

# Microsoft® Combat Flight Simulator Readme

October 1998

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This document contains important information specific to Microsoft Combat Flight Simulator 1.00.

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## Notice regarding Multiplayer

Multiplayer is technology that enables components of Combat Flight Simulator and other Microsoft applications to be shared between two or more computers, though each computer user must have the Microsoft application installed on his or her computer.

For non-Microsoft applications designed to supplement the Combat Flight Simulator (e.g. add-on packs), you should consult the accompanying license agreement or contact the licensor to determine whether component sharing is permitted by the licensor.

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## Other sources of information about Combat Flight Simulator

You can find more information about Combat Flight Simulator in the printed *Pilot's Manual* and Microsoft® Combat Flight Simulator Help, the multimedia help system for Combat Flight Simulator.

And don't forget to visit the Combat Flight Simulator Web site to get the latest information. The Web site includes a product support page with up-to-date tips, answers to frequently asked questions, and articles. Click the Flight Simulator Web Site command on the Help menu or use the following URL:

<http://www.microsoft.com/games/combatfs/>

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## INFORMATION ABOUT VIDEO DISPLAYS AND VIDEO DRIVERS

Although DirectX has drivers available for most major manufacturers' video cards, in many cases you'll get better video performance if you install the latest drivers from your video card manufacturer. A list of these sites is available at: <http://www.microsoft.com/games/combatfs/drivers.htm>

For best performance, use the high color (16-bit) setting for your video resolution. Displaying more colors affects performance.

It is recommended that you set your system's display settings to **Small Fonts** to maximize viewable space in Combat Flight Simulator dialogs. Also, users of the Windows® 95 Plus! Pack or Windows® 98 who have selected **Smooth edges of screen fonts** in their Windows® **Display** settings will display smoothed fonts. If you don't have the Plus! Pack, you can download the font smoother from: <http://www.microsoft.com/typography/grayscale/smooth.htm>

You can find more information about video cards and video drivers, including installation instructions, in the Troubleshooting guide in your Combat Flight Simulator program group or in the Troubleshooting section at the end of this document.

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## INFORMATION ABOUT JOYSTICKS AND GAME CONTROLLERS

To debug a joystick issue, first reset its default mappings:

1. On the main screen, click **Settings**.
2. Click **Customize Controls**.
3. Click **Assignments**.
4. Click any entry in the **Device** column.
5. Click **Reset Defaults**.

You can find more information about joysticks and game controllers in the Troubleshooting guide in your Combat Flight Simulator program group or in the Troubleshooting section at the end of this document.

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## SYSTEM PERFORMANCE

System performance can be improved through the reduction of the number of processes being run. You can examine this through the task manager. If background processes exist you can terminate them, resulting in a potentially significant gain in frame rate, (10 - 20 %). You must engage in this practice with great caution and at your own risk.

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## AIRCRAFT

There are three ways to start your aircraft's engine in Combat Flight Simulator:

1. Pressing **E** automatically moves prop control, mixture control, throttle, mags, and starter switch to proper position and starts engine. Starter switch then moves to OFF position.
2. If you hold down the **M** key and press = (**EQUAL SIGN**) repeatedly, the magnetos switch from OFF to L to R to BOTH, then the auto-start sequence begins (as in 1 above and 3 below).

3. If you click the starter switch with the mouse (and hold down the mouse button), the auto-start sequence begins (just like pressing E): prop control, mixture control, throttle, mags and starter switch move to proper position, and engine starts. Starter switch then moves to OFF position.

In the tables on pages 28 and 185, the *Pilot's Manual* lists commands for All lights (**L**), Panel Lights (**SHIFT+L**), and Landing Lights (**CTRL+L**). These commands are not available for Combat Flight Simulator aircraft, which have no lights. On aircraft imported from Flight Simulator, exterior and landing lights can be activated by pressing **L** and **CTRL+L**, respectively. Panel lighting on imported aircraft is not supported.

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## MISSIONS & CAMPAIGNS

Even though the Ju 87 *Stuka* is actually a dive-bomber, it is classified as a fighter in Combat Flight Simulator missions.

When you choose a **Difficulty** level when adding your pilot in a campaign, the skill of the aircraft you are flying against will be affected. If you want to change your flight model's level of difficulty, go to the **Realism** dialog on the **Settings** screen.

