

Install Guide

Note: You must have *Command & Conquer™ Generals* to play this game.

Introduction

Thank you for purchasing *Command & Conquer™ Generals Zero Hour Expansion Pack*. We hope that this game software will provide you with many hours of high-technology entertainment. This Install Guide is designed to assist you with installing and running the game on your system, as well as providing valuable troubleshooting and support information.

IMPORTANT

Please take time to ensure your system meets the Minimum Configuration requirements, detailed on p. 2 and on the packaging. **It is essential that your system meets these requirements in order for *Command & Conquer Generals Zero Hour Expansion Pack* to function properly.**

Checking my System Specification

The DirectX Diagnostic Tool can provide you with information about your system specification if you are unsure of your PC's current specifications.

- To run the DirectX Diagnostic Tool, click onto the **Start** button and select **Run**. In the Open box type DXDIAG. The DirectX Diagnostic Tool appears.
- Your system specification can be found in the System Information box and details about your video and sound card can be found under the Display and Sound tabs.
- You should compare this information with the information in the System Requirements section, below. As a rule of thumb, a PC that meets the *Minimum Configuration* will run the game on the most basic graphics and sound options settings, whilst a PC that meets the *Recommended Configuration* will run the game swiftly with higher settings selected.

Note: Unless you are an advanced user we do not recommend changing any of the options in the DirectX Diagnostic Tool.

- **Do you need help on getting your game started? Jump to the *Clean Up Your System before Running the Game* section on p.4!**
- **Having problems with your game crashing or locking up? Then consult the *Before Starting your Game* section on p. 5!**

System Requirements

- For best performance, you must have an AGP video card. PCI video cards are generally much slower than their AGP counterparts. PCI cards are normally below the minimum game spec.
- Make sure to turn off automatic anti-virus protection. This is usually located on the bottom of your screen in your PC tool bar. Simply right click and turn off. Remember to turn back on when exiting the game. See *Before Starting Your Game* on p. 5 for more information.
- Make sure your audio and video drivers are updated. This can be done by visiting their respective website and following instructions. See *Problems with your Software?* on p. 6.

Minimum Configuration (Solo & 2-Player Multiplayer)

- Windows® 98, Windows 98SE, Windows Me, Windows 2000, or Windows XP (Windows NT and Windows 95 not supported)
- 800 MHz Intel® Pentium® III or AMD® Athlon™ processor
- 128 MB RAM
- 8x CD-ROM/DVD-ROM drive
- 1.4 GB free hard disk space plus space for saved games (additional space required for Windows swap-file and DirectX™ 8.1 installation)
- 32 MB video card using the nVidia® GeForce2™, ATI® Radeon™ 7500 AGP video card, or more recent chipset, with DirectX 8.1 compatible driver
- DirectX 8.1 compatible 16-bit sound card
- Keyboard
- Mouse

Recommended (Solo and 2-8 Multiplayer)

- 1.8 GHz or faster Intel Pentium IV or AMD processor
- 256 MB or more RAM
- 8x or faster CD-ROM/DVD-ROM drive
- nVidia GeForce3™ or more recent DirectX3D™ capable video card

Required for Multiplayer Games

256 MB RAM required for 3- to 8-player games

Internet (2-4 players)

- 56.6 Kbps or faster direct Internet connection
- One set of game discs per player. Disc 1 and Disc 2 cannot be used simultaneously for multiplayer games.

Internet (5-8 Players)

- Cable, DSL, or a faster direct Internet connection
- One set of game discs per player. Disc 1 and Disc 2 cannot be used simultaneously for multiplayer games.

Network (2-8 players)

- TCP/IP-compliant network
- One set of game discs per player. Disc 1 and Disc 2 cannot be used simultaneously for multiplayer games.

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Clean Up Your System before Running the Game

Before you install any software, it is **critical** that your hard drive be in optimum working order. We recommend that you get into the habit of performing regular “house keeping” on your PC. ScanDisk, Disk Defragmenter and Disk Cleanup are the tools that you need to use to keep everything running smoothly. Such good practice offers you the best chance of running today’s games with minimum issues. As an added benefit, a clean system will operate more efficiently, and other software applications you use may run more quickly and stably.

