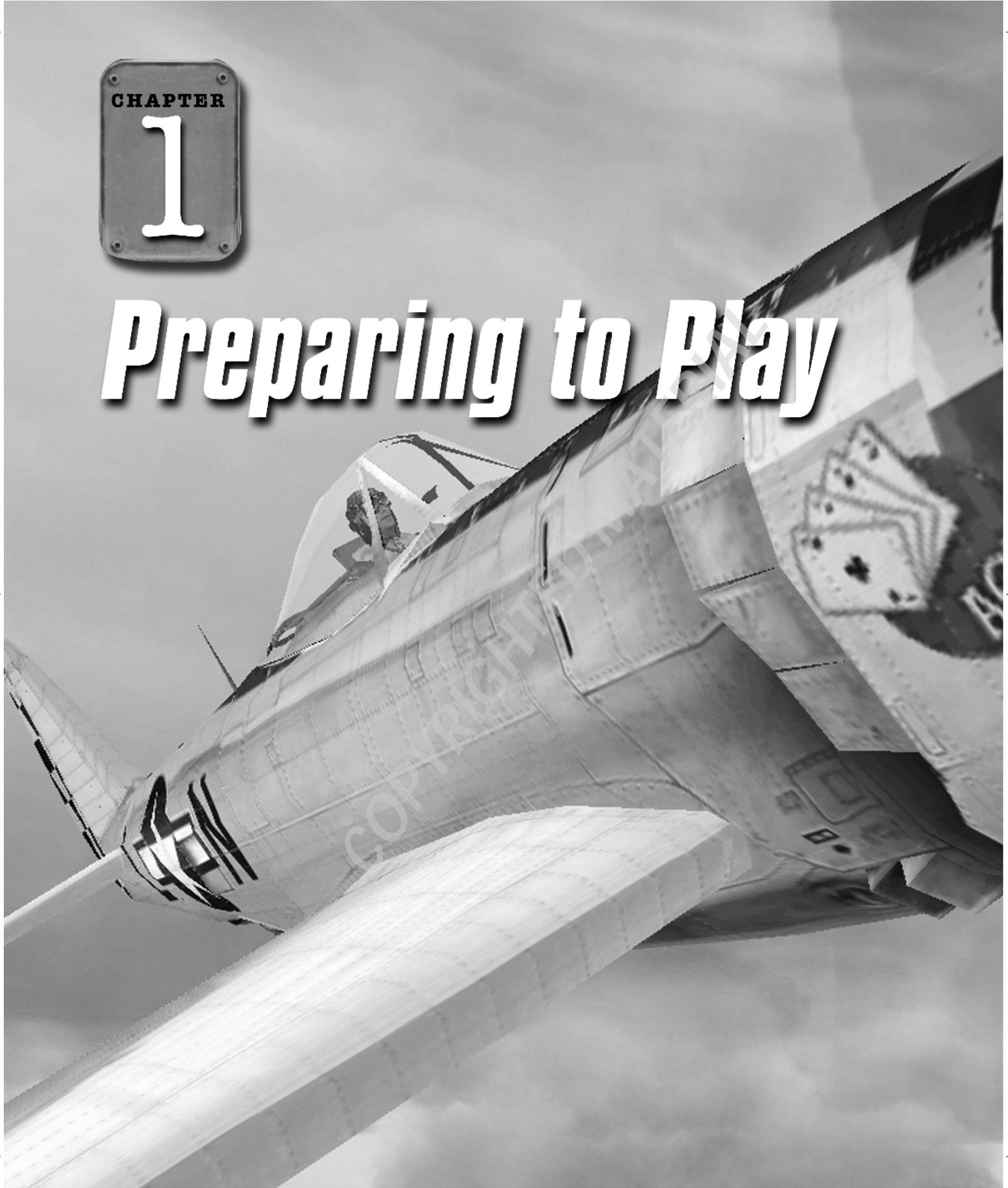


CHAPTER

1

Preparing to Play



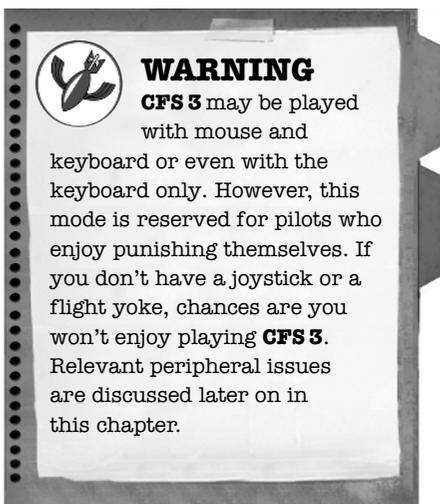


Microsoft's Combat Flight Simulator 3 offers a very rich gaming experience and has all the bells and whistles traditionally featured in a cutting-edge flight combat sim. It has beautifully modeled airplanes, killer A.I., and an array of gaming choices that give practically unlimited replay value. It also boasts several unique features. One of these is the emphasis on tactical air support instead of combat between airplanes (don't worry, you get plenty of dogfighting, too). The other is the campaign game, which introduces a strong strategy element: your decisions and combat performance affect not only the course, but also the outcome of the war.

All these features make CFS 3 a complex game, and if you're a newcomer to flight combat sims you do face a steep but fun learning curve (just reading and assimilating the contents of the game manual alone can require up to two hours). This book is meant to unravel the game's complexities so you can enjoy the game to its fullest. Now, the first requirement toward enjoying a game is making it run well on your computer. This chapter takes a look at how it's done.



Chapter 1: PREPARING TO PLAY



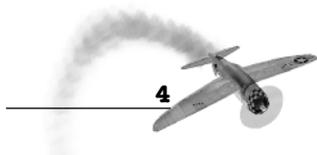
Preparing for Installation

The moment you pick up the game box, you should check the minimum system requirements. They may be printed on the box, or on a label glued onto the box sheath, and it's mandatory reading.

If you're unsure whether your system meets all the requirements, it's easy to check. Right-click on the My Computer icon on your desktop and select System Information, then click through the tabs to find out everything you want to know and more. There's a button called Benchmark at the bottom of the System Information panel, and it's both fun and useful. It shows you the relative performance of your system and lets you monitor any changes that occur.

Now, you may have the fastest system on the planet, but it may be so cluttered and overloaded it doesn't run well. Here are a couple of things you must do before installing *CFS 3*, and a couple more things you *should* do:

