Red Baron 3-D

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Instal l ing the game

Important: before installing Red Baron 3-D, *you should close all open applications.*

Starting the instal l ation program

Before you can begin playing *Red Baron 3-D*, you must install it to your hard drive. Let's go ahead and do that now:

If you have AUTOPLAY enabled on your CD-ROM drive (the default setting) all you need to do is insert the *Red Baron 3-D* CD into the drive and close the drive door. After a few seconds, a window will appear on your desktop with a picture of a crewman grabbing the propeller of an airplane and a couple of buttons on the bottom.

If you do not have AUTOPLAY enabled, put the *Red Baron 3-D* CD into the CD-ROM drive and close the drive door. Click on the **My Computer** icon on your desktop and a window will open listing all the drives on your system. One of the drives will have an icon of an Iron Cross and will be labeled **Red Baron 3-D**. Right click the CD drive to bring up a menu of options. Left click the menu option labeled **Autoplay**. After a few seconds, a window will appear on your desktop with a picture of a crewman grabbing the propeller of an airplane and a couple of buttons on the bottom.

Click the **Install Red Baron 3-D** button to launch the installation program.

Testing your system

The first thing the install program will do is test your system's audio playback capabilities. A small window will appear telling you that it is attempting to play a digital .WAV file. While that window is displayed, you should hear the sound of an aircraft engine starting up. After playing the sound the Setup program will display a small dialog box asking you if you heard the sound file.

If you heard the sound, click the **Yes** button when asked if you heard the sound.

If you did NOT hear the sound file, click the **No** button. A small window will then appear asking if you want more information on the problem. When you click the "Yes" button on this window, the Sierra On-Line Setup Help will be launched which will assist you in troubleshooting the source of the problem.

Choosing installation size

The next window to appear is the actual beginning of the installation process. This window tells you that you will need between 45 and 215 megabytes of available hard drive space for the game itself, plus an additional 80 megabytes of free space on the same drive the game is installed for use as a swap file.

Don't forget about this 80 megabyte requirement! If you ever have less than 80 megabytes free when *Red Baron 3-D* is launched, the game will warn you that it didn't find the required drive space.

In general, the larger the install size, the faster the game will respond. If you have the space for a full install, it is highly recommended, regardless of the speed of your system.

Click the **Next** button to get to the next screen which is where you are asked which size installation you want. Click either the **Large, Medium,** or **Small** install option, then click the **Next** button to proceed.

Choosing install location

Now the installation program wants to know on which drive you want *Red Baron 3-D* to be installed. The default location is on the C: drive in a directory called \Sierra\RedBaron3D.

If you want to install the game to a different location, click the **Browse** button, which will bring up the **Choose Folder** window. Select the drive you want the game installed to using the **Drives** list at the bottom of the window.

Important Note: *Red Baron 3-D* must be installed to a directory called \Sierra\RedBaron3D. For example, if you specify that you want to install the game to the \Games\RB2 folder, *Red Baron 3-D* will be installed to a directory called \Games\RB2\Sierra\RedBaron3D.

When you are satisfied with the install location, click the **Next** button. The appropriate game files will then be copied to your computer's hard drive. This can take anywhere from two to twenty minutes, depending on the installation size you chose and the speed of your CD-ROM and hard drives.

After copying all the relevant files, you are informed that you should register the game and then that the install program created an icon on your desktop for a service called NetMarket. This icon is not needed by *Red Baron 3-D* and can be safely deleted at any time.

Installing Indeo™ and DirectX™ drivers

Next, the installation program checks your system for the presence of the **Indeo™ Video Interactive** program which is necessary for the game's introduction and video sequences. If the installation program determines that you do not have the program already installed, you will be prompted with a series of windows to guide you through the installation process. Click the **Next** button to get to the license agreement, then click **Yes** to get to the system type selection window. Select the **Windows® 95/98** option, then click the **Next** button. You will then be given a list of the drivers to be installed. Click the **OK** button to complete the **Indeo™ Video Interactive** installation. When it is completed, you will be asked if you want to read the release notes. You can safely click the **No** button.

Now the installation program checks your system for the presence of **DirectX™** version 5.0 or later. If it is not installed, you will be asked if you wish to install it at this time. Click the **Yes** button and DirectX™ version 5.0 will be installed on your system without any further intervention on your part.

Final installation steps

Next, the installation program asks if you want to install a *bookmark* to the official Red Baron web page for *Internet Explorer™*. Select either the **Internet Explorer™** or the **DO NOT Install Bookmarks** option and click the **Next** button. Next you may be asked if you want to connect to the internet and check for *Red Baron 3-D* updates. For now, just click the **No** button if asked.

You will then be asked to register *Red Baron 3-D*. This can be easily accomplished by inputting your information into the forms provided. Alternately, you may register at a later time by clicking the **Register Later** button.

Finally, if either the *Indeo*™ or *DirectX*™ drivers were installed to your system, you will be told that your computer needs to be restarted before you can use *Red Baron 3-D*. Simply click the **Finish** button to restart your system. Otherwise, click the **Finish** button to end the install and return to your desktop.

Congratulations! You have successfully installed *Red Baron 3-D* to your system!

Starting the game

Once the game has been installed to your hard drive, you can choose one of two different ways of launching the game: autoplay or shortcut.

Starting the game with Autoplay

If your system has autoplay enabled, starting *Red Baron 3-D* is as simple as putting the game CD in the CD-ROM drive and closing the drive door. After a few seconds, a window will appear on your desktop with a picture of a crewman grabbing the propeller of an airplane and a couple of buttons on the bottom. Click the button labeled **Play Red Baron 3-D** to start the game.

Starting the game with a Shortcut

When *Red Baron 3-D* was installed to your system, a set of program shortcuts was put into a folder in your **Start** menu. To start the game, first make sure the *Red Baron 3-D* CD is in the CD-ROM drive. Next, click the **Start** menu button in the lower left and click the **Programs** folder near the top of the menu.

Next, locate and click on a folder called **Sierra,** then another one called **Red Baron 3-D**. Inside this folder is a shortcut called **Red Baron 3-D**. Click this shortcut to start the game.

Putting a Red Baron shortcut on your desktop

Starting *Red Baron 3-D* from the Start menu shortcut is at least a five-click method. If you want to save time when starting the game, you can put a shortcut on your desktop, reducing program launch to a single click.

To put a shortcut on the desktop, we first have to get a copy of an existing shortcut. To do that, click the **Start** button at the bottom left of your screen and then click the **Programs** folder near the top. Locate and click on the folder called **Sierra,** then locate and click on the folder called **Red Baron 3-D**.

Inside this folder is a shortcut called **Red Baron 3-D**. Instead of clicking this icon with the left button, click on it with the RIGHT mouse button which will bring up a small action menu. Left-click the **Copy** entry.

Now, right-click anywhere on your desktop to get the same type of menu as in the last step. Left-click the **Paste** entry and the **Red Baron 3-D** shortcut will be copied onto your desktop, giving you single-click access to the game.

TUTORIALS

Note: These tutorials form a programmed instruction set designed to teach you the mechanics of the Red Baron 3-D game as well as some of the basics of aerial combat. Each tutorial will rely on lessons learned in previous tutorials, so it is recommended that you perform each lesson in order.

*These tutorials assume the use of a Microsoft Sidewinder joystick, as depicted in the **Joystick Controls** diagrams found on page **73** of this manual.*

*If you are using joystick with fewer axis' or buttons, you will need to use the keyboard equivalents for any missing functions. Please refer to the **Keyboard Controls** diagrams found on page **74** in this manual.*

If you have a control system with more functionality, you should refer to the controller manuals for instructions on configuring the controller to fit your needs.

Tutorial 1: Fly Now

In this lesson, we will learn the following techniques:
1. *How to start a Fly Now game.*
2. *Using the fixed cockpit views.*
3. *Using the slewable cockpit views.*
4. *How to locate the enemy.*
5. *How to fly your aircraft using a joystick.*
6. *Fighting the enemy.*
7. *Exiting the cockpit.*

How to start a Fly Now game

Using one of the previously outlined methods, start *Red Baron 3-D*. After viewing the introduction, you will be left in the game's **Main Menu**. Click the **Fly Now** button at the top of the button row on the left.

Tip: You can skip the introduction by clicking the left mouse button or by pressing the ESC key on your keyboard.

After a short loading period, you will find yourself among the clouds in the cockpit of your *Nieuport 28* fighter aircraft. Before we do anything else, press the **pause** key on your keyboard.

Tip: The view controls all function while the game is paused. You can pause the game during combat to orient yourself or to identify and locate enemy aircraft. Don't rely on this too much, though, as the pause function is disabled in multiplayer games.

Using the fixed cockpit views

While the game is paused, let's learn the basics of the cockpit view system.

Red Baron 3-D features both a standard set of fixed views as well as a swiveling view that simulates the actions of a pilot's head as he looks around, known as the "slewable" cockpit view. Let's look at the fixed views first.

Note that when we start, we are looking straight ahead with the instrument panel dominating the lower part of the screen.

Move the *hat* on the joystick to the left and note that you are looking out the left side of the cockpit. Release the hat and note that the view returns to looking straight ahead, but that the instrument panel is mostly obscured and you have a better view over the upper wing. Whenever you release a view key or return to the cockpit from an external view, you will be returned to this forward view.

Now, push forward on the hat. Note that the forward view drops down a bit so that you can see the instrument panel. Move the hat around in a circle and note that the view pans to each of the eight basic viewing angles around the aircraft. Release the hat and the view returns to the standard forward view.

While holding down the CTRL key on your keyboard, push forward on the hat. Note that the view changes so that the only part of your aircraft that is visible is the top part of the prop circle. This view is known as the "45-degree forward" view and is one of the most useful combat views available. When you find yourself in a turning dogfight, this view allows you to glance at your enemy and see any maneuvers he might be making in an effort to shake you from his tail.

Similarly, holding down the CTRL key and looking back can give you a view of anyone that might be chasing you in a dogfight. With the CTRL key held down, all the standard hat views are changed to "45 degree up" views. Left becomes "45 degrees up and to the left", right becomes "45 degrees up and to the right", etc.

Using the slewable cockpit views

Now let's have a look at the slewable cockpit views.

Press and hold down the **Camera Rotate** button (the large button next to the hat on the Sidewinder). Notice that the wings lose color and texture and the flying wires on the wing struts disappear.

Now, while holding down the **Camera Rotate** button, move the joystick forward and notice the view slides smoothly down to the instrument panel. Push the joystick to the left and note how the view smoothly slides around to the left until you are looking almost directly back at the tail. Push the joystick around to the right and notice how the view will not let you look directly back at the tail.

The slewable cockpit is meant to simulate the views available to a pilot as well as the time it takes for him to swivel his head

around to another viewing angle. Just as humans are incapable of turning their heads in a complete 360-degree circle, the slewable cockpit cannot be swiveled in a complete 360-degree circle.

When you release the **Camera Rotate** button the view snaps back to the standard forward view.

You can permanently enter the slewable cockpit view by pressing the **F2** key. **F1** will get you back to the standard fixed view system.

How to locate the enemy

If you pressed the **pause** key as soon as the cockpit appears, you should see a small, dark dot in the center of your plane's windscreen. That dot is the enemy plane you are supposed to shoot down. All *Fly Now* games start with the enemy in front of you.

Now, press the **E** key on the keyboard. Notice how the view centers on the dot representing the enemy plane and that the view system has changed from a fixed view to a slewable view (evidenced by the lack of color and texture in the upper wing and the lack of flying wires on the wing struts). If the enemy was not visible, he should be now.

The **E** key activates the *Target Enemy* function. This causes the view to change so that the targeted enemy plane is in the center of the screen. As your plane's attitude changes, the view will adjust so that the enemy is always in the center of your screen.

If there were more than one enemy plane in the air, each press of the **E** key would cycle the target to the next enemy plane. This function serves as an effective identification system, allowing you to see if the specks in the distance are enemy or friendly, or to quickly find out if there are any enemy planes in the area.

Press the **pause** key on the keyboard to let play resume. Note That the view will slew to one side or another as the enemy aircraft leaves the center-line of your plane's flight path. Press the **pause** key again to halt the action while we discuss basic flight controls.

Tip: In Fly Now missions, you can identify the type of enemy aircraft by it's actions when you first see it. If the plane turns and comes directly toward you, it is a fighter. If the enemy plane gently turns to one side or the other and flies

> *away from you, it is a bomber or other plane with a tail gunner.*

How to fly your aircraft using a joystick

The joystick style game controller is the most logical and intuitive input device you can use for a flight simulation because it duplicates the control stick in most aircraft in both form and function.

There are four basic flight controls in the game: **throttle**, ailerons, elevators, and rudder. Let's look at them one at a time:

The first control, and the most basic, is the throttle. As expected, the throttle controls the power produced by the engine just as the accelerator on your car increases engine power which allows you to go faster or climb steeper hills. You can control the throttle with either the keyboard or the joystick or both, depending on your needs at the time. If your joystick is equipped with a throttle wheel or slider, you can directly control the throttle setting by moving it up or down.

If you prefer, you can use the keyboard to set the throttle to a specific setting by pressing one of the number keys across the top row of your keyboard. The **1** key corresponds to an idle setting and the **0** key represents a 100% throttle setting, with all keys in between representing linear steps of increased throttle settings. Additionally, you can increase the throttle setting by one "notch" by pressing the +/= key and can decrease it one "notch" by pressing the _/- key.

The **ailerons** are used to control the *roll* of the aircraft along it's center line axis. Pushing left on the joystick will cause the plane to roll to the left and pushing the joystick to the right causes the aircraft to roll to the right. If you hold the joystick down, the aircraft will continue to roll in that direction. If you let up on the joystick, the roll will stop and the aircraft will remain in whatever attitude it was when the rolling stopped.

The **elevators** control the *pitch* of the aircraft along an axis parallel to the plane's wings. When you are flying right-side up with the wings parallel to the ground, pulling back on the stick will cause the plane's nose to pitch upward and pushing forward will cause the nose to pitch down.

The **rudder** controls the aircraft's *yaw* along an axis placed vertically through the plane. Applying left rudder causes the planes nose to slide horizontally to the left until it starts to roll in

that direction and applying right rudder causes the same reaction, but to the right. The rudder is used mainly to offset a natural yaw to one side or another caused by the engine's torque or by gravity when rolled to one side or another. Note that if you do not have a joystick rudder control, you can use the keyboard equivalents.

Although the rudder can slide the aircraft's nose to the left or right, that is not the way to turn your aircraft. Turning is a two step process. First, roll your aircraft in the direction you want to turn until the wings are banked at about a 45 degree angle to the ground. Next, pull back on the stick and the aircraft will turn in the desired direction. Pulling back slightly will cause you to conduct a shallow turn while pulling back hard will tighten the turn's radius. Similarly, rolling so that the wings are perpendicular to the ground will tighten the turning radius, however, with the wings vertical to the ground, there is no *lift* and your plane will rapidly lose altitude.

