

INSTALLATION

Insert the Nations WWII Fighter Command CD into your CD drive. The CD-ROM should auto-play in which case follow the on-screen prompt to start the setup process. If the CD-ROM does not auto-play, you can start the setup program by running the Setup.Exe program which is located on the CD-ROM.

Once started, the setup program will ask you to select a language for use by Nations WWII Fighter Command.

There are three installation levels to choose from

- Minimum uses the least hard drive space but requires more CD access.
- Medium and Maximum use more hard drive space but access the CD less frequently. Medium is the default level.

If you wish to change the installation level or remove the program completely at a later stage, just run the Setup program again.

You can start this by choosing Add/Remove Program from the Windows Control Panel.

GETTING STARTED

When you start the game, a number of animated intro sequences will play. These and other movie sequences throughout the game can be skipped by pressing the ESC key or the Left mouse button.

Once the intro movies have played, you will arrive at the Main Menu.

MAIN MENU

The Main Menu is the central hub of Nations WWII Fighter Command. Options appear on the menu as illustrated buttons that can be activated using your mouse. Pass the mouse pointer over buttons to read the description, then click to confirm your selection.

In the bottom left of the Main Menu is the 'HOME' icon. This icon appears on each menu screen - click on it to return to the Main Menu. If you are already on the Main Menu, this icon will have no function.

In the bottom right of the Main Menu is the 'EXIT NATIONS' icon. If you click on it, you will be prompted to confirm whether you really want to quit. Click the 'CHECK MARK' icon to confirm or the 'X' icon to cancel. Confirming will leave the game and return you to Windows. This selection system is common to all the menus in Nations WWII Fighter Command. The 'CHECK MARK' icon is used to confirm a selection while the 'X' icon will cancel it.

The options appearing on the Main Menu are as follows:

CAMPAIGN

The Campaign game mode allows you to fly through 15 challenging missions on behalf of your chosen nation - Great Britain, Germany or the USA. The missions are based on actual historical events and follow the progress of each nation through the war. Selecting this option will take you to the Pilot Selection Menu - you should refer to 'CAMPAIGN' section of the 'GAME MODES' chapter for more detailed information.

MULTIPLAYER

The Multiplayer game mode allows you to play a game against other human opponents via the Internet, or a LAN. You can play different types of games in this mode, including 'every man for himself' dogfights and team-based battles. You should refer to the 'MULTIPLAYER' section of the 'GAME MODES' chapter for more detailed information.

SHOW RECORDED MISSIONS

When flying missions, you are able to record the action for future reference. You may simply want to watch it again for pleasure - perhaps you scored a spectacular hit and want to relive your moment of glory - but you may want to study the recording in order to learn from your errors. Selecting this option will bring up a list of recorded missions - you should refer to the 'PLAYING RECORDED MISSIONS' section of this manual for more detailed information.

INSTANT ACTION

When you want to fly straight into the middle of the action, choose this option. It allows you to select a specific scenario and immediately engage in a mission that, while no less realistic than any other Nations WWII Fighter Command game mode, ensures you see combat very soon after taking to the air. Selecting this option takes you to the Instant Action Menu - refer to the 'GAME MODE' section of this manual for more detailed information.

TRAINING

There are certain activities common to many of the combat missions within Nations WWII Fighter Command and you will need practice if you are to become proficient at them. Training allows you to practice without the challenge of a competitive mission. Selecting this option takes you to the Training Menu - you should refer to the 'GAME MODE' section of this manual for more information.

DATABASE

The in-game database contains statistics and images relating to all the aircraft included in Nations WWII Fighter Command. It also contains cockpit diagrams for those aircraft that can be flown by the player. You should refer to the 'DATABASE' section of this manual for more detailed information.

OTIONS

This option allows you amend some of the audio-visual effects within the game and reconfigure the controls. Refer to the 'OPTIONS MENU' section of this manual for more detailed information.

OPTIONS MENU

To reach the Options Menu, click on the Options button on the Main Menu. The Options Menu allows you to alter the game controls, or alter sound and music settings.

CONTROLS

Click on the 'Controls' button on the Options Menu to bring up the Controls Menu. This screen shows a scrollable list of in-game functions and their corresponding keys. Scroll through the functions by clicking on the Up and Down arrows to the left of the list. To reconfigure a function, highlight the key you wish to alter by clicking on it. You will be prompted to press your preferred key (or enter the appropriate mouse or joystick movement). If you choose a key that already has another function, you will be warned. If at any time you want to reset all functions back to their default setting, click on the 'Default Controls' icon to the left of the list.

NOTE: It is not possible to use keys AND joystick for the same functions at the same time. This means that if you assign a function to a key and then assign that same function to the joystick, you will not be able to use the key to operate that function while the joystick is active and vice versa.

You are able to switch a function off completely by highlighting it, then pressing the DELETE key to mark the control as 'NONE'.

If you are using the joystick to control your aircraft's direction, but you want to use the keyboard to control the rudder, you need to turn 'ANALOG RUDDER' to 'NONE' and then define the required keys to control the keyboard rudder. Similarly, if you are using the joystick to control your aircraft's direction, but you want to use the keyboard to control the throttle, you need to turn 'ANALOG THROTTLE' to 'NONE' and then define the required keys to control the keyboard throttle.