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## MULTIPLAYER

Potential cheat:

There is a "suspended state" in which your aircraft is suspended in midair, but other players see it continuing on its last known path. Your aircraft also doesn't accrue damage until the keypress event is undone. For example, hitting **D** displays the scoreboard; hitting **D** again dismisses the scoreboard and resumes your game. In this state, your plane also can fly through terrain where others can't follow.

The following can be used to put you in a suspended state in Multiplayer:  
During flight, all players:

**ALT** key (Pulls down menus)

**D** key (Pulls up scoreboard)

**ESC** key (Pulls up "Are you sure you want to exit this Multiplayer session?" message)

**ALT+F4** (Pulls up "Are you sure you want to exit Microsoft® Combat Flight Simulator?" message)

Resizing or moving the application window

Right-clicking the mouse

During flight, Host only (in addition to keys above):

When a player joins, the host will see a dialog that puts him in the suspended state.

To see when other players have entered this suspended state and to catch potential cheaters, edit the COMBATFS.CFG file so that:

```
SP_DISPLAY_CHEAT_WARNINGS= 1
```

in the [MULTIPLAYER] section. After doing so, you will see the message "<Player Name> has entered a suspended state" whenever someone does so. If a player enters a suspended state more than twice in a game, his score will have an asterisk (\*) after it. This information is broadcast regardless of whether players have changed their COMBATFS>CFG file. Doing so simply allows you to see when other players may have cheated.

While flying in a Multiplayer session, it is possible for players to have different levels of dynamic scenery, scenery complexity, or different scenery altogether installed. This will result in planes that appear to fly through objects, buildings, or under the ground.

You may encounter problems if you attempt to start an Internet Multiplayer session if you have not started your dial-up Internet connection prior to starting Combat Flight Simulator, and you are running Combat Flight Simulator in full-screen mode. In this situation, Combat Flight Simulator may stop functioning. This situation can be avoided by either starting your Internet connection prior to starting Combat Flight Simulator or by switching back to windowed mode first by pressing **ALT+ENTER**.

When playing a Squadron game, the score displayed at the bottom of the HUD is your team's score. You can see your individual score by pressing the **D** key.

The Sopwith Camel is an imported Microsoft® Flight Simulator 98 aircraft and therefore cannot be flown in Multiplayer games where the host has chosen the **Restrict Aircraft** option.

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## TRAINING MISSIONS

Before you fly a training mission, get a bird's-eye view of the maneuver by watching the associated training film:

1. From the main screen, click **Training Missions**.
2. Under Missions, click the mission you want to see demonstrated in a training film.
3. Read the mission description under the film screen to the right, then click **Play**. (You must use the mouse to click the **Play** button.)

Although each training film features a specific aircraft, in combat you can perform these maneuvers in any aircraft.

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## IMPORTING AIRCRAFT

Some aircraft that have been converted for Flight Simulator 98 may require files that are installed with the Flight Simulator Aircraft Converter. While you do not need to actually run the converter to use these planes, you may need to install it for these planes to work properly in Combat Flight Simulator.

Combat Flight Simulator is not compatible with some Flight Simulator 98 aircraft flap sounds. If you use a sound.cfg that has the three flaps sections, they will not work in Combat Flight Simulator. Instead, you will hear the Messerschmitt Bf 109E default flap sounds.

You can find more information about importing aircraft in Microsoft® Flight Simulator Aircraft Converter Help, the online help component for the converter. You can access it through the converter or by opening your <CFS>\help\cfsconv.hlp file.

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## IMPORTING SCENERY

You should not overlap scenery areas that were not designed to be overlapped, i.e. those which do not have inclusion filters. Neither Flight Simulator 98 Europe scenery nor Combat Flight Simulator default scenery have inclusion filters built in. Therefore if you overlap them, you may see floating roads and other visual anomalies.

Navigational aids are not automatically made available when importing scenery. Flight Simulator 98 North American nav aids are contained in files that reside in the <FS98>\Scenery root directory. These files have names such as **VOR\_NA.BGL** and **NDB\_NA.BGL**. You will need to copy these files to the <CFS>\Scenery root, or to

the directory where a scenery area's .BGL files reside. Scenery areas outside of North America typically include VORs within the BGLs for that specific area. This is true for third party scenery as well.

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## MISCELLANEOUS

The **Slewing Commands** topic in the *Pilot's Manual* lists "Turn latitude/longitude display on/off" as the **Z**-key. This should be **SHIFT+Z** (see Display commands **SHIFT+Z**). The **Z** key is unassigned by default.

Map view is always North oriented.