- **ScanDisk (Win 98/ME)/Error-checking (Win 2000/XP)** detects and repairs disk errors and bad sectors on your hard disk drive/s (HDD/s).
- **Disk Defragmenter** ensures that the data on your HDD(s) is organised properly. This helps to prevent corrupt data and speeds up the accessing of this data by your Computer’s Central Processing Unit (CPU).
- **Disk Cleanup** helps you to clear unnecessary files from your system. This frees up disk space and prevents conflicts that could stop the game from installing correctly.

Consult the Windows Help Guides for information on running the ScanDisk/Error-checking, Disk Defragmenter and Disk Cleanup tools.

Using Windows Help

Click onto the Start button and select **Help** (or **Help and Support** for Windows XP users) to bring up the Windows Help Guides.

Now, click the Search section and type in keywords such as “Scandisk” (Win 98/ME), “Error-Checking (Win 2000/XP)”, “Defrag” and “Disk Cleanup” to find the guides that help you run these tools.

What is DirectX™?

DirectX is part of Windows® 98, 2000, ME and XP. It allows Windows to access certain parts of your PC at high speed, to allow you to run today’s games. As new technology is introduced, such as next generation 3D Accelerators and 3D soundcards, DirectX evolves to support these new technologies. *Command & Conquer Generals Zero Hour Expansion Pack* requires DirectX 8.1, which is included on the game disc for you to install if necessary.

In order to operate correctly, DirectX will need the latest software drivers for your video card and sound card. These drivers can usually be downloaded from your card manufacturer’s website or obtained from the card manufacturer’s Technical Support hotline. Using drivers that do not have DirectX 8.1 support may result in display or audio problems in *Command & Conquer Generals Zero Hour Expansion Pack*.

To find out more about DirectX, visit the official DirectX website at:

<http://www.microsoft.com/directx>

How do I install DirectX 8.1?

If you want to install DirectX **after** installing *Command & Conquer Generals Zero Hour Expansion Pack*, insert the game disc into your CD-ROM/DVD-ROM drive and click onto the Start button and select RUN. Type D:\DirectX\dxsetup (or substitute the CD-ROM/DVD-ROM drive letter if it is other than D:; check in **My Computer**) and click OK. Click REINSTALL DIRECTX to install DirectX.

Installing the Game

To install *Command & Conquer Generals Zero Hour Expansion Pack*, insert the CD into your CD-ROM / DVD-ROM drive and wait for the AutoRun menu to appear. Click **INSTALL** and then click **NEXT**, the serial number window appears. Once the serial number window appears, type in the serial number found in the white box on the back of the *Command & Conquer Generals Zero Hour Expansion Pack* manual and follow the on-screen instructions to install the game.

- If the AutoRun menu does not automatically appear, double-click the **My Computer** icon on the Desktop, then double-click on the CD-ROM/DVD-ROM drive in which the game CD is inserted. Double-click on the 'setup.exe' file to launch the AutoRun menu.

Uninstalling/Re-Installing the Game

If you are having problems or the game did not install correctly the first time, we recommend re-installing the game.

1. To uninstall the game, click onto the **Start** button select **Programs** (or **All Programs** for Windows XP users) and then choose the location where the game is listed. Click onto **Uninstall** to remove the game.
2. To reinstall the game after uninstalling it, follow the information in the *Installing the Game* section, above.

Important Note: We strongly advise users against uninstalling this game manually, since certain files associated with the game may not be correctly deleted. It is normal for any files created by players such as save games, replays and other game-related files to be left on your hard drive in the game folder after the uninstall process. Should you not wish to keep these files after uninstalling the game, delete them as you would normally delete files from your PC.

Before Starting Your Game

In some cases, programs that are running on your system can monopolise resources that the game needs in order to run properly. Not all of these programs are immediately visible, and many activate automatically on start up. There are a number of programs known as "background tasks", that are always running on your system. In some cases, these *may* cause the game to crash or lockup. As such, we recommend that you deactivate these "background tasks" prior to playing *Command & Conquer Generals Zero Hour*.

Important Note: While shutting down background tasks will optimise your system for running the game, their features will then be unavailable. Ensure that you re-enable background tasks after playing *Command & Conquer Generals Zero Hour* by restarting your computer.