Now, let's put this all together and give it a try! Press the **pause** key to restart the action. Use the joystick to try to keep your nose pointed at the enemy aircraft. If you get disoriented with the slewable view, something that is easy to do when learning the system, switch to a fixed view by pressing forward on the hat. Concentrate on learning to control your aircraft and trying to follow the enemy plane, adjusting your throttle to keep from overshooting the target.

> *Tip: Make gentle movements with the joystick. It is very easy to overcompensate to the point where your plane is gyrating wildly around the sky. All of those sudden movements cause you to lose airspeed and can tear your wings off if they are poorly designed or weakened by combat damage.*

Fighting the enemy

Now that you are pointing your nose at the enemy plane, pull the trigger and watch where the bullets go. You've got unlimited ammunition and cannot jam your guns, so just hold the trigger down and adjust your aim until your bullets are hitting the enemy plane.

Practice keeping your bullet stream on the enemy plane while flying your aircraft. Try not to run into the enemy plane. It won't hurt you for now because we've got collisions turned off, but you

don't want to get in front of the target and get shot at yourself!

The purpose of the *Fly Now* missions is to give you a steady stream of enemy planes to fight. By default, a new plane is spawned every 5 minutes. When you shoot down the enemy plane, use the **E** key to check for the presence of other enemies. If there are none, start climbing!

> *Tip: Altitude is your best friend in combat. It gives you room to maneuver without fear of running into the ground and the freedom to dive your way out of a fight. You can trade altitude for airspeed when diving on an enemy and then trade the airspeed back into altitude.*

Practice shooting enemy planes. Watch out for the planes with tail gunners and try to approach them from behind and below or from an angle. Watch out for the ground, too! You can lose a lot of altitude in combat and wind up catching a wing on a tree if you're not careful.

Exiting the cockpit

Press the **ESC** key and the Exit Game menu will appear giving you several options:

> End Mission - ends the current mission right now.
> Abort Mission - cancels the current mission, ending it without saving any results.
> Restart Mission - restarts the current mission from the beginning.
> Return To Sim - clears the menu and allows you to continue flying.

If you crashed during your flight, the same menu will appear, but without the "Return To Sim" option. Click the **End Mission** button to return to the Main Menu.

Each time you return from a mission, you will be given a mission debriefing that details what you accomplished during your flight. The first part of the debriefing is a map that shows your flight path and the events that occurred during the mission. Pressing the **Enter** key continues the display to the next event. Pressing **Esc** ends the map portion of the debriefing and goes to the mission summary screen. Press **Esc** to continue.

The blackboard portion of the debriefing provides a summary of the entire flight, telling you how many planes you shot down as well as your own fate.

The **Replay** button restarts the debriefing by returning to the map display. Click the **Done** button to return to the *Main Menu*.

Summary

In this lesson we learned how to start and end a *Fly Now* game, how to use both the fixed and slewable cockpit views, and how to use the **E** key to locate enemy aircraft. We also learned how to use the controls to fly the aircraft and how to use the aircraft as a weapon to down enemy planes. You should repeat this lesson until you are comfortable with each of these concepts and can control your aircraft with some degree of confidence.

For more detailed information about how to fly your aircraft, check out the *Flight Reference* and *Flight Maneuvers* sections in the *Historical Section* of this manual. The *Battle Tactics of the Great War* section contains a more comprehensive outline of good aerial combat tactics, including the famous *Boelcke's Dicta*, a set of rules for fighter pilots that is as relevant today as it was in 1916.

Tutorial 2: Changing Preferences

In this lesson, we will learn the following:
   1. How to change the default settings for Fly Now missions.
   2. Changing the game's difficulty with the Realism Settings.
   3. Adjusting the game's sound levels before flight.
   4. Optimizing game performance with the Graphics Settings before flight.
   5. Adjusting sound and graphics settings in-flight.

How to change the default settings for Fly Now missions

In the first tutorial, you flew a Nieuport 28 against a random variety of plane types, but one of the best features of *Red Baron 3-D* is that you can choose to fly over 20 different planes. Let's look at the *Fly Now* preferences and learn how you can change them.

From the *Main Menu*, click the **Preferences** button, which takes you to the *Preferences* menu. Click the button labeled **Fly Now Setting** to reveal a screen with seven different settings that control the composition of *Fly Now* missions.

Locate the box labeled **Player's Plane**. The top section of the box has the words *Nieuport 28*, indicating the current selection. Directly beneath the current selection is a list of the different plane types you can choose to fly. Clicking the up or down arrows to the left of the plane list causes the list to scroll up or down.

The plane list is sorted into *German* and *Allied* planes which are listed alphabetically. It also contains an entry labeled *Random*, which if selected, will randomly choose one of the plane types for you to fly whenever a *Fly Now* mission is generated.

Scroll the **Player's Plane** list until the **Fokker Dr.I** entry is visible. Click the **Fokker Dr.I** label and note that it changes from white to gold text. Click the **Select** button at the bottom of the box and the words *Nieuport 28* are replaced by the words *Fokker Dr.I* in the current selection box.

Immediately to the right of the *Player's Plane* box is a similar box labeled **Enemy's Plane** with the word *Random* in the current selection box. If you scroll through the list of planes in this box, you will notice that there are several plane types that are not in the *Player's Plane* list. These other plane types are bombers and reconnaissance aircraft, which you cannot fly.

Scroll the **Enemy's Plane** list until you locate the **Handley-Page 0/400** type, click the **Select** button to make it the current selection.

The next box to the right is labeled **Weather**, which allows you to set the sky conditions for your *Fly Now* mission. With *Clear* skies, you can locate enemy planes at a greater distance while *Stormy* conditions severely reduce visibility. It should be set to **Clear** by default, which is the easiest to learn with, so let's leave it there for now.

Directly beneath the *Weather* box is the **Season** box. The selected season affects the color of the ground as seen from the air. This can have a significant effect on your ability to spot enemy planes. For example, most of the *Nieuport* models feature a white paint scheme, which is difficult to spot from a higher altitude during winter when the ground is covered in snow. However, in summer, the white plane stands out against the green trees and fields. In general, **Spring** or **Summer** gives the best visibility against the ground, so click the box next to the one you want to try.

The first box on the bottom row, labeled **Enemy AI Level**, allows you to control the quality of enemy pilots you come up against in *Fly Now* missions. Clicking the up or down arrows changes the current setting. You can set it so that all enemy pilots are **Novice, Junior, Veteran, Ace,** or **Elite** quality or you can set it to **Random** so that each enemy plane will be flown by a pilot of one of the above ability levels chosen at random. For now, leave it at **Random**.

The next box is labeled **New Enemy Activated** and is currently set to 5:00 minutes. This means that every 5 minutes of game time a new enemy plane is generated within visual range of your aircraft. You can change the interval to between 1 and 10 minutes or can set it to **No Enemies**, which allows you to fly around without fear of being shot down. Use the arrows to the left of the box to change the interval from 5:00 minutes to 2:00 minutes.

The last box is labeled **Time Of Day** and can be set to any hour of the day or night, from 00:00 to 23:00 hours. The time of day affects the lighting conditions as well as the placement of the sun in the game. With *Sun Glare* turned on, the placement of the sun in the sky can have extreme tactical significance. Use the up and down arrows in the box to set the time to **12:00**, which should place the sun directly overhead.

If you click the **Cancel** button, all changes are thrown away and you are returned to the *Preferences* menu.

Clicking the **Fly Now** button saves all changes and starts a *Fly Now* mission with the currently displayed settings.

For now, click the **OK** button to save all changes and return to the *Preferences* menu.

Changing the game's difficulty with the Realism Settings

No matter how much experience you have playing combat flight simulations, *Red Baron 3-D* is designed to be fun and challenging. By adjusting the *realism settings*, you can make the game easy enough so that you can be successful, but not so easy that it isn't fun.

Click the **Realism Setting** button. A box labeled **Realism Settings** appears in the center of the screen with a slider and three buttons.

The slider serves as both an indicator of overall game difficulty as well as a way of quickly increasing or decreasing the difficulty. The slider should be somewhere near the *low* setting.

To position the slider, simply point to where you want it and click. You can also drag the slider to the left or right by clicking the slider and holding the mouse button down while moving the mouse back and forth.

The **OK** button saves your changes and clears the box from the screen while the **Cancel** button clears the box without saving the changes. By the way, OK and Cancel work the same everywhere, so we can save time and space by not mentioning them again throughout the rest of the tutorial, unless you need to click one or the other for some reason.

The problem with using the slider to adjust the game's difficulty is that it doesn't give you any control over which settings get turned on or off, so it is really only useful if you want to move the difficulty to the either the minimum or maximum level.

Click the **Realism Options** button and the screen changes to show all of the individual options you can adjust. The **Score Modifier** in the 3rd row of options shows you a numerical evaluation of the overall game difficulty. In general, 100% is considered to be "realistic" with anything less than that being considered "easier" and anything over 100% being more difficult than "real".

Tip: Don't let yourself get intimidated by this number and think that you have to play the game at a certain level. The game is designed to be fun, so give yourself a challenge, but don't feel like you have to make it too hard just because of an arbitrary label.

There are 11 different realism categories you can control to adjust the game to your liking. Starting on the top row, the options are:

Vulnerability - when vulnerability is turned **on**, your plane can be damaged and you can be wounded by enemy fire. Turning it **off** means that your plane cannot be damaged and you cannot be wounded, even if you fly directly into the ground at full speed.

Ordnance - when set to **limited**, you only have 500 rounds of machine gun ammunition per gun, and a limited number of bombs or rockets, if the mission calls for them.

Fuel - when your fuel supply is **limited** you are subject to running out of fuel on particularly long missions or if your fuel tank is holed by enemy fire.

G-Force Effects - when turned on, your aircraft is subject to the effects of both positive and negative G-Forces. Negative G-Forces usually occur when, from level flight, you push forward on the control stick. This can cause your engine to cut momentarily which can have a significant effect in combat. Positive G-Forces usually occur when your airplane is diving and you pull back suddenly on the control stick in an effort to level it out. The forces generated in this maneuver can be enough to rip the wings off your plane, especially if they are poorly designed or have been weakened by combat damage.

Tip: Whenever you hear a "creaking" noise during maneuvering, you should know that you are inflicting permanent damage on your aircraft's structure which may result in a structural failure later in the flight. You should always try to avoid performing maneuvers which will damage your aircraft.

Collisions - when turned **on**, running into another aircraft will result in a crash and the probable destruction of both planes. Turning collisions **off**, allows you to fly through other aircraft without crashing.

Sun Glare - when turned **on**, the glare caused by looking directly at the sun reduces your visibility to the point where you may lose sight of enemy aircraft.

Gun Jams - World War I machine guns were temperamental and prone to jamming if they were fired while under excessive G-Forces or for prolonged periods of time. Turning Gun Jams **off**, allows you to shoot without fear of having your guns jam.

Tip: When firing your guns, squeeze off quick, short bursts. This not only helps prevent jamming, but also conserves your very limited supply of ammunition.

Flight Model - allows you to choose among three different flight models, which provide increased levels of difficulty and realism.

The **Easy** flight model classifies all planes as one of three generic types: slow, medium, and fast. This is more of an "arcade" style of flight that is very forgiving and a good starting point for beginners.

The **Intermediate** flight model uses the individual performance variations for each aircraft type, but the planes have all been given additional engine power and they are more forgiving in that it is more difficult to get into a stall or spin.

The **Authentic** flight model is a much more realistic model and as such is very unforgiving. Accelerated stalls, spins, torque and gyroscopic effects all act on your plane during flight. Additionally, combat damage can severely affect the performance of your aircraft to the point where it is nearly impossible to maintain level flight. Becoming adept at controlling your aircraft with the authentic flight model requires many hours of practice.

Enemy Skill Factor - controlled by a slider, you can set the overall ability levels of all enemy pilots, regardless of their quality level (Novice, Ace, etc.). Setting the slider to **Min** makes all enemy pilots perform worse than

normal, whereas setting the slider to **Max** makes enemy pilots perform better than normal.

Torque Effects - torque and gyroscopic effects are caused by the mass of the engine parts turning in one direction and tend to cause the aircraft to roll one way or another. Torque effects are most notable at low speed and high throttle settings, conditions that are prevalent at take-off and during stalls. This option is only available with the *Authentic* flight model enabled. Turning Torque Effects **off**, reduces your chances of getting into an unrecoverable spin.

Note: torque effects tend to resemble joystick calibration problems.

Instruments - the aircraft instruments available during World War I were very primitive when compared to the instruments available today. Using **Authentic** instruments limits you to those instruments which were available at the time while the **Balanced** set introduces the more common modern instruments such as an airspeed indicator and a fuel gauge.

When you are done setting the difficulty to your liking, click the **OK** button to save your changes and return to the *Preferences* menu.

Adjusting the game's sound levels before flight

Click the **Sound Setting** button and a box appears in the center of the screen with three vertical sliders labeled *Shell Music, Shell Sounds*, and *Sim Sounds*. Directly underneath each slider is a check box labeled *Mute*.

The sliders allow you to adjust the sound level while mute allows you to turn off all sounds of that type.

Shell Music is the music that plays when you are not actually in the sim.

Shell Sounds are the "clicks" you hear whenever you click a button.

Sim Sounds are the engine, machine gun, and other sounds that are heard when you are in the cockpit.

When you are done adjusting the sounds to your liking, click the **OK** button to return to the *Preferences* menu.

Optimizing game performance with the Graphics Settings before flight

Red Baron 3-D is designed to run with a smooth frame-rate on both older and slower computer systems as well as those that are on the bleeding edge of technology. By adjusting the level of graphical detail, you can control the frame-rate of the game so that it runs smoothly on your system.

Click the **Graphic Setting** button and a box similar to the *Realism Settings* box appears in the middle of the screen. As with the *Realism Settings*, you can quickly adjust the level of graphical detail by moving the slider to the left or right.

To get to the more detailed graphics settings, click the **Graphic Options** button at the bottom of the box, revealing a screen with 15 different options you can adjust or control. Starting in the upper left corner, the options are:

Object Detail - determines the distance at which ground objects are drawn in detail. When set to **Far**, ground objects will be rendered in full detail at the edge of your visibility range, which slows down the frame-rate, whereas if set to **Near**, objects are not fully detailed until you are quite close to them.

Aircraft Detail - determines the distance at which other aircraft are rendered in full detail. As with the *Object Detail* setting, the selected distance affects the game's frame-rate. However, the distance at which other planes are drawn also affects the distance at which you can identify them and gauge their heading and intent. In general, it is much better to reduce ground detail instead of reducing aircraft detail because the ground detail rarely affects combat.

Object Density - determines the number of ground objects that are drawn. A **High** number of ground objects looks more realistic but can severely decrease the game's frame-rate.