1. Check how much free space you've got on your hard drive (the Drive tab on the System Information panel), remembering that you should keep 20% of your hard drive free *at all times*. Otherwise, applications that require big swap files won't run well.
2. If you've got around 2GB or more available for installing new software, do consider the Full Install option in *CFS 3*. Although this takes up over 1.7GB, putting all the game files on the hard drive will remarkably improve game performance.
3. Defragment the hard drive prior to installation. If you don't know what that means or how to do it, you should immediately read up on Disk Defragmenter in Windows Help.
4. Install the game and restart your computer before playing it for the first time.
5. Check the connections of any peripherals you have. The anguished cry, "My joystick won't work with this game!" is often caused by the fact that the joystick isn't plugged in. Calibrate the joystick and any other peripherals if you haven't done so recently.

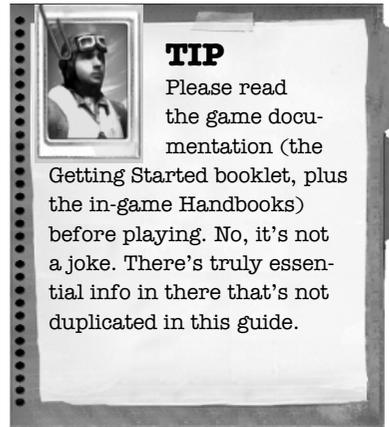


PREPARING FOR INSTALLATION



Resist the temptation to play the game the moment it's installed. Read the *CFS 3* Readme first (not reading the Readme docs attached to *all* applications is a major factor in anger management problems, cardiac complications, social unrest, etc.). Once you do start the game, begin by familiarizing yourself with its interface. You'll instantly see that although *CFS 3* offers an amazing number of options (Quick Combat alone features enough choices to keep you busy for a very long time), the heart of the game lies in its campaigns.

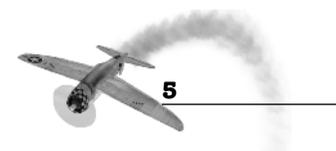
There's just one more thing that needs to be done before you start playing in earnest, and that's to review the configuration of game commands (in the main game menu, click Options, then Control Options). You may want to customize these commands to your liking, and the choices you make there will be dependent on what game peripherals you have. If you're a newcomer to flights sims, read the section that follows; if you're a veteran, skip it and go straight to Configuring Commands.