Auto-rudder:

Combat Flight Simulator automatically detects the rudder capability of your system. If you have a joystick with a rudder axis or rudder pedals, the auto-rudder feature (called auto-coordination in Flight Simulator) will be disabled by default. If you do not have rudder capability, auto-rudder will be enabled by default.

This improved functionality was implemented after the Combat Flight Simulator *Pilot's Manual* went to press. Thus, the description of auto-rudder on pages 30, 33, and 34 of the *Pilot's Manual* is no longer accurate.

With auto-rudder enabled, the rudder will move automatically as you move the ailerons. This helps you maintain coordinated flight in turns, and your airplane will be easier to fly. Some air combat maneuvers are easier with the auto-rudder disabled. To turn auto-rudder on or off, click **Settings** on the main screen, and in the **Controls** section, select or clear the **Enable auto-rudder** check box.

Time compression/Simulation rate:

You can adjust the simulation rate in the following ways:

1. On the **Options** menu during flight, click **Simulation Rate**, and then click a specific rate.
2. During flight, press the **R** key and then = (**EQUAL SIGN**) to increase the simulation rate, or – (**MINUS SIGN**) to decrease the simulation rate.

Using the keyboard to navigate the user interface:

Placing focus on a button and pressing **ENTER** may not invoke that button's command, but pressing the spacebar will.

Wind:

Winds are always from the north. They are constant so there is no aircraft buffet. The settings are mapped as follows:

- None: 0 knots
- Light winds: 8 knots
- Moderate winds: 18 knots
- Heavy winds: 32 knots.

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## FREQUENTLY ASKED QUESTIONS

**How can I disable the opening movie?**

Make the following change to your **COMBATFS.CFG** file: In the [MAIN] section, add a line which reads "ShowLogo=0" (without the quote marks).

### **When I start a Training Mission, nothing happens.**

If you installed Combat Flight Simulator with the **Typical** option, or you used **Custom Install** but did not choose to copy Training Mission Media to the hard drive, then the sounds are loaded from the Combat Flight Simulator CD-ROM as needed. They are deleted again when the Training Mission finishes. If you installed Combat Flight Simulator this way, and you attempt to run a Training Mission without the Combat Flight Simulator CD in your CD-ROM drive, no error message is generated, but none of the sounds will play, giving the appearance that nothing is happening. Press **CTRL+U** to end the Training Mission, insert the Combat Flight Simulator CD, and then restart the Training Mission.

### **I can't seem to open any of the dialogs in the application.**

Some poorly behaved installers for other applications overwrite system files needed by Combat Flight Simulator with older versions. If this happens to you, you will need to copy the files **MSVCRT.DLL** and **MFC42.DLL** from your Combat Flight Simulator CD-ROM's root directory to your Windows\System directory (System32 on NT 4.0.) You may need to close all of your applications or restart your computer in order to be able to copy these files in some cases.

### **None of the numeric keypad keys seem to be controlling the aircraft -- they are switching the views instead. Also, the Num Lock key no longer brings up a map view.**

The Num Lock key now behaves normally. That is, it toggles the Num Lock state on and off. In order for the numeric keypad keys to control the aircraft, you should ensure that Num Lock is turned off.

### **How can I change the SHIFT+Z coordinate displays back to degrees/minutes/seconds? It currently displays only minutes and fractional minutes.**

Add the following line to your **CombatFS.CFG** file, in the [MAIN] section:

```
DISPLAY_FRACTIONAL_MINUTES = 0
```

This will return to the display format used in prior versions of Microsoft® Flight Simulator.

### **Why does installing only the game files for Combat Flight Simulator take up more than 200MB on my disk drive?**

How much space Combat Flight Simulator uses on your hard disk depends on the size of clusters on your disk drive. A cluster is the smallest unit of hard drive space. If your cluster size is 32K, a file that is really only 5K will still take up 32K of space on your hard drive. If your cluster size is 4K, a file that is 5K will still take up 8K (two clusters) of space on your hard drive. Combat Flight Simulator has many files that are less than 10K in size, so on hard drives with large cluster sizes, many files take up more space than they need to.

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## **TROUBLESHOOTING**

### **Updating video drivers from manufacturers**

Contact your video card manufacturer and follow the manufacturer's instructions to get the latest driver. These drivers are often available on the manufacturer's Web site (a list of these sites is available at:

<http://www.microsoft.com/games/combatfs/drivers.htm>) or from a bulletin board (BBS). The driver is usually available as a PKZip (ZIP) file or a self-extracting executable (EXE) file.