Shadows - when turned **on**, all airplanes and buildings generate shadows based on the sun's position in the sky. Although the shadow serves as a useful tool in helping gauge your altitude above the ground, it severely impacts the game's frame-rate and should be one of the first details you turn off when trying to speed up game play.

Props - when turned **on**, your plane's propeller is drawn during flight, obscuring your view through the prop animation. Turning it **off**, increases the game's frame-rate.

Combat Detail - when set to **faster**, non-essential graphics, such as building textures and clouds, are removed whenever you are in combat. This helps offset the natural reduction in the game's frame-rate, which occurs when a large number of aircraft are being drawn.

Max Detail - all objects in the game, including buildings and aircraft, are rendered at two levels of detail. When this option is turned **on**, the higher detail level setting is used for all objects and when set to **off**, the less detailed objects are used, which can increase the frame-frate. Note that when max detail is on, aircraft control surfaces will move when viewed from outside the cockpit.

Pixel Size - determines which set of terrain "tiles" is used when rendering the terrain. The **Large** pixels option uses a fewer number of less detailed "tiles", which can give the ground a more "tiled" appearance, but improves the game's frame-rate. The **Small** option uses more "tiles" or greater detail, making the changes in terrain appear more smooth, at the expense of a slower frame-rate.

Terrain Range - determines the distance at which the terrain polygons are drawn, with anything beyond that distance being obscured by a "fog" effect.

Terrain Detail - determines the distance at which the terrain polygons are filled with the terrain textures. If you don't want to see polygon looking terrain, you should have this set as far or farther than you have the *Terrain Range* set.

Graphics - *Red Baron 3-D* is capable of being run with software or hardware rendering.

Setting the graphics to **Windowed** means that the game is software rendered within a window on your desktop. This is the slowest method and should only be used on the fastest computer systems.

The **DirectDraw™** option is still software rendered, but is a bit faster because the game occupies the full screen.

The **Glide** option is only available if you have a 3dfx-based 3D accelerator with the Glide 2.43 (or higher) drivers installed. This full-screen option gives the fastest frame-rates available in the game. Note that Voodoo2™ cards require version 2.51 or higher.

Terrain Textures - determines how much processor time is put into smoothing out the edges of the terrain textures. The **Smooth** option causes the hardware to blur the edges between terrain textures. If you are using the *Glide* driver, this is the only option available.

The **Normal** option allows the terrain textures to be drawn without any modification, which tends to increase the frame-rate.

When you select **None**, terrain textures are not applied to the terrain surface, leaving the world with a flat-shaded, polygonal appearance. This will result in the fastest frame-rates of the three options.

Aircraft Textures - each squadron and Ace in the game has a unique paint scheme for their aircraft. However, all the additional paint schemes can take up valuable memory space and slow down the frame-rate. The **Default** option allows only a single paint scheme for each aircraft model whereas the **Custom** option allows for multiple paint schemes for each aircraft type.

Clouds - the presentation of clouds and "scud" layers significantly reduces the frame-rate on slower machines. As such, clouds can be turned **off** in order to improve the frame-rate. This feature has the largest effect on frame-rates.

Resolution - when the *Graphics* option is set to *Windowed*, this controls the size of the window, otherwise it controls the resolution used in the full-screen mode. In general, you will obtain faster frame-rates by using a lower resolution.

When you are finished adjusting the graphics options, click the **OK** button to save your changes and return to the *Preferences* menu.

Adjusting sound and graphics settings in-flight

Adjusting the graphics options before flight is useful, but it would be far too cumbersome to require you to return to the shell every time you wanted to make a change to the graphics settings, so these options are also available when you are in the cockpit.

Click the **Main Menu** button to return to the *Main Menu*, then click the **Fly Now** button to get back into the cockpit. As soon as you get into the game, press the **pause** key to halt the action.

Position the mouse cursor anywhere on screen and click the **right** mouse button. A gray menu with five buttons appears in the middle of the screen.

Click the **Sounds…** button to get to the *Sound Preferences* controls. You can adjust the sound volume or can mute the volume here. After you are happy with the sound level, click the **OK** button to return to the cockpit. Each time you clear one of the screens of the *In-Flight Preferences* menu, the entire menu is cleared and you will need to right-click again to bring it back up.

Right-click the screen, then click the **Terrain…** button. Note that you can set the *Terrain Range* and *Terrain Detail*, as described in the section above. Additionally, you can set the *Cloud Detail* to **Haze only** or can display the full **Top layer**. Click **OK** to clear the screen.

Right-click the screen, then click the **Object…** button. This screen allows you to set the *Object Detail*, *Aircraft Detail*, and *Object Density* levels, as described above. Additionally, you can enable or disable the *Max Detail*, *Prop Animations*, *Ground Shadows*, and *Combat Detail* settings, with the same effects as mentioned previously. Click the **OK** button to clear the screen.

Right-click the screen, then click the **Screen…** button. This control allows you to set the screen resolution as described above. Click **OK** to clear the screen.

Now that you are in the cockpit, go ahead and press the **pause** key again to resume the action. You should be in a Fokker Dr.I, the famous triplane flown by the Red Baron himself. You should be flying against a series of Handley-Page 0/400's, an early heavy bomber bristling with defensive guns. You have unlimited ammunition, so see how many you can shoot down before you crash or get shot down yourself.

When you are finished playing, exit the using the methods you learned in the first tutorial.

Summary

    In this lesson, we learned where all the preference controls are located, how to change them, and what each one does to the game. By experimenting with the controls, you should be able to set the game to a point where it runs smoothly and is fun and challenging to play.

Tutorial 3: Flying Single Missions

In this lesson, we will learn the following techniques:
1. *How to select a Single Mission*
2. *How to delete a Single Mission*
3. *Viewing the pre-flight briefing*
4. *How to take-off from your aerodrome*
5. *Using the automatic pilot and time compression systems*
6. *Using the external view system*
7. *Navigating with the in-flight map*
8. *How to land at your aerodrome*

How to select a Single Mission

From the *Main Menu* click the **Single Mission** button. At the bottom of the *Single Mission* screen is a summary box which shows you the details of the currently selected mission. By default, it is the *Ace 1* mission where you have been challenged by Manfred von Richthofen.

Click the **Select Mission** button and a box will appear in the middle of the screen. At the top of the box is an area labeled *Mission Comments*, which displays the same mission summary that was at the bottom of the *Single Mission* screen. Directly underneath the *Mission Comments* is a list of the single missions which are available on your system.

A scroll-bar to the left of the missions list allows you to scroll through the pages of missions until you locate the one you want to fly. Each mission is identified by a *Filename*, a *Type*, and the *Squadron* you will be flying for in that mission.

Scroll through the list until you locate the mission called **TUTOR1**. Click the filename to highlight the mission and notice that the *Mission Comments* changes to reflect the contents of the highlighted mission. Click the **Select** button at the bottom of the list to select the Tutor1 mission.

How to delete a Single Mission

Click the **Select Mission** button to get the missions list. Scroll through the list until you find the **DELETEME** mission. Click on the filename to highlight it.

Click the **Delete** button and a confirmation box appears which will ask you if you really want to delete the mission, in case you clicked the button by mistake. In this case, we do want to delete the mission, so click the **Yes** button.

Scroll through the missions list and note that the *DELETEME* mission is gone. Click the **Cancel** button to clear the missions list and return to the *Single Mission* screen.

Viewing the pre-flight briefing

Click the **View Briefing** button. The screen changes to show a chalk board with a series of map rings at the top. The chalk board will tell you that you are part of the 94th Aero Fighter Squadron and that the date is June 1, 1918.

Your mission is a Combat Air Patrol over the bridge which is about 4 kilometers from your airfield. You will take off at 10:04 and you will be flying a Nieuport 28.

Click the **Continue** button and the mission's *Navigation Chart* is shown on the right side of the chalk board while the left side lists the details of each of your waypoints. Your first waypoint is your airfield where you take off, so it isn't listed here.

The second waypoint is the target bridge. You are scheduled to arrive at the bridge at 10:06 at an altitude of 609 meters (about 2000 feet). The third waypoint is your home aerodrome again, which you should reach by 10:08, again at an altitude of 609 meters.

Click the **Continue** button and the page changes to show the formation you should use on the way to the target. Since you are the only plane in the flight, all the other planes in the standard *Echelon Right* formation have been X'd out. For more information on the various flight formations, check out the *Flight Formations* reference, pages **98** to **106** of the historical section of this book.

Click the **Continue** button and the page changes to show the formation you should use at the target. In most cases, the formations are the same for both the *Enroute* and *Target* formations, as they are here.

Click the **Continue** button and the page changes to show a reconnaissance photograph of the target bridge. Note the dip in the north side of the river, just to the west of the bridge. The recon photos will reflect the actual terrain characteristics found in the game.

Click the **Done** button to return to the *Single Mission* screen.

How to take-off from your aerodrome

Click the **Fly Mission** button to start the mission and pretty soon you will find yourself in the cockpit with the engine off. At the top of the screen you should see the words "You may take off now". As the flight leader in the mission, not to mention the only plane, you are cleared for take-off as soon as you get into the cockpit. If you are part of a larger formation, you might have to wait for the planes in front of you to take-off before you will be given take-off clearance.

Before we take-off, let's get our bearings. Right now, all we have in front of us is blue sky. Use your fixed and slewable cockpit views to look around. You'll see that you are parked out on the runway of your aerodrome.

Once you're done looking around, go back to a forward view. The first thing we need to do is to start the engine. Position the throttle at about 10-20% of its movement, or press the **2** key to get the throttle set to just above idle. Now, press the **TAB** key on the keyboard to start the engine. If the engine sounds like it is trying to start but doesn't want to catch, give it a bit more throttle.

Once the engine is started, the plane will start to slowly roll forward. As it rolls forward over the slightly uneven ground, the plane will start to shake. You should also be able to hear the sound of the tail-skid scraping against the ground. Now, increase the throttle to 100% and the plane will start to move much faster.

The Nieuport 28 is a very stable aircraft and it will almost take-off by itself. Pretty soon, the nose of the plane should level out and you will hear the sound of the wheels start to cut out as your plane gets a little air. Gently pull back on the stick until the horizon is just above the bottom of the screen. This will put you in a very shallow, high-speed climb. Climb for about 15-20 seconds, then press the **pause** key to halt the action.

Tip: Some aircraft will not generate enough speed to level out the nose during the take-off run. To get enough speed to take off, you must carefully push the nose forward until the tail skid comes off the ground and your airspeed builds to the point you can lift off the ground.

Congratulations! You have successfully taken off from your aerodrome!

Using the automatic pilot and time compression systems

Red Baron 3-D provides three different automatic pilot systems to help you fly your aircraft.

The most comprehensive autopilot system is known as the *Full* autopilot and is activated by holding down the **CTRL** key and pressing the **A** key on the keyboard. The *Full* autopilot is capable of taking off, climbing to altitude, engaging in combat, and landing at your home aerodrome, all without any direction from you. In other words, the *Full* autopilot system is the same as assigning a computer pilot to fly your plane for you.

The next autopilot system is known as the *Navigation* autopilot and is activated by holding down the **ALT** key while pressing the **A** key on the keyboard. As the name implies, the *Navigation* autopilot will navigate your plane to each of the assigned waypoints, including changing to assigned altitudes. It will not engage in any combat, however.

The last autopilot system is known as the *Level* autopilot and all it does is keep your aircraft flying straight and level. Which can be useful when you find yourself far from your assigned flight path and need to fly a long way home. The *Level* autopilot system is engaged by holding down the **SHIFT** key while pressing the **A** key.

You can disengage any of the autopilot systems by pressing the **A** key, without any of the shifted states (CTRL, ALT, or SHIFT). You can switch to another autopilot system simply by selecting the new autopilot type, without the need to disable the existing autopilot system.

For now, let's just go with the *Full* autopilot system. Press the **pause** key to resume the action and then hold down the **CTRL** key and press **A**. At the top of the screen, you will see the words "Full autopilot enabled". Note that you cannot control the throttle or other aircraft controls as long as the autopilot is engaged.

There are two basic uses for the autopilot systems. Because so much energy and attention is put into simply keeping your aircraft flying straight and level, you don't have much time to put into scanning the skies for enemy aircraft. By engaging one of the autopilot systems, you don't need to worry about controlling the aircraft and can spend your time looking for the enemy.

The second reason for the autopilot system is to allow for a *time compression* system. Due to the long distances that can be

covered, it can take quite some time to get into some action, which is what the game is all about in the first place!

The time compression feature allows you to run at 2x, 4x, 8x, or 16x the normal speed. Pressing the] key will speed the game up one notch and pressing the [key will slow it down a notch. Pressing the \ key will instantly turn off time compression without having to step back down to normal time.

Tip: Never engage time compression without first engaging one of the autopilot systems. You will be unable to effectively control your aircraft and will end up crashing.

There are three events that will automatically disable time compression. The first is the presence of enemy planes. Whenever the game detects enemy planes /close to your aircraft, time compression is disabled. The second is when you disengage the autopilot system to resume manual flight. Time compression is automatically disabled to keep you from crashing. The third is when your aircraft is cleared to land.

Tip: You cannot engage time compression if there are enemy planes in the area, so you can use time compression as an early warning device.

Engage the Level autopilot by holding down the **SHIFT** key while pressing the **A** key so that we can play with time compression without ending the mission. Now, press the] key once to engage time compression. Note how a 2x indicator appears in the upper right hand corner of the screen. This indicator will remain on-screen as long as you are in time compression.

Press] several more times and note how the time compression indicator doubles the speed of the game each time the] key is pressed. Now, try pressing the [key and note how the game slows down to half the speed it was previously. Now press the \ key and note how time compression is disabled.

Using the external view system

If you are still flying, press **ESC** to get the exit menu and choose **Restart**. If you are already on the ground, the menu should already be displayed.

Once you get into the cockpit, take off, gain some altitude, then press **CTRL+A** to engage the *Full* autopilot. Let your plane gain altitude until it levels out, then engage the *Level* autopilot so that we can look at a the external view system without pausing the game.

Press the **F5** key on the keyboard and note that you are now looking directly at the tail of your plane. This is known as the *Chase Plane* view. Because the view is fixed to this external location, it is actually a good alternate view for controlling your aircraft.

Now, press **F4**. You probably won't see anything happen right away, but if you hold down the **Camera Rotate** button on the joystick and move the stick around, you will note that you can pan the camera to any position around your aircraft and can view in any direction. This is known as the *External Camera* view.

> *Tip: When patrolling the front looking for enemies, the External Camera view is probably the most useful view in the game. The **E** key will still locate enemies for you and you can freely pan in any direction.*

The **F6** and **F7** keys provide some entertaining, but less useful views. **F6** is called the *Delayed Chase Plane* view. Try it out to see how it differs from the *Chase Plane* view. **F7** is called the *Fly-By* view and is more of a cinematic view than a combat one.