Peripherals

As mentioned earlier, you do need a joystick or a flight yoke to fully appreciate the sim. Having additional controllers (rudder pedals, throttle controller) will enjoy the game even more. If you don't yet own any of these and are about to spend some of your hard-earned money, please keep the following points in mind:

- ⊕ Joysticks differ widely in quality, while flight yokes are generally high quality. Joysticks are generally considered to be more fun than flight yokes (that's why there are so many models of joysticks available), and they take up less desk space.
- ⊕ You can't go wrong if you purchase the game's official joystick, the Microsoft Sidewinder 2. It's somewhat pricey, but it features a twisting handle for rudder control; this theoretically makes rudder pedals unnecessary. However, it may cause problems when you're applying alternating or opposite rudder (plane banked one way, rudder flipped the other way) in the heat of combat (see Figure 1.1).





Chapter 1: PREPARING TO PLAY



Figure 1.1: Apply opposite rudder to lift your plane's nose in a turn.

- ☉ Quality has its price. Generally the more money you pay, the better the joystick. Just keep in mind that all joysticks wear out with enough use, and have to be replaced.
- ☉ Ask the store staff if you can test your chosen joystick on one of the demo computers. Something as silly as a sticky button can cause plenty of grief when you start playing, and no two joysticks are exactly the same. Testing your choice may save you a trip back to the store.

- ☉ If you're awash in cash and want to buy extra game peripherals, consider getting rudder pedals before anything else. At first glance, a throttle controller may seem to offer more with all those programmable switches. However, many sim pilots end up not using their rudder simply because they can't be bothered with sticky, imprecise keyboard keys. If you don't use the rudder while playing *CFS 3*, you're in for plenty of unnecessary pain.
- ☉ *CFS 3* requires using the keyboard even if you own a full suite of game controllers. Consider your desk space when buying extra stuff. You *cannot* fly a plane well by holding the joystick in your lap—in any case, you need a free hand to manage other game controls.



WARNING

Make sure your new peripheral comes with a plug that matches the port on your computer. Game port plugs (older controllers and computers) fit game ports only; USB plugs (newer models) only work in USB ports.

CONFIGURING COMMANDS



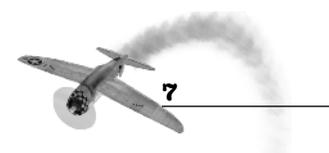
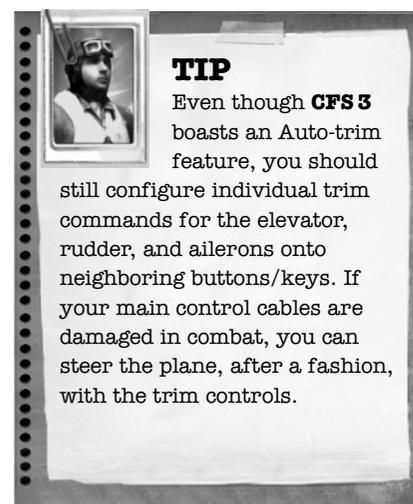
Configuring Commands

Choose Options from the main game menu and select Control Options to open the appropriate panel. It has two side tabs, and defaults to Assignments. You'll see a rather daunting list of commands—but don't be daunted! The pull-down menu near the top of the panel is set by default to All Commands; you can restrict the listed command options to a specific set (Display Commands, Weapons Commands, etc.). The second pull-down menu from the top offers you the option of saving a new command configuration under a new file name. It's best to create a new configuration file before you make any changes.

You'll find the configuration process easy if you remember that basically there are only two types of commands. There are time-sensitive, urgent commands, and then there are the not-so-urgent ones. Urgent commands should be one-press commands: they involve a single button/switch/keyboard key. Not-so-urgent commands can involve a combination of keys.