If the manufacturer of your video card includes specific instructions for installing the driver, follow them. Otherwise, unzip the files into a temporary subdirectory on your hard disk drive or onto a floppy disk. Then follow these instructions:

1. Open the **Display Properties** dialog box by right-clicking on the Windows® desktop and then clicking **Properties** on the popup menu.
2. In the **Display Properties** dialog box, click the **Settings** tab.
3. Click **Change Display Type**.
4. In the **Advanced Display Properties** dialog box, click the Adapter tab.
5. Click **Change**.
6. In the **Select Device** dialog box, click **Have Disk**.
7. If you have the latest video driver from your video card manufacturer on a disk or CD-ROM, select the appropriate drive and click **OK**. Otherwise click **Browse**. Go to the temporary subdirectory you created for the video card files and open the **DISPLAY.INF** file.
8. In the **Select Device** dialog box, choose the driver that matches your video card and then click **OK**.
9. Click **OK** as many times as necessary to accept the changes.
10. To restart your computer, click **Yes** in the **System Settings Change** dialog box.

### **Known problems and fixes**

Following are some solutions to common problems.

#### **Joystick completely or randomly disconnects**

The following fix works well to eliminate joystick issues for Combat Flight Simulator, but reduces the sound quality (11Khz mono as opposed to 22Khz stereo).

1. Find the **COMBATFS.CFG** file in your main CFS directory and use a text editor to add the following lines:  
[SOUND]  
Channels=1  
SamplesPerSec=11025
2. Save the file and restart Combat Flight Simulator.

#### **Why are buttons that are not on the joystick being automatically assigned?**

For your convenience we have created default assignments for certain popular joysticks. If your joystick does not have a default profile, it is given a generic profile that automatically assigns 10 buttons. You can always reassign each button from within the simulation.

For joysticks with less than 10 buttons, there will be more buttons assigned to actions than there are buttons on the controller. These extra assignments should not affect game play. If they do, you can manually remove them.

#### **To remove the joystick assignments**

1. On the main screen, click **Settings**.
2. Click **Customize controls**.

3. Click **Assignments**.
4. Highlight the mappings you wish to delete and click **Clear**.

### **What is the difference between SHIFT+Num 1 and Num 1?**

In the **Assignments** tab of the **Customize controls** dialog, **SHIFT+Num 1** refers to pressing 1 on the numeric keypad while Num Lock is **on**. Num 1 refers to pressing it while Num Lock is **off**.

### **My joystick does not work properly when daisy-chained through my game pad**

When you switch from one device to another (usually through a switch on the gamepad), it may appear that you have lost functionality. The real issue is that the current controller is using the button mappings from the previous controller. See the **Switching controllers causes some loss of functionality** section below for the remedy.

### **Switching controllers causes some loss of functionality**

This is most likely because Combat Flight Simulator is still reading the button assignments for your old controller. After switching controllers, you must click **Reset defaults** in the **Assignments** dialog of the **Customize Controls** screen under **Settings**. This symptom is more apparent when switching from a game pad to a joystick because their default mappings are so different.

### **To debug a joystick issue**

1. On the main screen, click **Settings**.
2. Click **Customize controls**.
3. Click **Assignments**.
4. Click anywhere in the **Device** column.
5. Click **Reset Defaults**.

### **When I program my gamepad or joystick it is difficult to steer my plane, and when I switch to different views it does not stick to that view**

Combat Flight Simulator may be difficult to steer because of the way Windows® responds to keyboards inputs.

When you hold down a button the initial response from Windows is slow, then progressively faster. Thus when you program a button on your joystick or gamepad to a keyboard button you will get a similar response from the controller. The plane will respond slowly at first, then very quickly.

When some controllers emulate keyboard inputs they automatically perform a repeat on that key. Thus it makes it difficult to use the views since the controller is emulating a repeating keystroke instead of one constant key stroke.

### **Joystick performance**

- If you unplug your controller while in the simulator, your game may have pauses. Reconnecting the controller will fix this.
- You cannot use a digital joystick (Sidewinder 3D, Sidewinder 3D pro, Force Feedback pro, etc) with an 8-bit sound card.
- Using the MS® Force Feedback joystick and an older sound blaster card (such as Sound Blaster Pro) can cause your computer to freeze. The Sound Blaster card does not have the features required to run the Force Feedback joystick.