The last two views are enabled with the **F3** and **F8** keys. **F3** is known as the *External Slewable* view the same as using the **F4** view and selecting an enemy with the **E** key. **F8** is very similar except that it looks at *your* airplane from the perspective of the target. Appropriately enough, **F8** is known as the *Target* view.

Navigating with the in-flight map

If you've been following the tutorial, you have probably passed the target bridge long ago and may even be out over the Channel. One way to find out where you are is to look at your in-flight map.

Make sure that the **Num Lock** light is on and press the **0** key on the numeric pad. Note that the view changes to show part of a flight map with your path drawn in yellow and red and that a small yellow airplane marks your actual location.

The in-flight map only covers a limited area so it is easy to fly off the edge of the map. If that is the case, you will see a small

white chevron at the edge of the map pointing to your location. The in-flight map is always oriented so that North is up.

The symbols on the map represent the major terrain features. The maps on page **119-123** of the historical section has a symbol legends to help you match what you see on the ground with what you see on the map.

To get back to the standard view, push forward on the hat or press the **0** key on the keypad again.

How to land at your aerodrome

Ok, let's put it all together now and fly this mission for real. Restart the mission, start your engine, and take off.

Once you are airborne climb until you are at about 600 meters altitude. Check your compass and turn until you are headed north.

Use your external and internal views to locate the bridge. It is only about 2 kilometers away, so you should have no problem spotting it.

Fly your aircraft until you fly over the bridge. This will satisfy your mission requirements.

Now, turn your plane around and fly south toward your airfield. As you approach the airfield, engage the Full autopilot. One of the best ways to learn how to land is to actually see it done, so go ahead and let the autopilot land your plane. As it is landing you plane, note the approach angle and airspeed. Note how the autopilot uses the throttle to maintain speed.

After the plane stops, restart the mission, fly to the bridge and turn south towards your airfield. As you approach your field, chop your throttle to about 50-60% and lose altitude until you are at about 50 meters. Your airfield is oriented east to west, so circle around the west side of the field and then fly east, parallel to the field, about 100 meters south of the buildings.

After you pass the end of the field, bank to the left and slowly turn your aircraft so that it is headed west and lined up with the middle of the runway. If you aren't lined up, level out and continue to fly west until you pass the end of the field, then bank to the left and turn around for another try at it. Keep trying until you have it lined up.

Tip: Often times, your aircraft will obscure your vision, making it very difficult to see the runway on your approach.

*Pressing **ALT-T** (in Glide mode only) makes your aircraft translucent, allowing you to see the runway without having to change your plane's attitude.*

Now that you are lined up with the airfield and headed west, chop your throttle to about 30% and lose altitude until you drop down onto the end of the runway. When you touch down, chop the throttle to idle and then coast to a stop.

Most likely, your first few attempts at landing will end up with the ambulance rushing out onto the field to pick through the pieces of your crashed plane. Don't worry about it. With time and practice, you will get it down until becomes second nature!

*Tip: You do not have to land your aircraft to successfully complete your mission! When you get within sight of your airfield, press **ESC** to get the exit menu and choose **End Mission**. You will be returned to your squadron with no penalty of any kind!*

Summary

In this lesson we learned how to select and fly a *Single Mission*. We also learned how to delete unwanted missions from the hard drive using the **Delete** button on the missions list. We learned about the pre-flight mission briefing and learned how to check out the flight path and reconnaissance photo.

Once in the cockpit, we learned how to start the engine and take off, as well as some of the restrictions that would be in place if you were part of a larger flight. We learned about the *Full*, *Navigation*, and *Level* autopilot systems and how to disengage the autopilot by pressing the **A** key.

We learned how to engage the time compression system and how to disengage it incrementally or all at one once. We discussed the external view system and checked out how the *External Camera* view allows you to view the entire sky around your aircraft by *flying* the camera around your plane.

We checked out the in-flight map and how to orient yourself with the flight path and aircraft symbol. We also discussed what to do if you find yourself off the edge of the map. Finally, we watched the autopilot land the plane and gave it a few tries. Most importantly, we learned that you don't have to land your aircraft to successfully complete missions!

Tutorial 4: The Campaign Game

In this lesson, we will learn the following techniques:
1. *How to create a new pilot*
2. *How to load and delete existing pilots*
3. *Reviewing campaign mission briefings*
4. *Viewing campaign reports*
5. *Transferring to another squadron*

How to create a new pilot

One of the central features of *Red Baron 3-D* is the ability to assume the role of a pilot on the Western Front. Your pilot (you) will be assigned to fly for various squadrons alongside famous aces such as Werner Voss or Albert Ball. If you choose to fly the entire span of the war, you will see various new aircraft come into service and will experience first hand the frustration of having to fight in an inferior machine. At other times, you will feel the exhilaration of knowing that you hold a technical advantage over your hapless opponents.

From the *Main Menu* click the **Campaign** button and you will be presented with an empty pilot dossier. The first thing you need to do is to select a *service* to fly with. You may choose to create a British, German, French, or American pilot. Click the **Service** tab, then click the **U.S.** button. Notice that over on the right side of the dossier, the *Current Date*, *Service*, *Rank*, and *Date of Enlistment* fields have been filled in.

Since the Americans did not become officially involved in the war, the default start date for an American pilot is March 1, 1918. However, you may choose to start on an earlier date. Click the **Enlistment Date** tab on the left side of the dossier and you will be given a list of valid start dates. Note that the start dates are all the first day of every month between January 1, 1916 and November 1, 1918.

Locate and click the **January 1, 1917** date to start about a year earlier than normal. A box appears on screen telling you that Americans enlisting before February 16, 1918 will fly for the French air service in the *Lafayette Escadrille*. Click the **Continue** button to accept these terms. Note that the *Current Date*, *Service*, *Rank*, and *Date of Enlistment* fields change from their previous values and that the *Current Squadron*, *Aerodrome*, and *Region*

fields have been filled in.

Click the **Squadrons** tab. Note that as a French pilot, you have a variety of squadrons you can choose to fly with. However, we are creating an American pilot, so we'll stick with our current squadron. Click the **Cancel** button to return to the dossier without making any changes.

Now, click the **Rank** tab. You may choose to start the game at any of the available ranks in the service you have chosen to fly with. At the lowest ranks, you will always be at the tail end of your flight formations and will usually be assigned the older aircraft in service with your squadron. Along with your success in the air, you will be promoted in rank.

At the highest rank, you are considered the squadron commander and can make changes to flight and aircraft assignments, if you wish. Click the **Captaine** button to select the highest French rank and become the commander of the *Lafayette Escadrille*.

Move your mouse cursor over the right side of the dossier. Note that the cursor changes to a white outline when it is moved over the *Service*, *Rank*, *Date of Enlistment*, and *Current Squadron* fields. Clicking your mouse on these fields or pressing the **Enter** key will activate the selection menus the same as if you clicked the corresponding tab on the left side of the dossier.

Click in the field labeled *No Pilot Photo Available* and note that a photo appears in the box. Each click of the mouse on the photo will cycle the picture to the next one in the list. Click through the photos until you find one that you want to represent this pilot.

Now, click the *Last Name* field just underneath the photo and type in the last name of your pilot. Press the **Enter** key when done or click in the First Name field and type in your pilot's first name. Click the **Done** button and after a few seconds you will find yourself at the *Campaign* menu.

Congratulation! You have just started a career in the famed L*afayette Escadrille*.

How to load and delete existing pilots

On the *Campaign* menu, click the **New Pilot** button. This gives you the same dossier as you saw in the previous step. Note that the empty dossier page is *Page 2 a*nd that the *Previous* button is now enabled.

Click the **Previous** button and note that the page changes to *Page 1*, which is the one that contains your previously created pilot. Note that the *Next Page* button is now enabled and that *Previous* button is no longer available. If you have more than one pilot on your system, you can switch between them by using the *Previous* and *Next Page* buttons until the pilot's dossier is shown, then clicking the **Done** button.

Deleting an existing pilot is as simple as showing the pilot's dossier, then clicking the **Delete** button.

Select your previously created pilot and click the **Done** button to return to the *Campaign* menu.

Reviewing campaign mission briefings

Click the **Next Mission** button. Soon you will find yourself looking at the familiar chalkboard describing your mission. Use the techniques learned in previous lessons to view the important data about your upcoming mission, then click the **Done** button to proceed to the *Next Mission* menu.

Click the **Repeat Briefing** button and note that it shows you the same briefing you just got done viewing. If you missed any portion of the briefing, you can review it prior to taking off. Click the **Done** button to return to the *Next Mission* menu.

Although the briefing contains a lot of good information about the upcoming mission, the real meat can be found elsewhere. Click the **View Flight Plan** button. You will see the chalkboard briefly and then a regional map will be displayed with your mission's flight path drawn in red.

Put the mouse cursor anywhere over the map and note that it changes to look like a magnifying class. Position the cursor over the area with your flight path and click the left mouse button once. Note that the map zooms in one level to show more detail. Click the left mouse button once more and note that the view zooms in one final level to show the maximum amount of map detail.

Placing the cursor on the edge will scroll the map in that direction. Click the right mouse button twice and note that the map zooms back out to its original size. Locate the legend in the lower left corner of the map. Note that the cursor changes to a "hand" as you move it over the labels for most of the symbols in the legend. Clicking the symbol or the check box to the left will remove all of those symbols from the map. Clicking it again will

re-enable the display of the selected object type.

You probably cannot help but notice the white mission summary box in the upper left corner of the map. The summary tells you the flight number, takeoff time, the type of mission, the mission's target and distance, how many aircraft are in the flight, and how many waypoints are on the flight path. Additionally, if the displayed flight is the one you are assigned to fly, the summary will show this as being the "Player's Flight".

Click the **Next** button in the bottom right corner of the mission summary. Note that the flight path and the mission details change, assuming your squadron is conducting multiple missions on this day. Each click of the **Next** button changes the summary to show the details for the next flight until it cycles back around to the first flight. The **Prev** button cycles backwards through the list of flights.

Get the summary back to where it shows your flight and then click the **Waypoints** button. The summary box changes to show a list of all the waypoints in your flight path. Note that on the map, one of the waypoints is flashing white and that in the summary, one of the waypoints is outlined in yellow. Click on one of the other waypoints in the list and note that the corresponding waypoint on the map starts to flash white.

Each waypoint in the list includes the major landmark type which corresponds to the selected waypoint, the action to take at the waypoint, the altitude (in meters), and the time of day you should be at the waypoint. To the right of the list are four arrow buttons. The double arrow buttons will take you to the beginning or end of the waypoints list and the single arrows scroll the list up or down one line at a time.

Click on the first waypoint, which should be labeled *Takeoff*. Click the **Add** button and note that a new waypoint was added between the first and second waypoints on the list. The new waypoint is placed on the nearest landmark to the previous waypoint.

Click the new waypoint to highlight it. Now click the **Edit** button and an edit screen appears. When editing waypoints you can change the altitude to fly at enroute to the waypoint, the action to take enroute, the action to take at the waypoint, the flight formation to use enroute, and the flight formation to use at the waypoint. We won't actually change anything at this point, so click the **Cancel** button to return to the waypoints list.

Zoom the map all the way in so that you can see the landmarks and waypoints clearly. Put your mouse cursor over the flashing waypoint mark and note that the cursor changes to a hand. Click and hold down the left mouse button and note that you can drag the waypoint to another landmark, which will be outlined in red. Let go of the mouse button and the waypoint changes to the new location.

In most cases, you will have no need to change waypoints and in this case, we really don't want the new waypoint added to our flight path. Highlight the new waypoint and click the **Delete** button. Note that the new waypoint and the corresponding flight path is removed from the map. Click the **Flights** button to return to the flight summary display.

With all the editing we did on our mission path, it is possible we messed up some of the timings. Click the **Restore Path** button, which is now displayed on the flight summary. This will revert back to the original flight plan.

Click the **Squadron** button and note that the flight summary changes to show a listing of all flights that will be flown by your squadron and that the map shows the flight paths for all flights. Click the **Done** button and the map is rolled back up and you are looking at a chalkboard display showing all of the missions assigned to your squadron, who is assigned to fly each one, and which plane type they will be flying. Note that one of the map rings at the top of the blackboard is colored red, indicating that it is the active map for your flight region. You can redisplay the map by clicking the map ring.

Because you are the squadron commander, you have the authority to change the details of any of the displayed missions. Position the mouse cursor over one of the pilot names assigned to one of the flights and note that a white box appears around the pilot name. Click and hold the left mouse button and drag the pilot's name over the top of another pilot's name in a different flight until a white box appears around the second pilot's name. Now, release the mouse button and note that the two pilots swap their flight assignments.

You can make a flight larger by moving a pilot into the blank spot at the end of each group of pilots. If you have extra pilots not already assigned to a flight, they will be listed at the bottom in the *Available* area.

You can do the same thing with planes. In some cases, your

squadron will be composed of a variety of planes, so you may want to assign a particular plane type to a particular pilot. To do so, simply drag the plane to the desired location and it will swap positions with the plane that is already there.

Click the **Flight** button and note that the chalkboard changes to show the names of the pilots in your flight as well as the ordnance loadout in use for each plane. As the squadron commander, you have the authority to change the ordnance loadout, too. You can enable or disable a particular ordnance type by clicking in the appropriate check box. A check in the box indicates that ordnance type is selected for that pilot's plane. Note that some ordnance types may not be available simply because your aircraft is incapable of using that ordnance.

When you are done reviewing your mission, click the **Done** button in the lower left to return to the *Next Mission* menu. To actually fly the mission, click the **Fly Mission** button. Alternatively, you can return to *Campaign* menu by clicking the **Campaign** button.

Go ahead and click **Fly Mission** to fly your first campaign mission.

Viewing campaign reports

After completing your first mission and finishing the mission debriefing, you will be returned to the *Campaign* menu. Click the **Squadron Ops** button to get to the *Squadron Ops* menu.

Click the **Kill Board** button. The *Kill Board* shows how many enemy aircraft have been downed by members of your squadron, including your pilot. Click **Done** to continue.

Click the **Pilot Dossiers** button. A book opens up to display the squadron name and insignia on the left page and a list of all pilots in the squadron on the right page. Clicking the **Next Page** button turns the page to show the first pilot in the squadron, which should be your pilot. Alternatively, you can click the name of a pilot to go directly to that pilot's dossier. When you are done viewing the dossiers, click the **Done** button to return to the *Squadron Ops* menu.

Click the **Squadron Info** screen and another book opens up to show your squadron name, insignia, location, quality, and a list of historical aces on the left page. The right page lists all the aircraft types assigned to your squadron. Clicking an aircraft name will

take you directly to the page which shows statistics and a three-plane view of the aircraft. Click **Done** when you are finished looking at your squadron's details.

We'll look at the *Transfer* and *Paint Plane* functions later, so click the **Campaign** button to return to the *Campaign* menu.