Here are some suggestions as to which commands should be given urgent status, set by set as featured in the game:

1. **Combat Commands:** All but Open/Close Bomb Bay Doors are very time-sensitive. You do not need any bomber-specific commands (Cycle Gunner Seats, Gun Elevate, etc.) if you're flying a fighter.
2. **Control Surface Commands:** All of these are urgent. Many of these will be automatically configured to your game controllers. If you are forced to configure rudder commands to your keyboard, make sure you choose a convenient set of three side-by-side keys that you can confidently operate without looking at the keyboard. For instance, the comma, period, and forward-slash keys (, . /) are a good set to use for this. Assign the key in the center to Center Ailerons and Rudder, and the appropriate outside keys to Rudder Left and Rudder Right.



Chapter 1: PREPARING TO PLAY



- Display commands:** This command set contains a few seldom used options, but important, single-press commands include everything related to the Tactical Display, the Aircraft Labels, and the Heads Up Display toggle (see Figure 1.2). The Enemy Indicator toggle is of importance only for very new pilots; if you do use it, it's definitely a one-press command. Same goes for Padlock View.



Figure 1.2: The Virtual Cockpit view is invaluable in mastering the game and should be assigned to a convenient joystick button.

- Engine Commands:** One-press commands should include everything related to operating the throttle. Seriously consider programming Throttle (100%) and Throttle (Idle) onto your joystick buttons—cutting the throttle quickly will save you time and again! Full Rich Mixture and Propeller (minimum pitch) are urgent one-press commands if you play the game at 100% difficulty, which involves manual adjustment of mixture settings. You'll need to switch very quickly to the combat combination of rich mixture and fine pitch when surprised by the enemy! You can reassign other less important

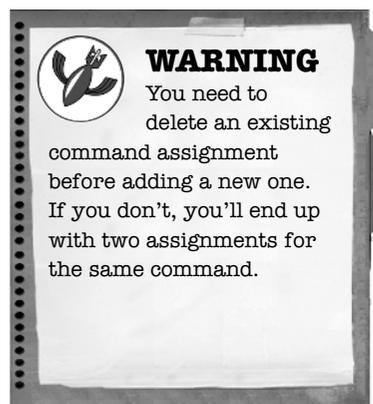
commands to key combinations. For example, Engine Autostart in particular hogs a convenient single key (E) by default, and it's only used when starting a new mission from an airfield runway.

- General Aircraft Commands:** One-press commands need to include Brakes, Lower and Retract Flaps Incrementally, and Spoilers/Dive Brakes (*if flying an aircraft equipped with these*).
- Simulator Commands:** You should be able to pause the game instantly, that's for sure. Shutting down Sound can improve frame rate in busy combat situations.

CONFIGURING COMMANDS



7. **View Commands:** These are important—Virtual Cockpit toggle and Eyepoint (reset) particularly—so preferably these two should be assigned to convenient joystick buttons.
8. **Weapons Commands:** All of these are very important. Hitting the target from a fast-moving airplane involves split-second timing; this holds true for guns, rockets, and bombs. The only candidate for a multi-key command is Refill Selected Weapon.
9. **Wingmen Commands:** All of these are one-press commands. Any delay in issuing orders to your wingmen may have painful consequences.



When assigning commands to buttons and keyboard keys, make sure to group related commands together in a logical manner. For example, the six trim commands should ideally be grouped together in neighboring pairs of keys. Group keyboard view commands in a layout corresponding with view direction. Do not be afraid to meddle with the default settings. You can restore them at any time with the Default button at the bottom of the Control Options panel. Take the time to set up things so you are comfortable, because once the action starts you'll often execute a new command every second—flipping views, communicating with your wingmen, operating weapons, flight controls, throttle. Combat flying is a very intense experience, and you definitely don't want to fumble with the keyboard when the heat is on (see Figure 1.3).

Once all the command assignments on the Assignments tab are complete, you should check