Anti-Virus/Crash Guard Programs

If your system is running Anti-Virus or Crash Guard programs, you are advised to close or disable them before running *Command & Conquer Generals Zero Hour*. To do this, find the icon for the program on the Windows taskbar. Right-click the icon and select **CLOSE**, **DISABLE**, or the relevant option.

Closing General Background Tasks

Once Anti-Virus and Crash Guard programs have been disabled, you should end all unnecessary general background tasks as these can sometimes cause problems when installing or running PC games.

Windows 98/ME

1. Hold down the CTRL and ALT keys on your keyboard and press DELETE once. The CLOSE PROGRAM window appears with a list of all background tasks currently running on your system.
2. To end a background task, click on its name in the list, then click the End Task button.
Note: It is important that you DO NOT CLOSE the background tasks named Explorer and Systray as these tasks are necessary for Windows to operate. All other background tasks may be closed.

The Close Program window closes and the task is ended. Repeat the above steps to close down any/all other background tasks.

Windows 2000/XP Professional

1. Hold down the CTRL and ALT keys on your keyboard and press DELETE once. The Windows Security window appears.
2. Click TASK MANAGER to open the Windows Task Manager. To end a background task, click on its name in the list under the Applications tab, then click the End Task button.
Note: Depending on your settings, when pressing CTRL, ALT and DELETE some Windows 2000/XP Professional users may bypass the Windows Security window and go straight to the Windows Task Manager.

Windows XP Home

1. Hold down the CTRL and ALT keys on your keyboard and press DELETE once. The Windows Task Manager window appears
2. To end a background task, click on its name in the list under the Applications tab, then click the End Task button.

Important Note: Remember that the next time you restart your computer all of the background tasks that you ended reactivate automatically.

Starting the Game

- Insert the CD in your CD-ROM/DVD drive. The AutoRun menu appears. Click PLAY to start the game.

Note: If the game does not automatically start when you insert the CD into your CD-ROM/DVD drive, go to **Start>Programs** (or **All Programs** for Windows XP users)> **EA GAMES > Command & Conquer™ Generals Zero Hour > Command & Conquer™ Generals Zero Hour**. The introductory screens appear and the game begins.

Problems with your Software?

If you are having problems running your software, we want to help. There are essential methods you should carry out to ensure the latest games run on your computer. The methods listed below solve most of the problems when running the latest DirectX games.

Is your game crashing or locking up?

When running games that use the latest version of DirectX, you must ensure your computer is running the very latest driver for your video card. Installing the latest driver for your video card can help solve crashes and lock-ups in games.

First of all, try downloading the latest driver from the video card manufacturer's website. A list of popular video card manufacturers' websites is given below:

Asus: <http://www.asus.com>



ATI:	http://www.ati.com
Creative Labs:	http://www.europe.creative.com
Guillemot:	http://www.guillemot.com
Hercules:	http://www.hercules.com

If there is no improvement, try downloading the latest driver provided by the video card chipset manufacturer. Your video card chipset is the video processing chip located on your video card, e.g. Radeon (ATI) and GeForce (nVidia) are video card chipsets. A list of popular video card chipset manufacturers is given below:

nVidia:	http://www.nvidia.com
ATI:	http://www.ati.com
Power VR:	http://www.powervr.com
Matrox:	http://www.matrox.com
S3:	http://www.s3graphics.com
Intel:	http://www.intel.com
SIS:	http://www.sis.com

Are you experiencing sound problems?

If you are experiencing choppy or stuttering sound, or sound that cuts in and out try downloading and then installing the latest driver for your sound card. A list of popular sound card manufacturers is given below:

Creative Labs:	http://www.europe.creative.com
C-Media:	http://www.cmedia.com.tw
Diamond:	http://www.diamondmm.com
ESS:	http://www.esstech.com
Videologic:	http://www.videologic.com
Yamaha:	http://www.yamaha.com/service.htm

Playing Through a Router/Firewall

While many people will be able to play *Command & Conquer Generals Zero Hour* online without making any changes to their Router/Firewall there are instances when some configuration may be necessary.