Click the **Intelligence** button to get to the *Intelligence* menu. Click the **Top Aces** button to view a top 10 listing of the most successful pilots on the western front, sorted by the number of kills. Note that when you play *Red Baron 3-D*, you are changing history. It is entirely possible for an historical pilot to be killed in your campaign before he was killed in the real war. Alternatively, the pilot could live longer than he did in real life and end up with more kills than he really had. This is alternative history.

Click the **Done** button when you are finished looking at the list of top aces. Click the **Ace Dossiers** button to open a book which contains pilot profiles for the historical aces in the game. The right page of the book lists the currently active services. Click the **German** label or the **G** tab to get a listing of all the German aces. Click the name of one of the aces to view his profile. You can also page through the book using the **Next Page** and **Previous** buttons. When you are finished viewing the ace dossiers, click the **Done** button.

Click the **Local Squads** button. The by now familiar book appears listing the available services on the right page. Click the **German** button to get a listing of all the German squadrons operating in the same region of the front as your squadron operates. The book contains the same basic information as is contained in the *Squadron Info* book, but includes all enemy and friendly squadrons in the region. When you are done viewing the squadron details, click the **Done** button.

Click the **Intel Reports** button. You will be taken to the film room where you will be shown a short intelligence film detailing a particular enemy weapon system or other piece of intelligence information. When you are finished viewing the film, click the **Done** button.

Click the **Campaign** button to return to the *Campaign* menu, then click the **Pilot Log** button. This opens up a pilot dossier similar to the one you got when you clicked the *New Pilot* button. You can select an active pilot, create a new one, or delete an existing pilot, just as you can from the *New Pilot* screen. Click the **Done** button to return to the *Campaign* menu.

Click the **Personal Stats** button. This opens up a book that shows you details about your pilot only. Each plane you've shot down is described, along with the date you shot it down. When you are finished looking at your pilot's data, click the **Done** button.

Click the **Medals/Awards** button. The screen changes to show an animation of your medals case opening up to display any medals you may have been awarded. Most likely, it is empty right now, so you need to get busy! Click the **Done** button to return to the *Campaign* menu.

Transferring to another squadron

If you get bored with a particular region or wish to see a little more of the western front, you can request transfer to another squadron.

From the main *Campaign* menu, click the **Squadron Ops** button and you will be shown a transfer request form. Locate and click on the button labeled **Select** in the bottom section of the form and you will get a list of available squadrons. Highlight the squadron you are interested in.

Click the **Info** button and you will be shown information about the selected squadron. Click the **Done** button when you are done looking at the squadron info.

Now, click the **Locate** button and you will be shown a map of the entire western front with a flashing red outline around the location of the squadron. If you don't see the flashing red right away, it may be obscured by the squadron selection box. You can click the left mouse button on the box and drag it out of the way, if you need to see behind it.

When you are done looking at the map, click either the **Select** or **Done** button to return to the transfer request form.

Finally, once you have decided which squadron you want to be a part of, highlight it in the list and click the **Done** button. The new squadron identification and location will be completed on the transfer request form. Click the **Done** button and your request will be submitted.

Now, fly the next mission. When you return from your mission, you may be informed that your transfer request has been approved. If you've changed your mind about the transfer, click the **Decline** button, otherwise click the **Accept** button and you will be transferred to the new squadron. You will find it easier to transfer into poorer quality squadrons instead of the elite ones.

Summary

In this lesson, we learned how to create new pilots as well as how to load and delete existing pilots. We learned about the different pre-mission briefing options available in the campaign game and we reviewed all the campaign reports and pilot dossiers, as well. We also learned how to request a transfer to another squadron and that you need to fly a mission while the transfer is being processed.

Tutorial 5: Flying Online

Once you've become familiar with flying single missions and campaigns, it is time to try your hand against the ultimate challenge - other people! In this lesson, we will learn the following:

1. *How to launch the Multiplayer version*
2. *Getting ready to fly online*
2. *How to find on-line games to join*
3. *Multiplayer game types*
4. *Navigating the lobby*
5. *Differences from flying single-player missions*

How to launch the Multiplayer version

As with the single player version of the game, there are a couple of different ways of launching the *Red Baron 3-D* multiplayer game.

When *Red Baron 3-D* was installed to your system, a set of program shortcuts was put into a folder in your **Start** menu. To start the game, first make sure the *Red Baron 3-D* CD is in the CD-ROM drive. Next, click the **Start** menu button in the lower left and click the **Programs** folder near the top of the menu.

Next, locate and click on a folder called **Sierra**, then another one called **Red Baron 3-D**. Inside this folder is a shortcut called **Red Baron 3-D Multiplayer**. Click this shortcut to start the multiplayer version of the game.

If you have AUTOPLAY enabled, putting the CD in the drive will display a window with picture of a crewman grabbing the propeller of an airplane and a couple of buttons on the bottom. Click the **Dogfight On WON.NET** button to start the multiplayer version of the game. Note that this option will take your through the WON.NET service, which serves as a substitute for the *Game Finder* described below. This software is being continually updated and is considered to be self-explanatory.

Getting ready to fly online

Note: The following instructions assume you are using the Start menu game finder and not the WON.NET finder, which is subject to continual improvement and is considered self-explanatory.

When you first start the multiplayer version of *Red Baron 3-D*, you will be presented with an empty pilot roster and a series of action buttons. Because the demands on your system are different in multiplayer games than in single-player mode, there is a separate set of graphics preferences for multiplayer and single player modes.

Click the **Preferences** button and set the graphic preferences to approximately what you have set up for the single-player game. You can fine-tune the settings from the cockpit in the same way as described in the second tutorial.

> *Tip: You may find that you can play at a higher level of graphical detail in the multiplayer version of the game than you can in the single-player version, because the multiplayer version does not need to perform artificial intelligence calculations, which the single player version needs.*

When you are done setting your graphics preferences, click the **OK** button to return to the pilot roster screen. Before you can fly, you need to create a pilot name that people will know you by. You can have up to fifteen pilots in your roster but can only fly one of them at a time.

Click the **New Pilot** button, type in a name, and press the **Enter** key on the keyboard. Your new pilot should be shown in the pilot roster with zero missions and zero kills. Notice that your pilot name is highlighted in red and that all the buttons are available for selection.

Click somewhere below your pilot's name on the pilot roster and note that your pilot's name is changed to black and the *Connect*, *Solo*, and *Delete Pilot* buttons are no longer available. You must have a pilot selected before you will be allowed to fly, so click on your pilot name again. If you don't like your pilot name, you can delete the selected pilot by clicking the *Delete Pilot* button and confirming the deletion of the pilot.

Finally, clicking the *Solo* button will allow you to practice flying offline without any other aircraft in the sky.

How to find on-line games to join

Now that you have your pilot ready to fly, let's find a game to play. First, you should get connected to the internet using your *Dial-Up Networking* or to by connecting to your local area network. Next, click the **Connect** button.

Once connected, you will find yourself looking at a screen with a list of *Available Games* at the top of the screen, some action buttons in the middle, and a set of connection and game type options listed at the bottom.

When you first get to this screen, your system will look on the network for game servers and will display a list of those servers in the *Available Games* window. Each line in the list of *Available Games* will show you the "name" of the server, it's *ping* time, how many players it currently has in the air versus the maximum number allowed, the game's difficulty level, and the type of game being played on that server.

> *Tip: If you see an available game that is displayed in gray text (instead of gold or yellow) it means that game is running a version of the software that is newer than the version you have installed on your system. To play on those servers, you will need the latest update. Note that servers running older versions of the software will not be displayed. If you do not see any servers, make sure you are connected to the network.*

The server name is created by the host administrator (the person that runs the server) and is usually descriptive of the type of game being played on that server. The *ping* time is a measure of the quality of the connection between your machine and the server. As the search for available games is being done, your system sends several *pings* down the line to see how long it takes for information to travel to and from the remote server. In general, if you are getting ping times less than 200, you have an *great* connection between the two machines, whereas, if you are getting pings greater than 400, you have only a *fair* connection.

> *Note: Although you may have a low ping time, other problems, such as line noise or packet loss, can cause the game to be unplayable. If you see the NET indicator regularly while flying, you may want to find a different game with a more reliable connection.*

A lock symbol to the left of the server name indicates that the game is password protected.

The *players* entry displays the number of players currently in the air to the left of the slash and the maximum number of players allowed in the game to the right. The maximum number of players allowed in the game is determined by the host administrator. Note that the display of current players in the game only counts those players that are in the air and not those players that are currently in the lobby.

There are three levels of difficulty in the multiplayer games: Novice, Veteran, and Ace. These labels not only help serve as a guide to the quality of opponents you will find in that game, but also determine the accuracy of ground gunners and the difficulty in damaging ground targets.

There are three types of multiplayer games supported in *Red Baron 3-D*: Melee, Team Melee, and Get The Baron. We will describe these in depth in the next section.

If the list of available games is particularly large, you can filter the list using the options at the bottom of the screen:

The *Protocol* option lets you choose whether you are looking for games over the internet or over an IPX or LAN based connection.

The *Quality* option allows you to filter out games that have poor ping times. If you select the *Fair* option, you will be able to see all connections that are considered at least *fair*, whereas choosing *Great* will only display the best connections.

The *Difficulty* option allows you to filter games by the level of difficulty and competition your would expect to find.

The *Description* option allows you to only display the types of games that you want to play.

Tip: You can refresh the games list by changing one or more of the options at the bottom of the screen.

Multiplayer game types

As stated earlier, *Red Baron 3-D* supports three different multiplayer game types:

Melee is your basic free-for-all contest. There are no teams and there are no friendlies. Everyone in the game is your target and everyone in the game is targeting you. Survival depends on picking your fights carefully and always ensuring you have an escape route available.

Team Melee is the most configurable of the three games and offers the widest variety of options. Players are divided into *Allied* and *German* teams and planes can be limited to those that were historically available on a particular date. Because you are flying as part of a team, you can be more effective by pre-planning and coordinating your missions with other pilots.

Get The Baron is basically a game of tag, with the it character referred to as *The Baron*. When the game starts, there is no *Baron* yet. The first player to shoot down another plane becomes *The Baron* and can start accumulating points by shooting down other planes. A player becomes *The Baron* and can start accumulating points by shooting down the existing *Baron*. The game can be configured to allow up to eight *Barons*, each distinguished by the use of a different, solid color instead of the plane's normal camouflage pattern.

Tip: Although you cannot get points for shooting down non-Baron planes, it may be to your advantage to take out a non-Baron plane.

The specific configuration options for each of the game types is contained in a file called *RB2SERVER.INI*, which can be found in the \SERVER directory on the CD.

Navigating the Lobby

Locate a game you want to join and then click the **Join Now** button to get to that game's lobby. The left side of the lobby screen is dominated by the pilot list. If the game is a *Team Melee* type, there are two lists, one for Allied and one for German pilots, otherwise there is a single list of pilot names. If a pilot's name is prefaced by a dash ("-"), that pilot is currently in the lobby. Note that you can place your mouse cursor over a pilot's name and leave it there for a second or two, a picture of the plane type that pilot is using is displayed.

To the upper right of the pilots list is a window showing the game's *Status*, displaying which of the various options have been enabled for this particular game. The *Region* refers to the map in use in the game and the *Arcade Mode* refers to whether the *Easy* flight model is being used or not. All the other status items are self-explanatory.

The bottom right quarter of the screen contains the *Chat* window. If you click in the blank area beneath the chat window, you can type a line of text to send to all other players in the game.

Across the bottom of the screen is a series of five buttons. If you are playing a *Team Melee* game, the *Change Teams* button allows you to switch between the two teams. If the game is not a team game, the button is unavailable.

The next button to the right is the *Change Aircraft* button. Clicking it will bring up a list of available aircraft to choose from. There are a few details here that are worth mentioning. First, due to texture space requirements, the game can only support a limited number of different aircraft types at one time, without adversely effecting the frame-rate of players using 3D cards equiped with less memory. This is defaulted to four but can be set higher or lower by the host administrator.

Secondly, the host administrator can configure the game to allow only particular aircraft types to be flown or can configure it to disallow certain types in the game. Because of this, the list of planes may be different from game to game.

Between the list of planes and the OK/Cancel button set, there is a small text area labeled *Squadron.* If you click in the blank area to the right of the *Squadron* label, you can type up to three numbers, which serve as a squadron identifier.

The squadron identifier serves three basic purposes in the multiplayer game:

1. One of the chat options is to communicate only with squadron members. Your squadron members are those players on your side (Allied or German) who have entered the same Squadron ID as you.
2. If you refer to the SQUADID.TXT file, found in the main SIERRA\REDBARON3D directory, you will see a list of historical squadrons and their accompanying squadron ID. By inputting one of these ID numbers, you can cause your aircraft to use the historical camouflage pattern used by that particular squadron.

3. You can create a custom paint scheme, give it a Squadron ID number, and then use it in the game by referring to that ID number. For more information on how to use a custom paint scheme in the multiplayer game, refer to the *Painting Planes in Multiplayer* file, which can be found in the *Custom Paint* Schemes directory in the *Red Baron 3-D* folder of the Start menu.

The *Change Airfields* button changes the screen to show a picture of the map being used in the game. To change airfields, simply click on the *roundel* or *iron cross* icons on the map. The current airfield is identified with a red square. If playing a team game, use airfields matching your chosen team.

The *Show Scores* button changes the screen to show a window with current scores for your pilot in this particular on-line game. Whenever you shoot down a plane, or are shot down your yourself, the game calculates the value of the kill based on the number of kills you have registered, the number that have been registered by your opponent, the number of enemy and friendly planes in the game at the time, and the relative qualities of the two aircraft involved. This is then displayed as an *Adjusted Kill* or an *Adjusted Death*. Note that you can never adjust a kill above 1 and never below 0.01.

When you are ready to fly, click the **Fly Now** button or click the **Exit** button to return to the pilot selection screen.

Differences between single-player and multiplayer

There are several differences between the single-player and multiplayer versions of *Red Baron 3-D*:

1. Occasionally you will see the word **NET** appear in the upper left corner of the screen. This means that your system has temporarily lost communications with the server. If this persists for more than 20 seconds, you should exit the game. When you see the **NET** indicator, be prepared for *warping* when communications are reestablished.
2. Holding down the **SHIFT** key and pressing the **N** key will cause the pilot name to be displayed above the plane for all aircraft within visual range.

3. The last person to put rounds into a target is credited with the kill regardless of how much damage was done to the target by each combatant. If a plane is shot down by flak, no pilot will get credit for that kill.

4. The **T** key targets the last person to shoot your plane, rather than the closest threat as is done in single-player.

5. The **D** key does not target the nearest dogfight. Instead, using **SHIFT-D** selects the closest plane in your cone of view as the default plane. Then, pressing the **D** key will cause the camera to refocus on that plane.

6. From within the cockpit (when not in the map view), you can activate the chat window by pressing the **BACKSPACE** key. Pressing **ESC** or **ENTER** will clear the chat window if you have not typed in any text.

