone require additional free RAM.
- * PC Speaker (sound effects only) requires approximately 8K over the base 522K (a total of 530K).
- * The Sound Blaster and Sound Blaster Pro require approximately 31K over the base 522K (a total of 553K).
- * The Roland LAPC-1 and Roland MT-32 require approximately 20K over the base 522K (a total of 542K).
- *Digitized speech* alone requires additional free RAM.
- * The Sound Blaster and Sound Blaster Pro require approximately 6K (a total of 528K).
- *Music, sound effects and digitized speech* together require the most memory.
- * The Sound Blaster and Sound Blaster Pro require a total of approximately 557K to run music, effects and speech.
- * Using a Roland MT-32 and LAPC-1 for music and effects with either Sound Blaster board for speech requires a total of approximately 549K free.

Available RAM

To find out how much memory you have available, run CHKDSK or MEM, two DOS programs designed for this purpose. If you use CHKDSK, look at the last line of the information presented. If you use MEM, look for the line describing the largest executable program size. This tells you how much RAM memory is free. For example, CHKDSK might tell you that your 640K system has 519490 bytes free.

Continuing the Sound Blaster example above: You must have 557K free to play the game with both sound and speech. (That's 570368 bytes.) If CHKDSK tells you that you have 519490, for example, you don't have enough free memory and the game will not run.

NOTE:

Loading DOS 5.0 high solves most memory-usage problems. To do this, add the line DOS=HIGH to your CONFIG.SYS file.

Freeing RAM

If you don't have enough memory to run *ULTIMA Underworld*, you may want to remove memory-resident programs that are unnecessary for system usage from your AUTOEXEC.BAT and CONFIG.SYS start-up files.

You can view these files by using the DOS TYPE command. (Enter "TYPE AUTOEXEC.BAT" at your DOS prompt to view your AUTOEXEC.BAT file.)

To edit your AUTOEXEC.BAT or CONFIG.SYS files, use any commercial text editor or word processor capable of saving files as "text only." EDIT, the text editor included with DOS 5.0 will do the job. Consult your DOS manual for information about modifying files with EDIT.

Do not delete your AUTOEXEC.BAT or CONFIG.SYS files completely — without them, your computer will not function.

Making a New Floppy Boot Disk

If you need more free RAM, but do not want to reconfigure your system, make a bootable system floppy disk to start your computer prior to play. To do this, insert a blank disk into your A drive. Type your hard drive prompt (for example, "C:") followed by "FORMAT A:/S." This will copy enough of your system files onto the floppy disk. You can now use this disk to boot up the machine.

However, to play *ULTIMA Underworld*, you must also copy your CONFIG.SYS and AUTOEXEC.BAT files to your boot disk so you can access expanded memory (see "Expanded Memory," below, access your CD-ROM drive,

and use a mouse. Then consult the documentation that came with your memory manager, CD-ROM drive and mouse to edit these crucial files as necessary to allow their use and to free up as much RAM as possible.

Should this process fail, it is also possible to create a bootable floppy by typing "SYS [Spacebar] A:" after the drive prompt. When the words SYSTEM TRANSFERRED appear, type "COPY COMMAND.COM [Spacebar] A:" and you will see "1 FILE COPIED." This indicates that the disk is now a boot disk. Copy your AUTOEXEC.BAT and CONFIG.SYS files (suitably edited, as above).

Turn your computer off, insert your new boot disk in your A: drive, and turn the computer back on. Change to your CD-ROM drive (by typing "<DRIVE LETTER>: [Enter]"), and type "UW [Enter]" to begin play.

Expanded Memory

Memory beyond 640K can be allocated as *expanded memory*. Expanded memory is not the same as *extended memory* — if your computer has extended memory, reconfigure it as expanded memory.

To access expanded memory on 386 systems, you must use an expanded memory manager program. Two of the most common ones are Quarterdeck's QEMM.SYS, and EMM386.SYS (which comes with Microsoft Windows and DOS 5.0) but there are others. These memory managers are installed by adding a line to the CONFIG.SYS file on your computer.

The Microsoft memory manager allocates only 256K of expanded memory unless you specify a greater amount. Consult your documentation and allocate at least 1024K of expanded memory. (Note that you must have 1024K of *available* expanded memory. Memory resident software can use up some of the available memory.

In addition, you must have HIMEM installed to use the Windows memory manager. Your CONFIG.SYS file should include the following lines in this order:

```
DEVICE=<PATH>\HIMEM.SYS  
DEVICE=<PATH>\EMM386.SYS 1024
```

"<PATH>" is the directory in which these files are found (usually C:\WINDOWS, if you use Windows or C:\DOS). The number 1024 indicates the amount of memory you want to access as expanded memory. You should allocate more, if you can.

Consult your hardware dealer or your expanded memory manager's documentation for more information about configuring expanded memory and determining how much expanded memory is available.

TROUBLESHOOTING

ULTIMA Underworld fails to load or run.

• *You may not have sufficient free RAM.* Run the CHKDSK or MEM program included with DOS to check your computer's available RAM. To do this, type "CHKDSK" or "MEM" after the prompt for the drive in which you have installed the game. In CHKDSK, compare the last line on-screen to the 534,528 bytes of free RAM required. In MEM, consult the third line ("largest executable program size"). Free up RAM if needed.