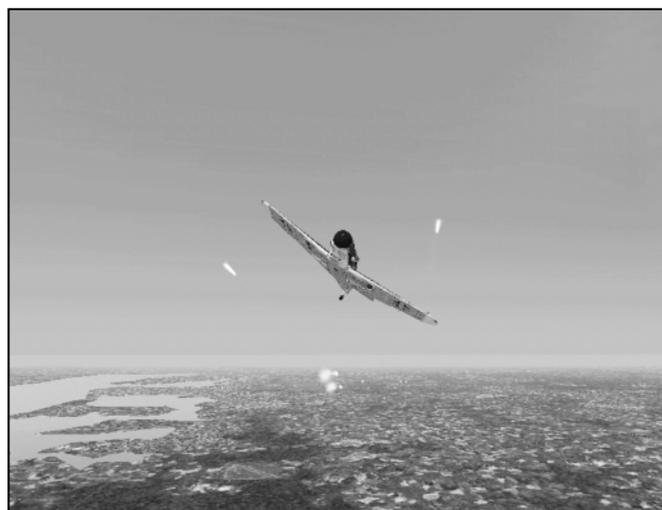
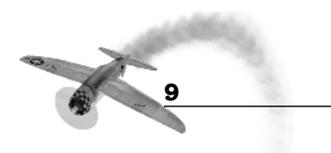
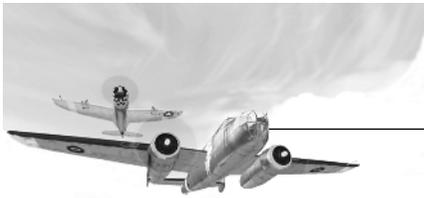
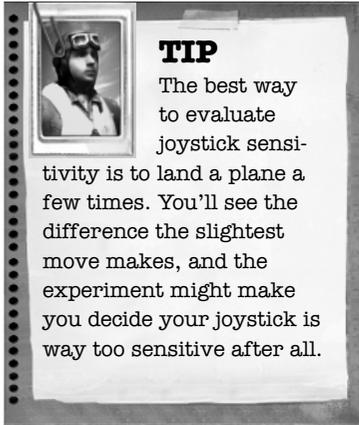


Figure 1.3: I think I'd better hit the Pause key.





Chapter 1: PREPARING TO PLAY



TIP

The best way to evaluate joystick sensitivity is to land a plane a few times. You'll see the difference the slightest move makes, and the experiment might make you decide your joystick is way too sensitive after all.

out the Sensitivities tab on the Control Options panel. It lets you adjust the sensitivity of your joystick/flight yoke with a slider regulating sensitivity, and another that adjusts the null zone (the “dead” zone around a centered joystick where slight joystick movement doesn't have any effect). Do *not* increase joystick sensitivity simply because you feel your plane isn't turning around nimbly enough. It will get you nothing except plenty of unexpected stalls, spins, and crashes.

Optimizing Game Performance

CFS 3 is a state-of-the-art combat simulation. Unfortunately, this also means it runs best on state-of-the-art equipment. It is perfectly enjoyable on a system that barely clears the minimum system requirements, but only if that system is in good shape. Begin by making your computer run faster; *then* make the game run faster on your computer.

Making Your Computer Run Better

If you have a special diagnostic program such as Norton Utilities, put it to use. If you don't, Windows comes equipped with all the tools you need. Here are some things you can do to ensure your computer runs as fast as it possibly can:

- ⊕ If your box has a network card and you're not playing multiplayer, make sure the card's disabled. Open the Device Manager in the System folder to disable it, and later enable it again (you must reboot your machine after making these changes).
- ⊕ Run ScanDisk and Disk Defragmenter once a week.
- ⊕ Run Disk Cleanup once every month.
- ⊕ Run msconfig (Start menu: select Run, type “msconfig”) every couple of months. You'll see what you've got running every time you boot up. Chances are you have plenty of things loading that you don't really need. Disable startup items you don't need, but be careful! If you haven't done it before, have someone knowledgeable by your side; otherwise, keep your Windows CD handy and make changes one by one and try them out by rebooting after each change. If you run into problems, rebooting from the Windows CD will let you reverse any unfortunate changes you made.



OPTIMIZING GAME PERFORMANCE



So, you've done all you can to your box, and you're still not satisfied with the game's performance? Well, there's more you can do.

Making the Game Run Better

CFS 3 is rich in graphic detail and astounding sound effects. As much as these contribute to the gaming experience, toning things down will significantly improve game performance.

You'll be given the option to customize video settings upon the conclusion of the game installation. It will be hard to make the right choices there and then, because you won't know what effect they'll have in practice. Don't worry! You can tweak things through the Display Options panel while running the game, which enables you to instantly evaluate the effect of the changes you make.

The Display Options panel has two tabs: Hardware and Image Quality. Hardware lets you choose between 16-bit and 32-bit color—naturally, 16-bit color puts lesser demands on your machine. This tab also gives you the option of setting the screen resolution.