7. The in-flight chat supports four different targets:

  ALL Players selects all players in the game to receive your message.

  All Teammates causes your message to be sent to all players on your side in a team based game. Note that in the *Get The Baron* game, all *Barons* are considered to be on one team and all *non-Barons* are considered to be on the other.

  Visible Teammates sends your message only to those players on your side that are within visual range of your aircraft. If you can use the **F** or **E** key to target a plane, it is in visual range.

  Squadron Members allows your message to be read only by those players that are using the same Squadron ID as you.

  In addition to being able to select one of these chat options with the mouse, the left and right cursor keys can move the selection on the chat window.

8. You can land at a friendly airfield and get repaired, rearmed, and refueled without leaving the cockpit. Note that you must be on a friendly airfield, your engine must come to a complete stop, and you must have already flown to an altitude of at least 100 feet before your plane can be refitted.

Summary

In this lesson, we learned how to launch the multiplayer version of the game, either through the normal *Game Finder* or through WON.NET. We learned how to create and delete pilots for on-line play and how to find and select a game to play.

We learned about the different multiplayer game types you can play as well as the details of navigating the on-line lobby. Finally, we learned some detailed differences between the single-player and multiplayer versions of the game.

Note: For the most up to date information available about the multiplayer version of the game, please refer to the site at www.redbaronplayers.com.

Tutorial 6: Advanced Campaign Techniques

In this lesson, we will learn the following techniques:
1. *Working with the Paint Shop*
2. *Using custom pilot photos*
3. *Resurrecting dead pilots*
4. *Deleting unwanted missions*

Please note that the techniques you will learn in this lesson will require you to manipulate files at the DOS level. You should probably ensure that you are comfortable with the game before attempting to perform this lesson. Also, be warned that whenever you are manipulating files you greatly increase the chance of making a mistake that would require you to delete and then reinstall the game from scratch. Feel free to skip this lesson entirely.

Working with the paint shop

As squadron commander, you have the opportunity to decide what paint scheme will be applied to the aircraft in your squadron as well as to select an alternate paint scheme for your own aircraft.

From the *Campaign* menu, click the **Squadron Ops** button, then click the **Paint Shop** button. The top of the *Paint Shop* display lists the various aircraft assigned to your squadron along the left side of the screen. To the right is a column labeled *Self Assignments* and another labeled *Squadron Assignments*. Beneath each of these labels is a button with the words *None Available*.

Click the **Paint Plane** button. The screen is divided into two sections. The left side of the screen has two pick lists labeled *Plane Part* and *Squadron Texture*. The right side of the screen contains a 3-D model of the plane being painted so that you can see what your paint scheme would look like in the game.

Despite what the name implies, you don't really "paint" your aircraft. Instead, you mix and match various pre-made textures to create a unique paint scheme for the finished plane. Most of the squadrons in the game have some unique paint scheme or identification badge for each of the aircraft that were historically assigned to that squadron. So, if you take a wing from squadron A and the fuselage from squadron B and the tail section from squadron C, you will have a unique paint scheme for your squadron, even though the individual parts were not unique. This

is kind of hard to describe in abstract terms, so let's just give it a try to see how it works.

If you are using the pilot you created for the *Lafayette Escadrille* the plane type assigned to your squadron is the Nieuport 17, which should be shown on the right side of the screen. Just underneath the Nieuport 17 model is a series of four arrow shaped buttons surrounding a button with a magnifying glass. These are the camera controls.

Put the cursor over the magnifying glass button and click and hold the left mouse button. Notice that the camera zooms in closer to the aircraft model. Now click and hold the right mouse button and note that the camera zooms out away from the plane. Now, click the button to the left of the magnifying glass button and note that the camera pans around the aircraft in a clockwise direction. Clicking the button to the right causes the camera to pan to the right. Similarly, clicking the button above the magnifying glass button pans the camera up and clicking the button at the bottom pans the camera down.

Click the **Plane List** button a list box appears with the Nieuport 17 as the only entry in the list. If your squadron had more than one aircraft type currently assigned, you could switch between aircraft types here without having to back out to the previous screen. Click the **Cancel** button to continue.

Click the **Load** button and a box will appear telling you that there are no saved configurations for this plane type on the hard drive. You cannot load the default squadron configurations and we haven't created any paint schemes yet, so the list of available schemes is empty. Click the **Continue** button to clear the box from the screen.

Now, let's change the look of one of the parts on our plane. The current plane part is the *Upper Wing Top* and the current scheme in use for that part is *Esc 124*, as identified by the *Plane Part* and *Squadron Texture* fields. Click the up and down arrows to the left of the *Plane Part* field until the current part is the *Fuselage*. Note that the fuselage for *Escadrille 124* contains the profile of a man's face just behind the cockpit.

Click the up and down arrows to the left of the *Squadron Texture* field until you locate the texture for *Esc 49*, which has a yellow flag in place of the profile. Click the **Apply** button and note that the aircraft model to the right changes to replace the "profile" fuselage with the "yellow flag" fuselage from *Escadrille 49*. Play around with the different parts and different squadron

textures until you get comfortable with the concept.

Now, click the **Save** button and you will get a *Configurations* list box with the cursor in the type in field at the bottom. Type in an eight-character name for your configuration and click the **Save** button. Now, click the **Load** button and note that your scheme is now shown in the list. Click **Cancel** to clear the dialog box from the screen.

As you were scrolling through the various squadron textures, you probably noticed that most of them were exactly the same and that some of the more garish colors, such as solid red or solid blue parts, are not represented. You can use parts with alternate textures that are not already represented in the game, but you need to create them yourself.

Scroll the *Plane Part* field until it is showing the *Upper Wing Top*. Click the **Export** button to get a list box labeled *Export Texture*. The list is empty because this is the first texture we are exporting. In the edit field at the bottom of the box, type in an eight-character name that is descriptive of the plane part. For example, you might save this one as **N17UWT** for "Nieuport 17 Upper Wing Top".

Exit *Red Baron 3-D* and load up your favorite graphics editor, such as *Microsoft Paint*™, which comes as part of Windows 95®. Load the texture you just exported into the editor. If you installed *Red Baron 3-D* to the default location on your C: drive, the file will be found in the C:\SIERRA\REDBARON3D\PAINT subdirectory.

You can now edit the texture using the tools provided with your graphics editor program. You should avoid changing the shape of the texture as it may cause problems when it is applied to the aircraft in the game. One thing to keep in mind when editing is that the fuselage texture only covers the left side of the plane. For the right side, the fuselage texture is simply reversed, so if you have any text on the fuselage, it will be backwards on the right side of the plane.

When you are done editing your aircraft piece, save the file and exit your editor. Now, open an MS-DOS box and get to the *paint* directory where you saved your finished aircraft piece (usually by typing **cd\sierra\redbaron3D\paint**). Before we can use the piece, we have to make sure it uses only the same colors that the game uses in its *palette*. To this end, we've included a small DOS program that will remap the palette to the appropriate group of colors.

The format of the command for redoing the palette is:

palmap infile.bmp -O outfile.bmp
where:
infile.bmp is the filename of the aircraft piece
you edited
outfile.bmp is the filename you want for the
new file

*Note: the **-O outfile.bmp** portion of the
command is optional. If you leave it off, the
output file will use the same name as the input
file.*

Assuming you named your aircraft piece **N17UWT** as was
suggested, type **PALMAP N17UWT.BMP** and press the enter
key to convert the file to the proper palette.

*Tip: Some of the more advanced graphics editors allow
you to have multiple files open at the same time, which allows
you to grab a particular color from one texture and use it in
another. If you use one of these programs and are careful to
use only those colors that are in exported aircraft pieces, you
won't need to run the palette mapping tool on each piece
before using it in the game.*

Restart *Red Baron 3-D*, click the **Campaign** button, then
Squadron Ops, followed by **Paint Shop** and finally the **Paint
Plane** button. We should be back to viewing our Nieuport 17
model.

The first thing we need to do is to make sure that the active
part shown in the *Plane Part* field is the same type as the one we
edited. There is no way for the game to know that a particular
bitmap file belongs to a particular part, so if you import the wing
to the wheel, for example, you will have a VERY strange looking
plane, indeed!

Now, click the **Import** button. You should see your modified
part in the list of available textures. Click the filename to
highlight it and then click the **Select** button to retrieve it. Now we
can see that the new part is shown on the left but has not yet been
applied to the aircraft on the right. Click the **Apply** button and
you will see your newly modified texture on the plane!

Click the **Save** button and give this new configuration with your custom painted parts a unique name. Now, click the **Exit** button to get back to the *Paint Shop* screen. Note that the buttons underneath the *Self Assignments* and *Squadron Assignments* headers have been changed from *None Available* to *Unassigned*, indicating that there are one or more custom paint schemes available for this plane type but that none have been selected yet.

Click the **Unassigned** button underneath the *Self Assignments* header. A box appears listing the available custom paint schemes. Note that, in addition to the schemes you have created and saved, there is one called *Unassign*. Selecting the *Unassign* scheme allows you to reselect the default scheme for the squadron.

Highlight one of the schemes you created and click the **Select** button. Note that the label on the button changes from *Unassigned* to display the name of the scheme you created. You can select separate schemes for your pilot and for your squadron, if you wish.

When you are done selecting schemes for your aircraft, click the **Squadron Ops** button to get back the *Squadron Ops* screen and then the **Campaign** button to get back to the *Campaign* menu. Go ahead and fly another mission to see how your new paint schemes look in the air!

Using custom pilot photos

When you created your new pilots, you probably noticed that the number of available photos was rather limited. Fortunately, you can add photos of your own choosing to the game to make it more personal.

The first thing you need is a black and white or color photo to use. You will need to crop the photo so that it is exactly 95 pixels wide and 105 pixels tall.

Put the photo you want to use into the C:\SIERRA\REDBARON3D\DATA\SHELLPAT directory. Open up an MS-DOS box and change to the same directory.

Run the palette remapping tool on the photo you created, using the form:

palmap infile.bmp -O outfile.bmp -P photo.pal

> *where:*
>> infile.bmp is the filename of the original photo
>> outfile.bmp is the output filename for the remapped photo
>>
>> *Note: the* **-O outfile.bmp** *portion is optional. If you do not use it, the output file will be written over the original.*

Now that the file is converted, rename it to **usraceXX.bmp**, where XX is a two-digit number between 15 and 99 (files 00-14 are the ones that are already in the game). Now when you create a new pilot, your new photo will be among those that are available.

Resurrecting dead pilots

Even though you can replay missions in which your pilot is killed, sometimes you will click the wrong button or hit ESC too many times and your pilot's death will be recorded into the pilot file. Fortunately, all is not lost, you can recover your pilot.

First, note which page of the pilot dossier is used to display for this pilot. For example, the first pilot in the game will be on page 1. Open up an MS-DOS window and change to the C:\SIERRA\REDBARON3D\CAMPAIGN directory. The data for your pilot is contained in a file called **campgnXX.dat**, where XX is the two-digit page number of your pilot minus one. For example, if the pilot is the first one, from page 1, the file is called **campgn00.dat**.

You will note that there is a corresponding file called **backup00.dat**. This is a backup of the campgn00.dat file made before the flight in which your pilot was killed. To restore your pilot back to where he was prior to that mission, simply copy the backup file over the current original. In the example, we've been using so far, you would simply type:

copy backup00.dat campgn00.dat

Reload the game and note that your pilot is alive and well and is ready to fly!

Deleting unwanted missions

Unlike most games, the missions in the *Red Baron 3-D* campaign game are generated, not pre-scripted. Because of this, it is very possible to get a mission that is so difficult that you cannot complete it without reducing the game's difficulty to nothing. Or you may find that you just hate a particular mission type and don't want to fly anymore of them.

Fortunately, you can delete an unwanted mission. To do this, open up an MS-DOS box and change to the C:\SIERRA\REDBARON3D\CAMPAIGN directory. The data for the mission is contained in a file called **campgnXX.mis**, where XX is the two-digit page number of your pilot, minus one.

To delete the mission, simply delete the **campgnXX.mis** file, in this example, you would delete **campgn00.mis**.

Now when you go back to the game and select the **Next Mission** button, you will get an entirely different mission generated for your pilot.

Summary

In this lesson we learned how to mix different plane textures to create a unique plane configuration and we learned how to export textures, edit them, and import them back into the game for use in a custom paint scheme. We learned how to select a custom paint scheme for use by your pilot or squadron as well as how to revert back to the default paint schemes.

We also learned how to add custom pilot photos to the list of photos used in the pilot dossiers. Finally, we learned how to resurrect a dead pilot as well as how to delete an unwanted mission.

Tutorial 7: Creating Single Missions

In this lesson, we will learn the following techniques:
1. *Locating aces and squadrons*
2. *Setting initial mission conditions*
3. *Creating a mission from scratch*
4. *Generating a large mission*

Locating aces and squadrons

From the *Main Menu*, click the **Single Mission** button, then click the **New Mission** button to get to the *Mission Builder* chalkboard. In the lower right hand corner of the screen are two buttons which allow you to locate specific aces and squadrons. Click the **Locate Ace** button.

You will be shown a large scale map of the entire Western Front, with each of the four major regions outlined and identified. There is a window in the upper left corner, labeled *German Aces*, which can be moved around by clicking and holding the left mouse button on the border and dragging it to reveal that portion of the map.

You will notice that there are no German ace names highlighted in the list and that there is a flashign red square in the bottom left corner of the *Marne* region. Click on the entry labeled **Goering**, **H** and note that the flashing red square moves to the upper middle portion of the *Marne* region.

You can use the scroll bar to view the entire list of available German Aces. Clicking the down arrow to the left of the *Service* section will change the list of aces to show the various *French*, *British*, and *American* aces on the front. Note that the only *Richthofen* listed in the group of German aces is *Lothar*. So where is the famous Red Baron himself, *Manfred von Richthofen*?

Click the **Done** button to return to the chalkboard. Inside the boxed off section in the middle is the *Mission date*. Note that the date is currently set to *June 1, 1918*. This is the reason that *Manfred* is not listed among the German aces; by June 1, 1918, he is dead and no longer available for missions.

Click the left arrow underneath the *1918* date to change the date to **1917**. Now click the **Locate Ace** button, scroll down the list of German aces and note that both *Manfred* and *Lothar* are listed. The presence of an ace, and his location on the front, is determined by his actual movement during the war.

Click the **Done** button to return to the *Mission Builder* chalkboard. Now click the **Locate Squad** button. Note that the display is identical to the *Locate* Ace display, except that it lists squadron names or designations rather than aces. Click **Done** to return to the chalkboard.

Setting initial mission conditions

We've already looked at one of the mission conditions, the mission date, and have seen its effect on the availability of aces and squadrons. Now let's look at some of the other conditions you have control over.

First, you have the opportunity to set the name of the pilot that you (the player) will be using in this mission. The default name is *Default Player*. To change the name, click on it, backspace to delete the existing name, then type in the new one.