• *You may be using a memory manager program that uses up too much base RAM to run ULTIMA Underworld.* For example, depending upon your system configuration, EMM386.SYS (the Expanded Memory Manager included with Microsoft Windows) may use too much of your 640K to permit *ULTIMA Underworld* to run.

• *Your CONFIG.SYS file may need to be modified.* If you get a message that reads, "Internal Error" or "Underworld can no longer run. Error code ####," edit your CONFIG.SYS file so the line reading "FILES=##" reads "FILES=20" (or more). This should allow you to play the game.

• *You may have a memory-resident TSR program that conflicts with the game.* Boot the computer from a DOS system floppy (as in "Making a New Floppy Boot Disk," above) or remove memory-resident programs before running the game.

• *You may have chosen an invalid configuration during the install process.* Check your configuration and, if necessary, re-install the game.

• *You may have filled all free space on the active disk drive.* Use the DOS DIR command to check available hard drive space. You need at least 2 megabytes for saved games and temporary files.

My mouse pointer doesn't respond properly.

Some rare combinations of hardware and software cause mouse conflicts that freeze the on-screen pointer. If your mouse pointer ever stops moving, press [Alt][F4] to free the mouse and allow the pointer to move normally.

My game runs too slowly.

Your computer may not be fast enough to run the game efficiently. The minimum configuration is a 16 MHz 386SX, but movement and animation are faster and smoother on a faster computer. From the main game screen, select the Options icon, followed by "Detail." Experiment with the various detail levels until you find a balance between speed and detail that suits you.

When I select PC Speaker sound effects all I get are "Beeps" and "Boops."

There's nothing wrong with your speaker or your game. The PC speaker sound effects are not intended to be realistic. They do, however, provide important feedback (whether you hit a creature in

combat, for example). The best answer is to upgrade your system with a sound card. (The installation menu lists the cards supported by *ULTIMA Underworld*.) If a system upgrade is not possible and you'd rather play in silence, select the Options icon from the main game screen, followed by the "Sound" option. Turn sound off and return to the game.

I want to play different characters in different games.

ULTIMA Underworld allows you to save up to four different games at once. You can save four different points in a single character's adventure or you can save one character's adventure in the first saved game slot, another character's adventure in the second slot, and so on. Any combination of characters and saved game slots is possible (up to the maximum of four).

I've tried saving my game, but I keep getting a message that says, "SAVED GAME FAILED."

Each saved game takes up approximately 300K of hard disk space. If you don't have that much available, you can't save. To get around this, you can save your new position over an existing saved game. Select the Options icon from the main game screen, followed by the "Save Game" option. Then, simply select a saved game slot you've already used. When you are asked to enter a name for the game, press **[Enter]** to use the same name as the old game, or type in a new one.

In addition, you must have 700K of free hard disk space available when you begin a session.

My CD drive is too slow to play the game from. Can I play *Underworld* on my hard drive?

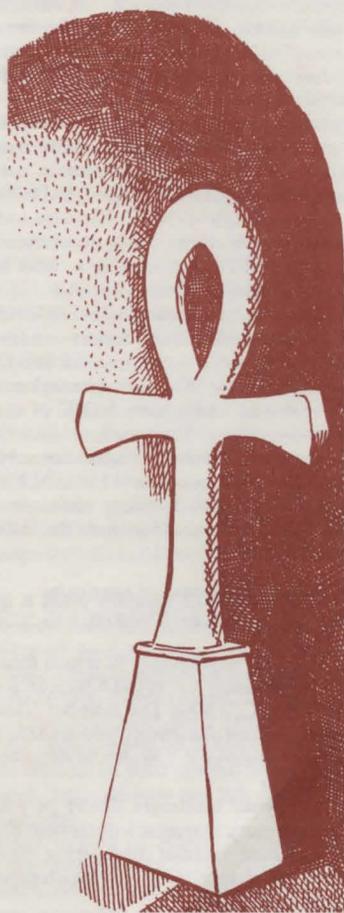
To run the CD version of *Underworld* on your hard-drive follow these steps:

1. Make sure you have at least 16 megabytes of hard drive space available.
2. Type `XCOPY D:\UW C:\UW /E/S` **[Enter]**. This will copy all of the necessary files to a \UW directory on your hard drive. (This assumes your CD drive is D: and your hard drive is C:.)
3. When the files have finished copying, change to your newly created C:\UW directory and type `WINSTALL` **[Enter]**. This will begin the *Underworld* configuration process.
4. After completing the configuration, type `UW` **[Enter]** to begin playing.

None of the suggestions above seem to help.

*If you get an error message you don't understand, or you can't solve an *ULTIMA Underworld* problem, call ORIGIN Customer Service at (512) 328-0282, Monday through Friday, between 9 a.m. and 5 p.m., Central time. Please have the following information ready, if possible:*

- the error message displayed when the problem occurred (if any),
- which version of DOS you use,
- free RAM (last line of CHKDSK info),
- expanded memory available,
- your mouse and mouse driver type,
- your graphics mode,
- your machine type,
- your sound board (if any),
- the contents of your CONFIG.SYS and AUTOEXEC.BAT files,
- whether you use *Windows* or a DOS shell.
- CD-ROM drive type
- CD-ROM extensions version



UWIGcd/892/OSI/12

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