WarBirds' QuickFlight Guide

You may be in for a surprise when you first jump into the cockpit of an aircraft in WarBirds'. All of the forces acting on an aircraft are modeled to provide an experience that's much closer to flying an actual aircraft than you might expect. While most pilots of full scale aircraft will feel right at home in the virtual skies of WarBirds', the rest of us can expect to go through a brief period of acclimation. While a thorough explanation of the physics of flight is beyond the scope of this guide, a few easily understood concepts should make the transition from ordinary flight sims to WarBirds' as painless as possible. If all you want to do is get in the air as quickly as possible, the next few topics are all you'll need to read.

Taking Off (there's nothing wrong with your joystick)
Be sure your joystick is recognized and calibrated in the appropriate joystick control panel. WarBirds does not currently do direct joystick support, but most joysticks available will work via their mouse emulation modes.

If you don't have a joystick installed, you can fly WarBirds using the mouse and keyboard.

When you strap into a WarBirds' aircraft, release your controls, start your engine ("e" key) and hit the "F12" key to memorize the joystick center positions. If you've done this and you're still drifting off the left side of the runway, read on…

All of the engines in WarBirds' produce torque. Just as in the real world it is the pilot's job to compensate for this. On the runway, you'll need to work to keep the plane moving in a straight path until flying speed is reached. The engine's torque will make your plane turn left and veer off the runway unless you compensate for it. Use the rudder for directional control on the ground. For most of the single engine planes, two or three clicks of right rudder ("d" key) will be sufficient. Ease your plane out of the revetment, line up with the runway, and increase the throttle smoothly. Use the "a", "s", and "d" keys to control your direction. Once your speed is above 100 mph. or so, you can ease back on the stick to lift off. Once airborne, hit the "G" key to raise the landing gear. Try to move the stick as gently as possible until you have gained some airspeed and altitude, or your flight will be a short one. Don't forget to neutralize the rudder and set the autotrim.
Note: The P-38 exhibits very little torque effect due to its twin counter-rotating engines, making it an excellent first choice for new WarBirds' pilots..

Autopilot
There are three autopilot modes available in WarBirds'.

Straight and level Mode
To fly straight and level, hit "X". Hitting "X" again or moving the controls will disengage the autopilot.

Speed Mode
Hitting <shift "X"> tells the autopilot to maintain a specific airspeed. Set the speed by typing "/.xxx" where xxx is the speed you want the autopilot to maintain. Depending on your throttle

setting, the autopilot may cause the aircraft to climb or descend in order to maintain the selected airspeed. This mode is commonly used to achieve a desired rate of climb The optimum climb speed for most of the fighters in WarBirds' is somewhere between 140 and 180 mph. Hitting "X" or moving the controls disengages the autopilot.

Angle Mode
Hitting <cmd "X"> causes the autopilot to attempt to maintain the climb or descent angle of the aircraft at the time it is engaged. The autopilot will crash the plane into the ground in this mode if you allow it to. Hitting "X" or moving the controls will disengage the autopilot.

The Map
You can look at the map anytime in flight by hitting the "F1" key. Hitting "F1" again returns you to the cockpit. Your position is represented by a cross in the center of the map. The map will scroll as you move around the world. During an online session, two GCI (Ground Controlled Intercept) arrows appear on the map display. The red arrow indicates the direction to the nearest group of enemy planes. The white arrow points to the nearest group of friendly aircraft. Note that the arrows do not indicate individual planes… you must constantly perform visual scans of your immediate area to avoid being surprised by an enemy. You can zoom in or out on the map with the "[" and "]" keys. It is always a good idea to engage the autopilot when you intend to look at the map.