To the right of the name is a section labeled *Region*, which is currently set to *Marne*. Click the left or right arrows under the region name to cycle through the four regions of the front. Beneath the region is a section labeled *Season*, which is currently set to *Spring*. As with the region, you can cycle through the four available seasons using the left and right arrows under the current season label.

Continuing to move to the right, there is a section labeled *Weather*, which is currently set to *Clear*. You can cycle between **Clear**, **High Clouds**, **Partly Cloudy**, **Cloudy**, and **Storm Pending** conditions to use in your mission. Finally, you can set the time of day that your mission is supposed to start, using a 24-hour military clock, which can be set to any time of day or night in 5 minute increments.

Just above the boxed off *Mission date* area is a check box labeled *Set Historical mode*, which is checked by default. Click in the box to turn off *Historical mode*, and note that the *Mission date* box is removed from the chalkboard and that the label at the top of the chalkboard changes from *Historical Squadron locations* to *All Squadrons available*. When you are creating a non-historical mission, you can use any squadron name or designation and equip their flights with any aircraft available to that service (you cannot equip German squadrons with Allied planes, and vice versa).

Click in the *Set Historical mode* box to re-enable historical mode. Inside the *Mission date* box is a check box labeled

Generate flights for all active squadrons. If this box is checked when the *Continue* button is clicked, the game will generate missions for all active squadrons in the selected region, which you can then edit. If you do not have this box checked, you will have to create flights for each squadron you wish to include in your mission. In general, if you are trying to recreate a specific engagement, you will want to create all the flights yourself, but in most cases, you will want to let the computer give you a head start and save yourself several hours of work.

Creating a mission from scratch

Change the mission date back to June 1, 1918, then click the *Set Historical mode* box to turn historical mode off for the mission we will be generating, then click the **Continue** button. A map of the selected region is displayed with a large, white *Create Flight* box dominating the center of the screen.

Use the up and down arrows to the right of the *Service* selection to make the flight an *American* one. Click inside the *Squadron* box to get a list of available American squadrons. Locate the *94th Aero Fighter Squadron*, click on it to highlight it, then click the **Done** button to continue.

Click in the *Aircraft* box to get a list of all available Allied aircraft. Locate the *Sopwith Camel*, highlight it, and click **Done** to make the selection. Now, click on the up arrow to the right of the *Number* label to change the number of aircraft in your flight from two to four.

Next, click to the right of the *Mission type* label to get a list of available mission types. Locate the *Combat Air Patrol* type, click it to highlight it, and click **Done** to select it. Note that a complete list of all mission types can be found on page **77**.

Change the start time to **10:00**, then click the **Continue** button. The large edit box disappears to reveal the map and the smaller *Create Flight* box in the upper left corner. The next step is to select the START point on the map. On other similar displays, you've been able to use the magnifying glass to zoom in on the map, but in this situation, the cursor is used for pointing instead of zooming. So, instead, you can use the + and - keys on the numeric pad to zoom in and out.

Zoom the map in one level so you can see the details and locate the town of *Soissons*. Click on the roundel just below the town to set the home airfield for this flight. You are now

prompted to select the PATROL region. Locate the blue infantry symbol (a square with an X in it) nearest your starting airfield and click it.

>   *Tip: If you set your start location on a landmark other than an airfield, your mission will start in the air.*

We now have a flight which takes off from the Soissons aerodrome and patrols over the nearest friendly infantry unit. Click the **Waypoints** button and note that there are only two waypoints. The first is the takeoff and the second is the patrol. Note that the patrol is set to occur at 8000 feet, or another excessive altitude. Let's drop that down to about 3000 feet.

Click on the *Patrol* waypoint, then click the **Edit** button. Click the down arrows next to the altitude until it is set to 3000 feet. From this edit screen, we can see that we are supposed to patrol in a *Diamond* formation for 17 minutes. Let's change that so that we are patrolling in **Fluid 4** formation for **20** minutes. Click the *Formation* at setting to activate the scroll arrows, then scroll through the list until you reach **Fluid 4**. Do the same with the *Minutes* setting and change it to **20**. Note that we will be flying TO the waypoint in a *Diamond* formation and then we will switch to a *Fluid 4* for the patrol itself. Click the **Done** button to accept our changes.

We still need to land our aircraft, so click the *Patrol* waypoint to highlight it, then click the **Add** button to add another waypoint after the patrol waypoint. Note that the waypoint is placed on a random landmark near the last one you entered. In this case, it is most likely NOT our home airfield, so click the third waypoint and drag it onto the home aerodrome.

The third waypoint is still listed as a *Navigation* type, so we need to change that to *Land*. Click on the third waypoint in the list to highlight it, then click the **Edit** button. Click the *Action at* entry and change it to **Land**. Obviously, we cannot land at 5000 feet, so click the *Altitude at waypoint* entry and start reducing the altitude. Note that it changes in 500 foot increments until it gets down to 1500 feet, then it changes in 100 foot increments and shows you the *AGL* (above ground level) altitude as well as the *MSL* (mean/average sea level) altitude.

When you reach 200 feet MSL, note that the AGL is at 86 feet, indicating that out airfield is 114 feet above sea level. Click the down arrow once more and note that the altitude changes 114

MSL, 0 AGL, which is where we want it. Click the **Done** button to return to the waypoints list, then the **Flights** button to return to the flight details box. Click in the check box to the right of the *Player's Flight* label to make this the active player flight for this mission.

Now, let's create a flight to encounter on our mission. Click the **Create Flight** button to get the same *Create Flight* box as we had several paragraphs ago. Make this a *German* flight, from the *Jasta 2* squadron. Change the aircraft to the *Albatross D.III*, the number of planes in the flight to 4, the mission type to *Offensive Patrol*, and the start time to *10:00*. Click the **Continue** button when done changing the details of the flight composition.

You are now being prompted to select the START point. Locate the German airfield that is closest to *Soissons* and click the iron cross symbol. You now need to select the PATROL point on the map, so click the same blue infantry symbol that you selected for the previous flight. This will ensure that the two flights will have someplace common to fight over.

Now, click the **Waypoints** button so we can give this flight a landing waypoint and can set it to patrol at the same altitude as the previous flight. First, click the second waypoint, labeled *Loiter* and then click the **Edit** button. Change the *Altitude at waypoint* to 3000 feet MSL and the *Minutes* to 20. Click the **Done** button to continue.

Now, create a third waypoint for this flight and set it to land at it's home airfield using the same methods as you used with the previous flight. When you are done, click the **Flights** button and then the **Done** button to get back to the chalkboard. The flights are now displayed on the chalkboard along with their ordnance options. For this mission, we'll just use standard ammunition, so click the **Save** button.

You will be prompted to give your mission a filename and description. For now, give this a filename of TEST and a description of "My first mission design." Click the **Save** button and you will be told that the mission is saved and will then be left back at the chalkboard. Click **Done** to return to the *Single Mission* screen, with your newly designed mission as the current selection.

Go ahead and click **Fly Mission** to see the results of your handiwork!

Generating a large mission

When you are done flying the mission, return to the *Single Mission* menu and click the **New Mission** button. Set the initial mission conditions as desired. Before clicking the **Continue** button, ensure that you have the *Generate flights for all active squadrons* option checked.

Instead of getting the *Create Flight* box, you are shown the map with a series of green and blue flight paths criss-crossing the length of the front. Click the **Next** button to cycle through the various flights that have been created.

Locate a fighter flight that looks interesting and click the *Player's Flight* check box. You must have one of the flights selected as the player's flight in order to have a valid mission. After reviewing all the flights, click the **Done** button.

> *Note: As you can see from the complexity of the generated mission, creating a complete mission from scratch is not a trivial task! All the missions in the campaign game are generated in the same way and with the same degree of complexity, giving the campaign game infinite replayability.*

Click **Done** to get back to the chalkboard, then save your newly generated mission.

Summary

In this lesson we learned how to use the locator to find aces and squadrons in any particular historical period of the war. We learned about how to set the various mission conditions and how the historical option affects the availability of aces and aircraft.

We created a simple single mission and edited the waypoints to produce a complete mission. Finally, we looked at creating a mission by allowing the computer to generate flights for all the active squadrons in a region.

GAMEPLAY REFERENCES
Keyboard and joystick controls

Because of the complexity of the game, *Red Baron 3-D* requires you to have both a keyboard and a joystick to play the game. This section describes all inputs that can be given to the game using the joystick and/or keyboard. Note that in the following text, an **F#** refers to the F1 through F12 function keys across the top of your keyboard and a **KP#** refers to a key on the numeric keypad on the right side of your keyboard. Also note that the **NumLock** light must be on for the numeric keypad inputs to function.

Aircraft control surfaces

The control surfaces include the elevator and ailerons:

Pushing forward on the joystick moves the elevators down which causes your plane to dive.

Pulling back on the joystick will move the elevators up which causes your plane to climb.

Pushing left on the joystick causes the ailerons to move in a way to cause your aircraft to roll to the left.

Pushing right on the joystick will make your aircraft roll to the right.

Rudder control

The rudder can be controlled with either the keyboard or a joystick rudder control (either a set of rudder pedals or a rudder axis on a joystick).

For keyboard control, the rudder will move in the direction specified until you let up on the key, then it will remain in that position until you center it. The keyboard rudder inputs are:

, (comma)	Applies left rudder which causes your plane to yaw to the left.
. (period)	Centers the rudder.
/ (forward slash)	Applies right rudder which causes your plane to yaw to the right.

When using a joystick rudder control, you can apply exact amounts of rudder and hold the rudder in position as long as desired. When you let go of the rudder control, the rudder will center.

Engine controls

Although you can control the throttle setting with either the keyboard or a joystick throttle control, you must use the keyboard to turn the engine on and off:

TAB	Toggles engine on and off.
+/=	Increases the throttle setting.
_/-	Decreases the throttle setting.
1 through **0**	Sets the throttle to a specific position, where 1 is idle and 0 is full throttle.

For joystick throttle control, putting the throttle at the lowest position will set it to idle and putting it at its highest position will set the throttle to maximum.

Weapon controls

Your plane can be equipped with up to three weapon types, machine guns, bombs, and rockets.

For keyboard control, the following keys are used:

SPACE BAR	Fire machine guns.
B	Drop bombs (if equipped).
R	Fire rockets (if equipped).
U	Unjam machine guns.

On the joystick, the following buttons are used to control the weapons (note that there is no joystick control for firing rockets):

Button 1	Fire machine guns.
Button 3	Drop bombs (if equipped).

Cockpit view controls

You can control the cockpit views with either the keyboard or a joystick "hat".

For the keyboard, the following keys are used:

F1	Enabled fixed views.
F2	Enable the slewable cockpit view.
KP8	Look down at control panel.
KP5	Look straight up.
KP2	Look straight back.
KP7	Look forward and left.
KP4	Look left.
KP1	Look back and left.
KP9	Look forward and right.
KP6	Look right.
KP3	Look back and right.
KP0	Toggle kneeboard map on and off.
KP/	Using the slash key on the keypad

allows you to glance forward without disabling the slewable view.

CTRL	If CTRL is held down in conjunction with a fixed view key (KP1 through KP9), the view is pitched up 45 degrees. So, for example, CTRL+KP8 gives you a view straight ahead and 45 degrees above level.
ENTER	If the ENTER key is held down, moving the joystick will move the slewable view in the corresponding direction instead of moving the aircraft's control surfaces.
Page Up	Look forward and up.
Page Down	Look forward and down at the instrument panel

For the joystick, the following buttons are used:

HAT	The eight directions on the joystick "hat" correspond to the eight fixed views around the aircraft. You can use the **CTRL** key in conjunction with the "hat" to get the 45 degree up views.

Button 2   If button 2 is held down, moving the joystick will move the slewable view in the corresponding direction instead of moving the aircraft's control surfaces.

External view controls

Almost all the external view controls are only available on the keyboard. These controls are:

F3	Enable the external slewable view. Note that you can move the camera, but that it will snap back to its object of focus when the camera controls are released.
F4	Enable the external camera view with the ability to move the camera.
F5	Enable the chase plane view (an external camera fixed directly behind the aircraft).
F6	Enable the delayed chase plane view. Similar to the chase plane view, but it starts with the camera at aircraft and lets the plane fly to the normal chase plane distance before entering chase plane mode.
F7	Enables the fly-by view. Puts the camera in your aircraft's flight path, then pans to follow as your plane flies past.
F8	Enables target view, which, if you have a target selected, causes the camera to look in the direction of your aircraft, but with your target in the foreground, which is very useful for target identification.
F9	Rotates the camera to the left.
F10	Rotates the camera up.
F11	Rotates the camera down.
F12	Rotates the camera to the right.
Z	Zooms the camera in.
X	Zooms the camera out.
ENTER	If the ENTER key is held down, moving the joystick will move the camera in the corresponding direction instead of moving the aircraft's control surfaces.

The following is the only joystick control which affects the external views:

Button 2   If button 2 is held down, moving the joystick will move the camera in the corresponding direction instead of moving the aircraft's control surfaces.

Targeting and camera focus controls

Because there are no automated weapons systems, the terms "targeting" and "camera focus" have the same meaning in this context. Whenever you enter a slewable view, you have the option of fixing an external object as the focus of the camera, which will then slew to track the selected object. The following keys are used to set the target:

E   Targets the closest enemy plane. If an enemy plane is already the target, pressing **E** again will cycle to the next enemy plane in the list, if any.

F   Targets the closest friendly plane. If a friendly plane is already the target, pressing **F** again will cycle to the next friendly plane in the list, if any.

M   Targets the closest plane in your formation. If a plane in your formation is already the target, pressing **M** again will cycle to the next plane in your formation, if any.

N   Targets the closest plane of any type. If a plane is already the target, pressing **N** again will cycle to the next plane in the list, if any. Note that the **N** key can target planes at a greater distance than either the **E**, **F**, or **M** keys can, because it does not require aircraft identification to function.

D   Uses the game's AI to determine which enemy plane you should engage and then puts the camera's focus on that plane. This control functions differently in multiplayer games.

T	Uses the game's AI to determine which enemy plane is the greatest threat to you and puts the camera's focus on that aircraft. This control functions differently in multiplayer games.
L	Targets the nearest ground landmark. If a ground landmark is already targeted, pressing **L** again will cycle to the next ground landmark in the list, if any.
O	Targets the ground object in your cone of fire.

Communications controls

The following keys allow you to communicate with other players in mutliplayer games:

BACKSPACE	Enables the in-flight chat window.
Left cursor	When the in-flight chat window is open, selects the previous recipient in the list.
Right cursor	When the in-flight chat window is open, selects the next recipient in the list.
Insert	Activates the **Insert** message macro, as defined in the [QuickKeys] section of the MPLAYER.INI file.
Home	Activates the **Home** message macro, as defined in the [QuickKeys] section of the MPLAYER.INI file.
PageUp	Activates the **PageUp** message macro, as defined in the [QuickKeys] section of the MPLAYER.INI file.
Delete	Activates the **Delete** message macro, as defined in the [QuickKeys] section of the MPLAYER.INI file.
End	Activates the **End** message macro, as defined in the [QuickKeys] section of the MPLAYER.INI file.
PageDown	Activates the **PageDown** message macro, as defined in the [QuickKeys] section of the MPLAYER.INI file.