Read the following section to learn how to setup your SMC Wireless Router or Linksys Router to play *Command & Conquer Generals Zero Hour* online. For other routers, a basic overview is provided at the end of the section.

To set up a SMC Model# SMC7004VWBR Wireless Barricade Router:

These instructions show how to set up your SMC Wireless Router to open ports in your firewall so that *Command & Conquer Generals Zero Hour* can create or connect to an online game.

Note: This configuration is intended only for people experiencing connection problems from behind a SMC SMC7004VWBR Wireless Barricade Router/Firewall. Other SMC Routers may or may not work with similar setups. Before you attempt to configure your router please visit www.smc.com and download the latest firmware update.

1. To access the SMC Wireless Barricade's management interface, open your web browser (Microsoft Internet Explorer, Netscape Navigator, etc.). In the address box enter <http://192.168.2.1> which is the default address for the SMC7004VWBR Wireless Router. Then click LOGIN. (By default there is no password.)

Note: If you changed the router's IP address or specified a password, then enter the new address in your web browser and specified password at the login screen. For more information, please consult your SMC User's Guide.

- At the home page of the SMC management interface, click ADVANCED SETUP.
- On the left hand side of the ADVANCED SETUP screen click on NAT and then select SPECIAL APPLICATION from the sub menu.
- On the SPECIAL APPLICATIONS screen you will need to set up an individual rule for each computer connected to your Router/Firewall to be used while playing *Command & Conquer Generals Zero Hour* online. For each computer define the following settings.

TRIGGER PORT Enter a port number that is used to initiate the connection. Do not use a standard port. For example, you can use 27901 for the first computer and 27902 for the second and so on. The trigger port must be unique for each computer.

TRIGGER TYPE Select UDP, the protocol used by the game.

PUBLIC PORT Enter the same port number here that you entered in the Trigger Port field for each computer.

PUBLIC TYPE Select UDP, the protocol used by the game.

ENABLED Check this box to enable the settings you entered for each computer.

Note: Write down each port number used in step 4. You'll need to know this for step 6.

- Repeat step 4 for each computer connected to your Router/Firewall that is used to play *Command & Conquer Generals Zero Hour* online. To finish click APPLY and then close your web browser.
- Now you must tell the game what port to use. Start *Command & Conquer Generals Zero Hour* on each computer. At the Main Menu select OPTIONS. At the bottom of the OPTIONS screen under NETWORK OPTIONS look for FIREWALL PORT OVERRIDE. In the dialog box type a port number that matches one of the port numbers entered in step 4. Then, on the same screen click REFRESH NAT. Click ACCEPT to apply your settings and exit the OPTIONS screen.
- Repeat step 6 for each computer connected to your Router/Firewall that is being used to play *Command & Conquer Generals Zero Hour* online. Again, each computer must use a unique port number that matches one used in step 4.
- You are now ready to play *Command & Conquer Generals Zero Hour* online.

To set up a Linksys Model# BEFSR11 or BEFSR41 Router

These instructions show how to set up your Linksys Router to open ports in your firewall so that *Command & Conquer Generals Zero Hour* can create or connect to an online game.

Note: This configuration is intended only for people experiencing connection problems from behind a Linksys BEFSR11 or BEFSR41 Router/Firewall. Other Linksys Routers may or may not work with similar setups. Before you attempt to configure your router please visit www.linksys.com and download the latest firmware update.

- To access the web based utility of your Linksys Router, open your web browser (Microsoft Internet Explorer, Netscape Navigator, etc.). In the address box enter <http://192.168.1.1> which is the default address for the Linksys BEFSR11/BEFSR41 Router. A password request page will pop up. Leave the user name blank and enter **admin** in the password field. Then, click OK.

Note: If you changed the routers IP address, specified a user name or new password, then enter the new address in your web browser and enter the specified user name and new password at the password request screen. For more information, consult your Linksys User's Guide.

- From the main setup page click on the ADVANCED tab, then the FORWARDING tab and finally at the bottom of the screen click on PORT TRIGGERING.

3. On the PORT TRIGGERING screen you will need to set up an individual rule for each computer connected to your Router/Firewall to be used while playing *Command & Conquer Generals Zero Hour* online. For each computer define the following settings.