- Hooking up the Microsoft® Sidewinder 3D Pro to pedals can cause hardware conflicts that don't allow you to calibrate correctly. Separate pedals should not be used with this joystick.
- You must reset the default mappings for the Microsoft Sidewinder USB Game Pad in order to adjust axis sensitivity.

### General video performance

- If your computer crashes at the start of the introductory movie, the opening and transition movies will no longer play.
- Combat Flight Simulator requires 2 MB of free video memory to run in hardware acceleration. At least 4 MB is recommended. Running with 2MB's memory causes some texture dropouts.
- Combat Flight Simulator requires DX6 to run in hardware acceleration. Some video card drivers are not compatible with DX6. Contact your video card's manufacturer for updated drivers.
- If the color of the maps in the Mission Briefing seems wrong and you are running on the original Windows® 95 (i.e., no service packs have been installed), your **COMCTL32** component could be out of date. Updating to a newer version will fix this. Newer versions are installed with some applications, including the latest version of Microsoft® Internet Explorer.
- If you are running in full screen mode on Windows® NT 4.0, you may not be able to press **ALT+TAB** to use other applications. To use other applications run Combat Flight Simulator in a window.
- If you are experiencing system hangs and running Combat Flight Simulator on an AGP video card, you should edit your COMBATFS.CFG file so that:

TextureAGP = 0 in the [HARDWARE] section

- The following resolutions are supported by most video cards and are available for selection (if supported):

320x200, 320x240, 640x400, 640x480, 800x600, 1024x768, 1280x1024.

You may run at other resolutions by editing your COMBATFS.CFG file so that:

LIMIT\_RESOLUTIONS = 0 in the [PREFS] section

Running at other resolutions may cause problems on some video cards. At resolutions below 640x480, the location of the mouse cursor may not exactly match the items it has selected.

### Issues with specific video cards

**3Dfx** (Get technical support and information from <http://www.3DFx.com>.)

#### **Voodoo and Voodoo II chipsets (Diamond Monster I & II, Canopus Pure 3D I & 2, Creative Labs Voodoo Blaster, etc)**

- Sometimes you cannot select the Voodoo card on your system. Completely rebooting your computer will fix this error.
- Combat Flight Simulator may not recognize a Diamond Monster II with its retail drivers. Upgrading to the latest drivers eliminates the problem.
- Voodoo I users may see a band of rectangles that briefly appear horizontally across the screen. This condition occurs when the card is downloading new textures while any audio is playing. This is a problem with the hardware itself and there is no known fix.

- Errors can occur in the graphics if you are not using the latest drivers from the card manufacturer. Errors include a palette distortion and blurry text.

### **Rush chipset (Hercules Stingray 128 /3D)**

- Your system may hang when you exit Combat Flight Simulator. This is an issue with the 4.10.1.2059 version of the video driver. Installing the 3Dfx Voodoo Rush Reference Drivers for Windows 95/98 (Single Board) from the 3Dfx web site will fix this problem.

**ATI** (Get technical support and information from <http://www.atitech.com>.)

### **RAGE**

- Textures are corrupted or missing. This is a limitation of the video card. Turning off MIP mapping will alleviate some of these effects.

### **RAGE II / II+ chipsets**

- Errors may occur in the graphics if you are not using the latest drivers from ATI.

### **Rage Pro (including the Xpert@work and the Xpert@play)**

- Errors may occur in the graphics if you are not using the latest drivers from ATI.

**Cirrus Logic** (Get technical support and information from <http://www.cirrus.com>.)

- Text is corrupted when using the Cirrus Logic CL-546X chipset (including the Creative Labs Graphics Blaster 3D).
- When running the Win98 default drivers (cirruslg.drv ver. 4.10.1637) the texture is corrupted in all 16 and 32 bit resolutions. When running under the latest Cirrus Logic drivers (546x.drv ver. 4.10.01.1701) texture corruption occurs only when running in 32 bit resolutions. Upgrade to the latest driver available for the manufacture of your card.

**Matrox** (Get technical support and information from <http://www.matrox.com>.)

### **G-100 chipsets (productiva G-100)**

- The textures get blurry on the airplane and ground (MIP mapping errors). This is an error in the drivers for this card. Contact Matrox for a driver update.
- The propeller, aircraft canopy, and explosions are stippled (checker pattern). This is a limitation of the card. It does not support the hardware features required.

### **G-200 chipsets (Millennium & Mystique G-200)**

- Some older drivers may cause the ground textures to become corrupted. This is an error in the drivers for this card. Contact Matrox for a driver update.