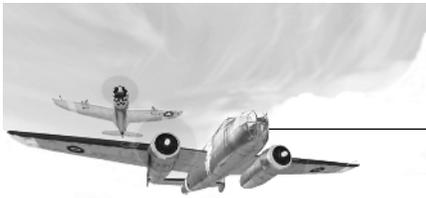
Resolution in Detail

To begin with, keep in mind that a higher resolution with lower level of detail tends to look better than a lower resolution with a higher level of detail. Start by deciding which resolution you'd like to play at. The lowest choice available (800×600) doesn't look great, and going just a single step up (to 1024×768) makes quite a difference. All in all, the very next resolution (1152×864) offers the best between beauty and performance (see Figure 1.4). There are better, higher resolution options, but the first two jumps (between 800×600 and 1024×768, and subsequently to 1152×864) are particularly striking.



Figure 1.4: Really good-looking clouds begin at a resolution of 1152×864.





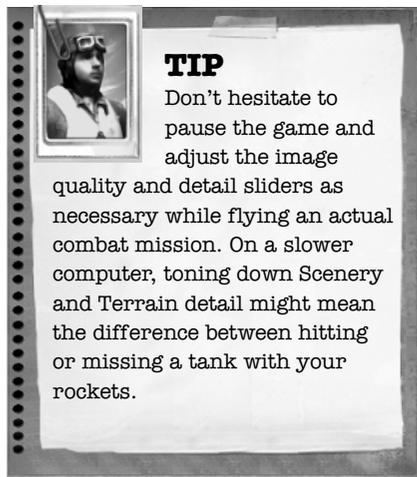
Chapter 1: PREPARING TO PLAY

The size of your monitor is also a consideration. You may have the fastest system in the world, but if your monitor screen is relatively small (14 or 15 inches) game objects might be truly tiny under a high resolution. Owners of decent systems coupled with monitors under 19 inches will probably find 1024×768 the best choice.

Once you've got the resolution sorted out, turn your attention to the sliders regulating detail level. It's best to choose Quick Combat from the main menu and set up an encounter between a total of a dozen aircraft over Paris at an altitude of 2,500 feet. Paris features more ground objects than any other game location, and their presence will put an extra heavy load on your machine. Hit the F10 key to bring up the Options menu and adjust settings as appropriate. You need a smooth frame rate

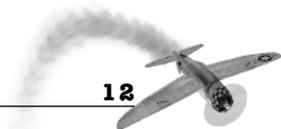
in order to play this game—and win! Hitting a target becomes very difficult otherwise. You can toggle the frame rate on and off by pressing Shift and the Z keys simultaneously; it should stay above 16 fps in all situations.

The Image Quality tab on the Display Options panel features an array of sliders for managing image quality and detail. It also features four options activated by checking the appropriate box: High Detail clouds, Shadows, Reflections, Terrain and Scenery Lighting. Begin improving frame rate by disabling these options and see how things work before adjusting the sliders. It's best if you adjust one slider at a time, unpausing your Quick Combat battle to see how each change works in practice.



Choosing Your Game

Begin by setting the Realism level (selectable from the Options menu). The game manual recommends using different difficulty levels for training and for serious play. It advises to learn at one difficulty level *below* the difficulty you'll choose when playing for real. This approach may lead to disappointment, since training harder always means an easier fight later. Even if you're a complete newcomer to flight sims, you should choose Hard. This automatically sets other selectable options for a 95% difficulty—you have to manage fuel mixture manually for a difficulty of 100%.



CHOOSING YOUR GAME



There are plenty of good reasons for learning to fly at the Hard level. It will be tougher, so you'll learn much faster and you won't acquire any sloppy habits. Yes, you'll crash and get shot down more often for the first few hours. If this bothers you, or if you just get tired of restarting an encounter over and over again, you can set your plane to Invincible on the Realism panel. Becoming a better pilot in half the time is worth a few initial disappointments (see Figure 1.5). Most importantly, choosing an easier level means you won't experience the full game. All this hard work that went into perfecting the game's realism, and you're going to miss out on the results? Come on.