APPLICATION NAME	Enter the name of the connection. It can be anything: Generals1, Generals2, etc.
TRIGGER PORT RANGE	Enter a port number that is used to initiate the connection. Do not use a standard port. For example, you can use 27901 for the first computer and 27902 for the second and so on. Be sure to enter the same port number in both fields under this heading. As an example your first computer would be 27901~27901, the second 27902~27902 and so on. The trigger port must be unique for each computer.
INCOMING PORT RANGE	Enter the same port number here that you entered in the Trigger Port Range field for each computer. Be sure to enter the same port number in both fields under this heading.

Note: Write down each port number used in step 3. You'll need to know this for step 5.

4. Repeat step 3 for each computer connected to your Router/Firewall that is used to play *Command & Conquer Generals Zero Hour* online. To finish click APPLY and then close your web browser.
5. Now you must tell the game what port to use. Start *Command & Conquer Generals Zero Hour* on each computer. At the Main Menu select OPTIONS. At the bottom of the OPTIONS screen under NETWORK OPTIONS look for FIREWALL PORT OVERRIDE. In the dialog box type a port number that matches one of the port numbers entered in step 3. Then, on the same screen click REFRESH NAT. Click ACCEPT to apply your settings and exit the OPTIONS screen.
6. Repeat step 5 for each computer connected to your Router/Firewall that is being used to play *Command & Conquer Generals Zero Hour* online. Again, each computer must use a unique port number that matches one used in step 3.
7. You are now ready to play *Command & Conquer Generals Zero Hour* online.

Other Routers

If you own a different brand of router, try to apply the settings listed above in similar areas or your router configuration. While different routers may use different terminologies you basically want to specify the same port for the outgoing and incoming packets and set the game to use the same port as well.

Note: Before applying any changes to your router configuration, review the documentation that came with the router. Also note that making any changes to your router could have adverse effects on your current network configuration if done improperly. It's generally a good idea to record your current settings before making any changes.

Network Problems

Command & Conquer Generals Zero Hour Expansion Pack requires a TCP/IP compliant network and network interface card for network play. If you experience difficulties with network play, consult your network manual or network administrator for specific information on loading drivers.

Connection Problems

- Make sure the computers you are trying to connect are on the same network and are all using the required protocol.
- Do not run any applications that communicate over the network in the background (e.g., mail programs, personal schedulers, network monitors, or instant messengers) while playing a network game.

Testing Network Connectivity

It is possible to test your network status with DirectX.

1. Click the **Start** button on your Windows Taskbar, then click **Run....**
2. In the Run dialog box, type **dxdiag** then click **OK**.
3. Click the **Network** tab.
4. Click the **Test DirectPlay** button, then highlight the network protocol you will be using from the list of Service Providers.
5. Make sure that the button next to **Create New Session** is selected, then click **OK**. A DirectPlay Chat test session opens.
6. To test your network connectivity, other users must attempt to join your DirectPlay Chat test session. To join your test session, other users should follow steps 1-4, select **Join Existing Session**, and click **OK**.
7. Attempt to chat by typing a message and clicking **Send**.

Test results are displayed in the Notes field upon closing the test session. Contact your network administrator if results indicate that a problem exists or if other users have difficulty joining your Chat test session.

IP Address

If you do not know what your TCP/IP address is, you can find out by following these steps:

To determine your IP address (Windows XP and 2000):

1. Establish a direct Internet connection.
2. Click the **Start** button and select **Run....**
3. Type **cmd** in the Run dialog box, then click **OK**. A command prompt window opens.
4. Type **ipconfig** and press **Enter**. A list of information is displayed, including your current **IP Address**.
5. Record this number and close this window when finished.

To determine your IP address (Windows Me or 98):

1. Establish a direct Internet connection.
2. Click the **Start** button and select **Run....**
3. Type **winipcfg** in the Run dialog box, then click **OK**. The IP Configuration utility opens.
4. Select the network device you are using to connect to the Internet from the available choices in the drop down box.
- Your IP address is the number displayed in the IP Address field.
5. Record this number and close this window when finished.