Cockpit Views
Use the numeric keypad to see the different views from the cockpit. "4" and "6" on the keypad will look left and right respectively. The "2" key is for looking behind you. Multiple-key combinations are used for other views, for example "4" and "2" will give you an over the left shoulder view. The "5" key is used to look straight out the top of the plane, or to provide a 45 degree up view in conjunction with any of the other view keys. Take some time to familiarize yourself with the various view keys. One of the most important aspects of flying in combat is the ability to use the view keys effectively. Practice will pay off later in the online arena.
Hitting <alt "V"> in flight will switch to an external view of your aircraft. You can use the view keys to see the aircraft from various angles. Hitting <alt "V"> again will return to the cockpit view.

Landing
Landing is considered the most difficult aspect of flying, and rightly so. The key to a good landing is setting up a good approach. You want to be lined up with the runway from several miles out, at an altitude of 1000 to 1500 feet. Your airspeed should be around 120 mph. as you begin your final approach. Drop your landing gear ("G") and lower your flaps ("Q"). Depending on the plane you're flying, you may need to hit "Q" several times to fully lower the flaps. Approach the runway in shallow descent, using throttle and elevator to control your airspeed and descent rate. If all goes well you should cross the threshold of the runway at very low altitude at just under 100 mph. airspeed. Just before you touch down, raise the nose of the plane slightly so that the gunsight crosshair is a bit above the horizon. Once you're on the runway, hit the wheel brakes (spacebar) to bring the plane to a stop. Once the plane has stopped, exit via the ".e" command. Don't be discouraged if you find landing difficult at first… like anything it gets easier with practice.

The B-17 Flying Fortress

When you fly the WarBirds' B-17 you'll assume the dual roles of pilot and bombardier. The simulated Norden bombsight allows you to deliver bombs with pinpoint accuracy, but you'll have to fly within strict parameters to use it effectively. The bombsight requires a straight and level approach to the target, during which time the bomber is an easy target for enemy fighters. Your gunners will do their best to hold any attackers off, but make no mistake… bombing is a dangerous and nerve-wracking job.

Flying the B-17 takes patience and a steady hand… this is a big heavy aircraft which cannot be expected to perform like a fighter. Gentle climbs and shallow easy turns are the order of the day.

Begin a bombing mission by selecting the B-17. Load your bombs with the ".bomb XX" command, where "XX" is the number of bombs you want to carry. You can set the salvo and delay values (number of bombs dropped with each press of the release key, and delay between bombs) with the ".salvo XX" and "delay XXX" commands. Note that you must be in "pickle" mode (F9 key) in flight for multiple bomb releases to be enabled.

To drop bombs with any degree of accuracy, you'll need to make your final turn to the target from approximately 10-20 miles away. Once you're headed for the target area, switch to the bombardier position ("y" key) and have a look around. The autopilot engages when you're in the bombardier position, but you can still make gentle course corrections. To look through the bombsight, hold the keypad "2" key. You'll see an aiming crosshair, and a needle in the upper right portion of the display. This needle must be centered for the aiming point of the crosshair to be accurate. As you continue toward the target in straight and level flight, the needle will slowly center itself. This takes some time, and any turns you make now can upset the process. Once the needle is centered, you can make small gentle course adjustments on the way to the target. When the needle is centered and the target is under the crosshair, release your bombs (don't forget to open the bomb bay doors) and the target will be obliterated.

Carrier Flight Operations

It can be argued that flying from carriers is the most difficult aspect of military aviation. Landing a fighter on what amounts to a moving 800 foot airfield is no easy feat, but successful carrier flights might just be the most exhilarating online combat experience available.

Taking off from a carrier wil be tricky… the margin for error is small. You'll have to be sure that engine torque doesn't take you over the side, but you'll need full power almost immediately to reach flying speed before the end of the deck. All of the conventional (tail-dragger) geared aircraft in WarBirds are now trimmed to climb by default This makes takeoffs a bit easier, but you'll need to retrim shortly after takeoff to avoid stalls.

Carrier landings require careful approaches. A bad approach is almost always followed by a bad landing or a crash. It is always better to go around then to try and "save" a missed approach. Remember to add full power and climb away gently to avoid a sudden stall… unless you feel like going swimming. Another thing to remember is that WarBirds carriers are WWII vintage straight deck ships… the angled landing areas seen on modern carriers were not in use until later.