Note: the chat window must already be displayed for the chat macros to function.
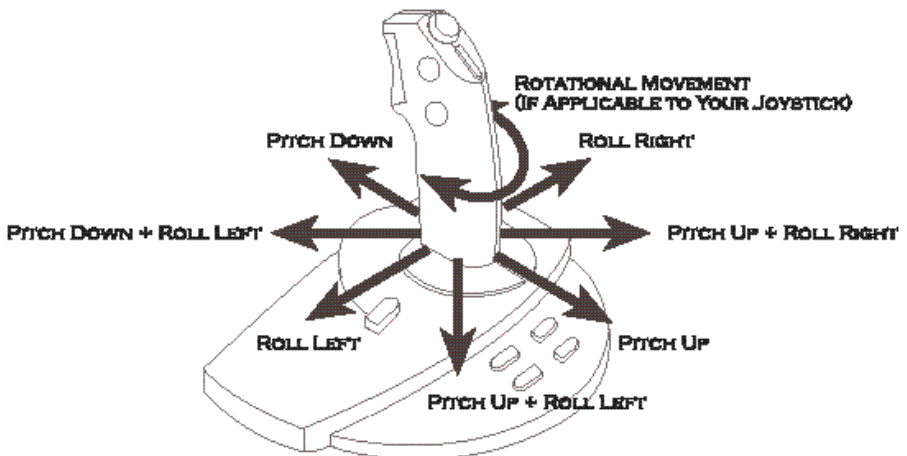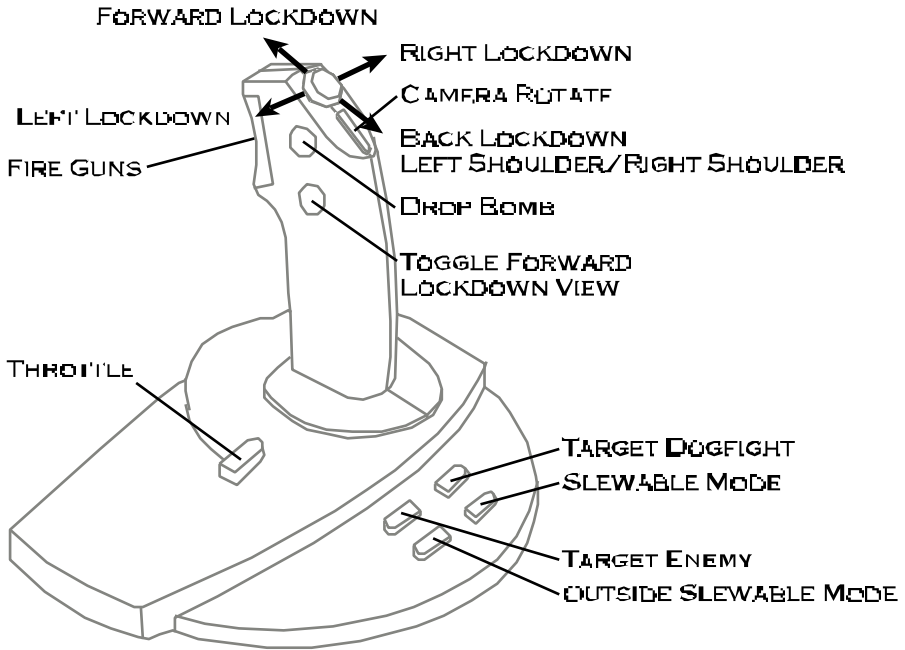
Autopilot, time compression, and other controls
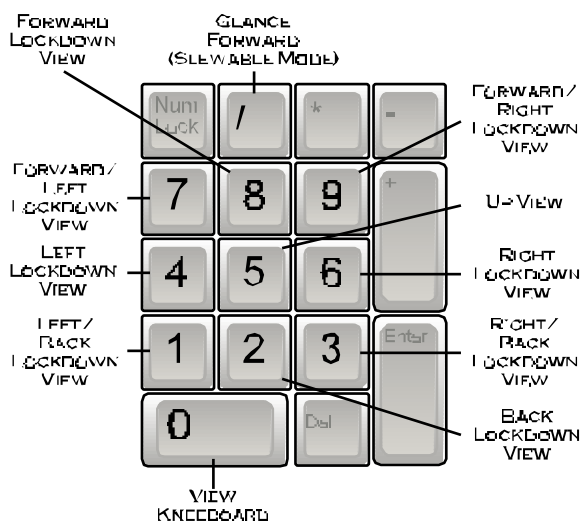
The rest of the keyboard controls are as follows:
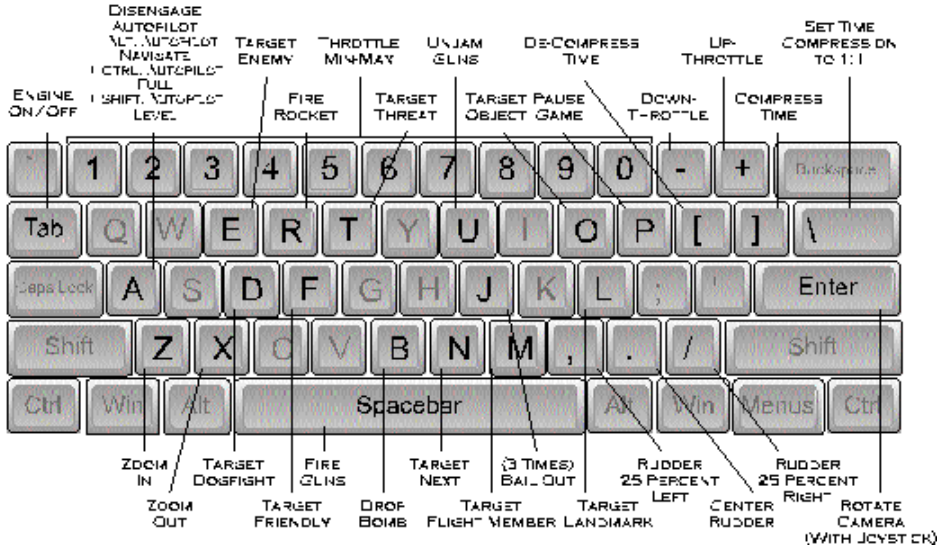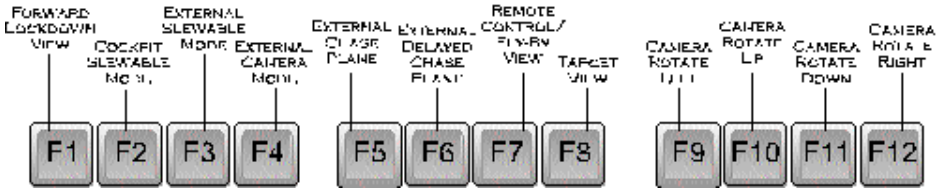
CTRL+A	Enables the Full Autopilot system, which allows the game's AI to fly your plane as if it were under computer control.
SHIFT+A	Enables the Level Autopilot system, which will keep your plane flying straight and level at about 70% throttle. (In Multiplayer, it will use 100% throttle.)
ALT+A	Enables the Navigation Autopilot system, which will fly your aircraft to each of the waypoints in your flight plan.
A	Disables any Autopilot system.
[	Decreases the time compression rate, halving it with every press of the key.
]	Increases the time compression rate, doubling it with every press of the key, to a maximum compression rate of 16x normal speed.
****	Disables time compression.
ALT+T	Toggles cockpit transparency.
ALT+F	Toggles the frame rate counter.
ALT+I	Toggles a wing angle indicator in the upper right corner of the screen. The first symbol, a straight line pivoted on the left, reflects the angle of attack to show whether you are climbing or diving and how much. The second symbol, a triangle pivoted in the center, indicates the amount of bank your plane is in.
P or Pause	Pause the game (not available in multiplayer).
J (3 times)	Pressing the **J** key three times in succession causes your pilot to bail out of your plane. Note that parachutes are not available to pilots in the *Red Baron 3-D*, so unless you are extremely lucky, bailing out is fatal.
ESC	Activates the "end flight" menu.
Right-click	Activates the in-flight preferences menu.

KEYBOARD AND JOYSTICK DIAGRAMS

The following diagrams serve as a visual reference to the keyboard and joystick controls:

FORWARD LOCKDOWN

RIGHT LOCKDOWN

CAMERA ROTATE

LEFT LOCKDOWN

BACK LOCKDOWN
LEFT SHOULDER/RIGHT SHOULDER

FIRE GUNS

DROP BOMB

TOGGLE FORWARD
LOCKDOWN VIEW

THROTTLE

TARGET DOGFIGHT

SLEWABLE MODE

TARGET ENEMY

OUTSIDE SLEWABLE MODE

ROTATIONAL MOVEMENT
(IF APPLICABLE TO YOUR JOYSTICK)

PITCH DOWN

ROLL RIGHT

PITCH DOWN + ROLL LEFT

PITCH UP + ROLL RIGHT

ROLL LEFT

PITCH UP

PITCH UP + ROLL LEFT

OPTIMIZING GAME PERFORMANCE

Red Baron 3-D is designed produce a smooth frame rate at maximum detail on the fastest machines available. If, like most of us, you don't have the fastest machine possible, you may need to optimize the game and your machine for a level of performance that fits your personal requirements.

As a basic approach, we have found that systems faster than 333 MHz can usually operate with full game detail (or with minimal modifications). Machines slower than 200 MHz usually should start with minimum detail settings, and then increase the important settings until a compromise between frame rate and graphical detail can be found. If your machine is between 200 and 333 MHz, you should be able to find a nice compromise that gives you most of the essential graphical details, while losing only the more trivial settings. Machines in this mid-range will gain the most from careful experimentation of the graphical detail settings.

> *Note: Because of the sheer number of textures used in the game, the amount of texture memory on the Voodoo or Voodoo2 based card will have a significant impact on the game's performance.*

The first thing you should do is play the game and see how it performs. Use the frame rate counter (ALT+F) to help you get an idea of what is acceptable or not. In general, most people become dissatisfied when the frame rate drops to less than 10 frames per second.

When optimizing the graphics settings, you may want to remove or decrease detail in the following order:

Shadows - The only game function the shadows perform is to help you gauge your height above the ground, which you can do with the trees when playing in Glide mode.

Prop Animations - These look cool, but serve no useful purpose in the game.

Combat Detail - When set off, ground detail will be suppressed whenever you are actively in combat (triggered by firing your guns). When performing ground attack missions, this can be an important detail setting. When in an aerial dogfight, this setting has almost no impact on the game.

Clouds - These look really cool and can affect your ability to identify enemy planes. Turning them off will have the effect of always flying in clear skies, both for you and for enemy aircraft.

Large Pixels - Changing from small to large pixels can improve performance on some systems. The graphical trade-off is minimal.

Max Detail - When objects are drawn in detail, they can have one of two levels of graphical detail. Turning *Max Detail* off allows gives you a lower level of detail, which can allow you to play with detail drawn at a greater distance.

Object Density - Reducing the number of ground objects that need to be drawn can have a significant effect on the game's performance.

Object Detail - Reducing the detail that is drawn on ground objects can also have a significant effect on the frame rate.

Resolution - Playing at lower resolutions greatly decreases the load on the system, allowing the game to run significantly faster. Higher resolutions, however, allow you to see more of the world, so this is a lower priority trade-off.

Terrain Range - This determines how far out the "fog" effect will be and how much of the world will be drawn between you and the "fog".

Terrain Detail - Determines how far out the ground detail is drawn. Any terrain visible between the detail range and the "fog" will have a polygonal appearance.

Aircraft Detail - Since the planes are the focus of the game, this is the last option your should try to reduce.

In addition to changing the game's internal graphics settings, there are some things you can do with your machine that will help game performance. First, try defragmenting the hard drive on which *Red Baron 3-D* is installed. If the game is installed to a drive other than the C: drive, defragmenting the C: drive will also improve performance since this is where your system's swap file resides.

There are also some performance issues directly related to the Voodoo™ based graphics accelerators. You should refer to your card's manufacturer as well as the newsgroups for assistance in optimizing your hardware.

FIGHTER AND BOMBER MISSION TYPES

Following is a description of each of the mission types that can be assigned to a fighter group:

Attack Balloon - The goal is simply to shoot down the enemy balloon. The task will be much easier if you use incendiary machine gun ammunition or the French "Le Prier" rockets. You should avoid flying directly under the balloon as you will run the risk of running into one of the tether cables.

Attack Target - The target of this mission is either an enemy aerodrome or infantry unit. The goal is to damage the target as much as possible. When attacking aerodromes, your priority is the destruction of aircraft and hangers. When attacking infantry, the artillery emplacements are the highest priority. To be successful you should destroy more than a quarter of the priority targets while losing less than one-third of your f ight's aircraft.

Balloon Defense - Prevent the friendly balloon from being destroyed by enemy planes.

Barrage Patrol - Patrol a section of the front and prevent enemy aircraft from penetrating your airspace.

Combat Air Patrol - Your job is to patrol the area above the friendly ground landmarks and destroy any aircraft that threaten those assets.

Escort - Fly along with friendly bombers or reconnaissance aircraft and prevent enemy planes from damaging your charges.

Lone Wolf - You job is simple - fly around looking for trouble and shoot down any enemies you encounter.

Offensive Patrol - Your job is to patrol the area above one or more enemy installations and destroy any enemy planes that rise to your challenge.

Support Attack - You are tasked with supporting an infantry advance across no-man's land. Take out any enemy aircraft that threaten the friendly infantry units and assist your infantry by taking out enemy artillery and machine gun emplacements.

Support Defense - Enemy infantry is advancing across no-man's land and your job is to support the defending

infantry forces. Prevent enemy aircraft from attacking the friendly infantry and gun emplacements and use your guns to attack the enemy infantry.

Following is a description of each of the mission types that can be assigned to a bomber or reconnaissance group:

Artillery Spotting - The aircraft acts as a forward observer for friendly artillery. The flight must get to the waypoint, stay long enough to get the required intelligence, and return safely to base.

Bomb Target - The aircraft is tasked with flying to the specified target and dropping bombs in an effort to destroy that target.

Landmark Reconnaissance - The aircraft is tasked with flying to an enemy landmark, usually at high altitude, taking photographs, and returning safely to base.

ADDITIONAL NOTES

Any information made available after this manual goes to press can be found either in a text or configuration file (.ini) in the SIERRA\REDBARON3D directory or can be gleaned from the www.redbaronplayers.com web site.