Network Performance Issues

There are various adjustments you can make to be sure you get the best performance out of your network game. These apply to the host computer as well as the client computers. Try them on the host first as this may solve all the problems.

- Make sure the host computer (the one that creates the network game) is the fastest of the computers, as it controls the game speed.
- High-traffic networks slow the game down considerably. Avoid playing the game at peak traffic hours, while there are large file transfers or print jobs being done.
- The slowest computer limits performance. Adjusting the resolution, detail settings, etc. on a slow machine can help boost performance in a network game.

TCP and UDP Port Info

Command & Conquer Generals Zero Hour Expansion Pack uses the following TCP and UDP port(s) for Internet play:

TCP ports: 80, 6667, 28910, 29900, 29920

UDP ports: 4321, 27900

Customer Support – Here to help you!

Problem? Question? If you're having trouble installing or running your game, we're here to help.

Electronic Help File

Your game includes an electronic help file to help solve any problems you might be having. The help file can be accessed from the Windows Start Bar in the same group as your game. Please check here first for common problems and solutions.

Ask Us

Visit www.uk.ea.com or www.ie.ea.com and click on SUPPORT CENTRE to be taken to our online Support Centre for the UK and Ireland. We are likely to have a solution to your problem stored in our knowledge base – to find out, click on GET HELP. The solutions you'll find here are the same as those used by our customer support staff, so you can be sure they're always accurate and up to date.

To ensure you find the answer to your question, please choose the game type and title carefully, as well as the format you are playing on.

If you can't find the answer to your question, click on ASK EA to send your question to a customer support technician. We'll review your question and get an answer back to you as soon as possible.

www.uk.ea.com

www.ie.ea.com

If you don't have access to the Internet, or you would prefer to speak to a technician, you can telephone our Customer Support team (They are available, Monday – Friday between 9am and 9pm).

Please remember that due to the nature of most problems encountered when running PC games, it is far easier and generally far quicker to accurately diagnose the problem if you use our online Support Centre.

Customer Support Telephone: 0870 2432435

Customer Support Fax: 0870 2413231

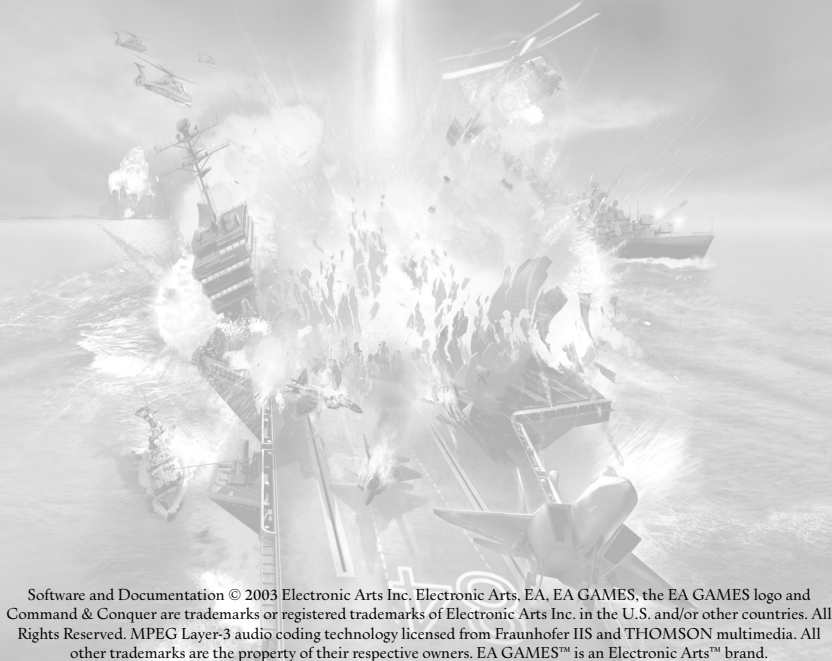
Note: These are UK National Call rate numbers charged at BT's standard national call rates for calls from a BT line in the UK. Consult your telephone service provider for further information. Calls from outside the UK will be charged at International rates.

Please note that Customer Support cannot provide game play hints or tips – if you're stuck in your game, please see the back of this manual for details of our official Hintline.

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