You must touch down in the arrester gear (the black wires in the rear section of the ship) to guarantee a successful trap, and if you forget to chop the throttle you will not catch a wire. The most effective approach to carrier landings is a fairly steep approach, followed by a flare and sharp reduction of power just before touchdown. Remember,, the ship is moving… short approaches are a common mistake. Once you've landed, you can release your hook by raising your throttle above 50%.

WarBirds task groups consist of a carrier, two cruisers and four destroyers. Each ship is equipped with anti-aircraft weaponry, so attacking a group is not a job to be taken lightly. When a ship is sunk, a repalcement is generated at the group's home port, where it waits for the group to return. The group will alter course for home at this time, and regroup to protect the carrier. If all the ships in a group are destroyed before they can reach home, the attacking country will own the new group when it sails from its home port.

WarBirds 1.09 reduces the number of task groups in the arena from four to one. The carrier is field 5 on the map. It can only be seen by members of the country that owns it at any given time. The carrier group is no longer a victory condition. The country that owns the fleet can still lose the war if all its land bases are captured. Whenever one country loses all its land bases, the war is "over" and field ownership reverts to the original arena settings. The carrier group begins as neutral (the gunners shoot at everyone) and remains so until captured by one of the countries.

Airfield Capture

Capturing an enemy airfield requires teamwork and timing. Performed correctly, an airfield capture operation is quick and brutal… performed incorrectly it can quickly deteriorate into an exercise in futility.

There are normally three phases to a capture operation, the Attack, the Landing, and the CAP. During the attack phase, the aggressors must destroy all of the critical ground assets at the field. This can be a difficult task to accomplish. Anti-aircraft guns will try to stop the attackers, and the field may be defended by its owners. Ground targets will be repaired minutes after their destruction, so speed is essential.

To successfully capture a main airfield, the attackers must destroy the control tower, the hangars, the radio mast and comm hut, the HQ building, and all six acks.
Note: A hangar is considered destroyed for capture purposes when its roof is blown off. It is not necessary to destroy the side walls as well.

To successfully capture a forward field, the attackers must destroy the control tower, the radio mast and comm hut, and all four acks.

The landing phase begins when all of the critical assets are destroyed. At least one of the attacking pilots must land and come to a complete stop on the runway, then exit the plane before any of the ground assets are repaired. When this happens, the field has been taken, and becomes the property of the country whose pilot has landed and exited. The new owners cannot fly from

the newly captured field until the ground assets are repaired.

The CAP (Combat Air Patrol) phase is necessary because until the field is once again operational, it may be recaptured by any pilot able to make a safe landing. The new owners of the field must guard against this until the field re-opens.

When practicing offline, a single rocket hit, cannon shell, or a few machine gun bursts will destroy any ground structure, but online it's a bit harder. It doesn't take much damage to kill an AA gun… A direct hit with a cannon shell or rocket will do the job. For the other structures, bombs are a better choice. While it's certainly possible for a determined group of pilots to clear a field using machine guns only, it's not an efficient way of going about it. WarBirds now models 100, 500, and 1000 pound bombs. Rockets have roughly half the explosive power of a 100 pound bomb. It's impossible to list the exact amount of ordnance required to destroy specific objects, because ordnance damage is based on ordnance type, and distance from the target.
While any of the planes in WarBirds can carry any type of ordnance offline, they are restricted to historically appropriate loads online. Refer to the Aircraft section for specific capacities of each plane.

Additional Resources

If you already have access to the Internet, stop by the ICI Games Web Site at
<http://www.icigames.com> for up to the minute news and information about WarBirds'.

Do NOT miss John "Wolfman" Wolf's Mac WarBirds pages... visit them at
<http://cris.com/~JRWolf/warbirds.shtml>

While you're surfing the web, be sure to visit Brian "rolo" Holland's "Hatchlings" page at:
< http://www.access.digex.net/~holland/index.html>