Chapters 2 through 5 will provide you with many reasons for avoiding such low-level enticements as Autorudder (you won't be able to apply opposite rudder or skid through turns, both of which are useful in combat) and disabled G-effects (which also disables one of the three adjustable, improvable pilot attributes when playing a campaign). It's in your best interest to choose Hard even if you're a softie. However, if you're a complete newcomer to flight sims and find Hard definitely too hard, choose Medium; don't choose Easy. Using the

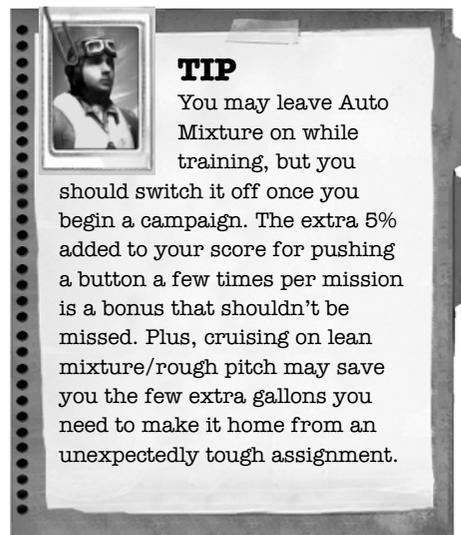
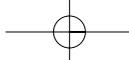


Figure 1.5: It's just a game...darn it!





Chapter 1: PREPARING TO PLAY

Easy flight model promotes acquiring many bad habits that may prove very difficult to unlearn once you decide to move up in flight model difficulty.

Autorudder and Automixture

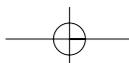
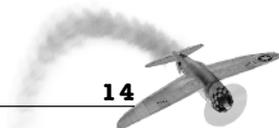
As explained in the game documentation, Autorudder links your aircraft's rudder to the ailerons. New pilots will find it really helpful, since they'll have one less thing to worry about while learning how to control a plane. At the same time, switching Autorudder on carries certain penalties: the inability to apply opposite rudder or to use rudder alone, without the ailerons. You should know that most aiming corrections in combat are usually best done with the rudder only. This is equally true whether you're fighting enemy planes (a touch of rudder is often exactly what's needed for the right deflection) or attacking ground targets. Conclusion? Switch Autorudder off as soon as you can handle an airplane without embarrassing yourself every five seconds. It will pay you big dividends down the line.

Automixture is also discussed in detail in the game documentation. What needs to be said is that using it will cost you 5% of your score. In addition, leaning out the mixture manually may be a lifesaver when you're low on fuel and far away from home. This may happen more than once when flying long-range missions during a campaign, and also during the game's single missions that have you flying for the Luftwaffe. The game faithfully replicates German wartime fuel shortages, and if you aren't very careful about conserving fuel you won't be able to make it home. This automatically means failure even if you've managed to achieve all other mission objectives.

Quick Combat, Mission, or Campaign?

CFS 3 features four game choices: Quick Combat, Mission, Campaign, and Multiplayer. Each of these choices lead to more choices, and all are beautifully explained in the game manual. Here, let's concentrate on which choice is right for you.

Let's make one thing clear from the start: you cannot say you've played *CFS 3* if you haven't played the campaign game. Its unique mix of realistic combat, strategy, and role-playing is intensely addictive and gives the game practically unlimited replay value (you'd have to spend half a lifetime exploring all the pilot career paths available). However, a campaign game represents a serious time commitment, and even flight sim veterans will find it's best to begin with Quick Combat and Free Flight



CHOOSING YOUR GAME



before proceeding to fight anyone. The computer-controlled pilots are a very sharp bunch!

Once you've won several Quick Combat encounters, proceed to Missions. These include both Historical and What If missions featuring advanced aircraft, such as Allied jet fighters, which were conceived during World War II. Both new and experienced players should also repeatedly fly all the Training missions. They are there for good reasons, and the combat training missions emphasize the importance of timing your moves just right.

If you're new to flight sims, you're facing a very enjoyable learning curve. You should definitely spend a few hours in Free Flight with the Hard flight model. Consider yourself ready for combat only once you've managed to land the plane on the airfield nearby (set a low starting altitude to crash, er, land faster). Need help with landings? The next chapter discusses that along with many other issues.



TIP

Don't switch to a different aircraft too quickly. It's better to know one plane really well than to know ten planes badly. Also, becoming an expert on one aircraft makes mastering subsequent plane types much easier.