### **Mystique and Mystique 220.**

- Can't run in hardware acceleration with these cards.
- These cards do not support the features required for Combat Flight Simulator.

**Mpact II 3DVD (STB Nitro DVD)** (Get technical support and information from <http://www.chromatic.com>.)

- At the time of release there were no drivers compatible with Combat Flight Simulator for this chipset. Please check with your video card vendor for an updated driver. If no new drivers exist and you are experiencing problems when running in 3-D hardware then you'll need to run the game in 3-D software mode.

**Nvidia** (Get technical support and information from <http://www.nvidia.com>.)

#### **Riva TNT (STB Velocity V4400)**

- You may see flickering in cockpits. Downloading the latest driver will fix this. Otherwise you can check the "Wait for VBLANK" option in the Display section of your Windows Control Panel.
- If you are experiencing problems with the Original Equipment Manufacturer (OEM) drivers, installing the latest Riva TNT drivers from <http://www.nvidia.com> may provide better functionality.

#### **Riva 128 (STB Velocity 128, Diamond Viper V330)**

- On the Dell OEM version of the STB Velocity 128, you may see white horizontal flashes. Downloading the latest driver from Dell (<http://www.dell.com>) will fix this.
- On the Diamond Viper V330, you may get a system hang when you crash your airplane. Upgrading to the latest drivers from Diamond (<http://www.diamondmm.com>) eliminates the problem.

**Permedia 2 (AccelSTAR II [found in Gateway E3000, Gateway E5000 etc. computers], View top AGP Mars-2 & 3D Mars-2, Creative Labs Graphics Blaster Exxtreme, Diamond FireGL 1000 Pro, GLoria Synergy)** (Get technical support and information from <http://www.3Dlabs.com>.)

- Errors can occur in the graphics if you are not using the latest drivers from the card manufacturer. Errors include a green palette distortion, texture dropping, texture corruption, and blurry text.
- When Combat Flight Simulator is non-full screen (hardware), if an auxiliary view window has focus and the **W** key is pressed, two overlapping view panes appear. There is no fix for this.
- Running at 1600 x 1200 resolution produces sliding polygons at bottom of screen.

**PowerVR PCX2 (Grafixstar - Apocalypse 5D)** (Get technical support and information from <http://www.powervr.com>.)

- Polygons can be seen in the fog. Clearing the **Enable Hardware** check box in the **Settings** dialog will fix this problem.

**Rendition** (Get technical support and information from <http://www.rendition.com>.)

#### **V2x00 (Hercules Thriller 3D, Diamond Stealth II S220)**

- Some minor graphic errors occur on this chipset. There is no known workaround. Updating the drivers to the most current available from the manufacturer may resolve some issues.

#### **V1000 (Creative Labs 3D Blaster, Canopus Total 3D, Sierra Screaming 3D)**

- Errors may occur in the graphics if you are not using the latest drivers from the card manufacturer.

**S3** (For any card with a ViRGE (standard, Vx, Gx, Gx2 etc.) chipset, downloading the latest drivers from <http://www.s3.com> eliminates many problems.)

#### **ViRGE (Diamond Stealth 3D 3000)**

- You may not see textures when running on the Diamond Stealth 3D 3000. Upgrading to the latest drivers from <http://www.s3.com> eliminates the problem.

### **ViRGE VX (STB Velocity 3D)**

- Playing for 30 minutes or longer may hang your system. Upgrading to the latest drivers from <http://www.s3.com> eliminates the problem.
- Alpha-blending (partial transparencies) may not work. Upgrading to the latest drivers eliminates the problem.

**Trident Cyber 9397** (Get technical support and information from <http://www.tridentmicro.com>.)

- The gunsight may appear distorted. There is no known fix for this.

### **Audio Performance**

If you hear chirping or other sound anomalies, you should find the **Combatfs.cfg** file in your main CFS directory and use a text editor to change values to the following:

```
[SOUND]
Channels=1
SamplesPerSec=11025
```

This will reduce sound quality but should remove any anomalies.

If you have a Sound Blaster 16 and are not hearing any sound in Combat Flight Simulator or the audio in the opening movie is not playing correctly, disable the 16-bit DMA channel in the **Sound Blaster 16 Configuration** dialog. This is usually found in your Windows® **Control Panel's Multimedia** section.

If you have a Yamaha sound card in your system and having the sound on greatly reduces your frame rate, go to your Windows® **Control Panel's Multimedia** section and select **Game Compatible Device** as your **Preferred Device** on the **Audio** tab.