If you wish to use the joystick to glance round while flying, you only need to define the joystick controls for 'GLANCE FORWARD', 'GLANCE BACK', 'GLANCE LEFT' and 'GLANCE RIGHT'. You do not need to define joystick controls for the diagonal directions - these should remain as key controls or specifically defined as 'NONE'.

SOUND AND MUSIC

There are 2 volume controls on this screen. The Sound Effects Volume is in the top left of the screen and the Music Volume is in the bottom right. Both these controls are operated in the same way. Move the mouse pointer over the volume level number and left click to increase volume or right click to lower it.

Other sound options can be selected by clicking on items on the central list - choose from Mono or Stereo.

You can also select your general MIDI device from this list.

CHANGE RESOLUTION

This option allows you to choose the screen resolution to be used while playing Nations WWII Fighter Command. The available resolutions appear on a scrollable menu - this can be scrolled by clicking on the 'UP' and 'Down arrows on either side of the list. Click on your chosen resolution to highlight it, then click the 'CHECK MARK' icon to confirm. Alternatively, click on the 'X' icon to cancel the menu without changing the resolution.

FLIGHT CONTROL SUMMARY

You will need a minimum of a keyboard and a mouse to control Nations WWII Fighter Command. The mouse is used to navigate through menu screens in the front-end, and to look round the virtual cockpit once you're in-game. All the other flight functions can be controlled using the keyboard.

However, while flying, you can also use a correctly connected joystick to operate your aircraft's elevators and ailerons. The joystick buttons can also be used to fire your guns, rockets or bombs, while other controls can still be used via the keyboard. Use the 'J' key to switch between joystick and keyboard control. You can reconfigure all the game controls to suit your own preferences by choosing 'Controls' from the Options Menu. Refer to the section called 'Options Menu' for more detailed information on how to do this, but if you do reconfigure any of the controls, remember that this manual always refers to the default keyboard controls. Whenever this manual instructs you to click on an on-screen button or icon, it refers to a single click on the left mouse button unless stated otherwise.

<i>Cursor arrow keys</i> Elevators and Ailerons	Rudder (Analog)
<i>Left CTRL key</i> Fire Guns / Fires Cannon (if applicable)	<i>Joystick Throttle</i> Throttle (Analog)
<i>Left SHIFT key</i> Fire Rockets / Drop Bombs	'J' key Switch between Joystick and Keyboard contra (on- screen confirmation will appear)
'Z' key Rudder Left	<i>Mouse</i> Look around
'X' key Rudder Right	'D' key Airbrake (Hold key down to engage brake)
'C' key Center Rudder	'S' key Flaps (Hold key down to operate flaps)
'Q' key Throttle Up	'F' key Flaps (Toggle On/Off)
'A' key Throttle Down	'B' key Wheelbrake (Green light in cockpit)
<i>TAB key</i> Emergency Throttle (inactive if Joystick Throttle is in use)	'G' key Toggle Landing Gear Up/Down
<i>Joystick</i> Elevators and Ailerons (Analog)	'E' key Eject
<i>Joystick Button 1</i> Fire Guns	<i>ESC key</i> Quit Game (cannot be redefined)
<i>Joystick Button 2</i> Fire Rockets / Drop Bombs	<i>F1 key</i> In-game menu (cannot be redefined)
<i>Joystick Twist</i>	'M' key

Map	
'T' key	'4' key
Target ID Flags	Into Cockpit View
F5 key	Keypad '8'
Command – Break Information	Glance Forward
F6 key	Keypad '4'
Command – Regroup	Glance Left
F7 key	Keypad '6'
Command – Help me!	Glance Right
F8 key	Keypad '2'
Command – Return to Wing Position	Glance Back
F9 key	Keypad '5'
Broadcast Message (Multiplayer – sends text message to all players)	Glance Up
F10 key	Keypad '7'
Radio Message (Multiplayer – sends text message to your own side's pilots)	Glance Forward/Right
'I' key	Keypad '9'
Zoom In	Glance Forward/Left
'O' key	Keypad '1'
Zoom out	Glance Back/Left
'1' key	Keypad '3'
Fly-by Camera	Glance Back/Right
'2' key	Keypad '+'
Free Camera (not locked behind the aircraft)	Glance at Cockpit Instruments
'3' key	Keypad '0'
Padlock View	Move smoothly (use with keypad keys)
	PAUSE/BREAK key
	Pause game

AIRCRAFT COCKPITS

Although all the different aircraft in Nations WWII Fighter Command have their own specific cockpit layouts, most of the dials on the instrument panel are common to all aircraft. This manual reproduces labeled cockpit diagrams for all the aircraft and summarizes the function of each dial - you will soon get used to the location of the most useful information.

You will also find that when flying with the in-cockpit view, you may want to refer to instruments that are not currently visible on-screen. Use the mouse to simulate the

movement of your head - you will then be able to scan all the cockpit dials as required. Alternatively, you can quickly glance at the instrument panel by pressing the keypad '+'.
The in-game database also contains cockpit layouts for your reference. Access the database by selecting 'Database' from the Main Menu.

UNITS OF MEASUREMENT

The RAF and USAAF cockpit dials are calibrated in imperial units, while the Luftwaffe aircraft use the metric system approximate equivalents between the two systems are given below. These are not accurate conversions, but should enable you to assess quickly your height or speed when dealing with a system with which you are unfamiliar.

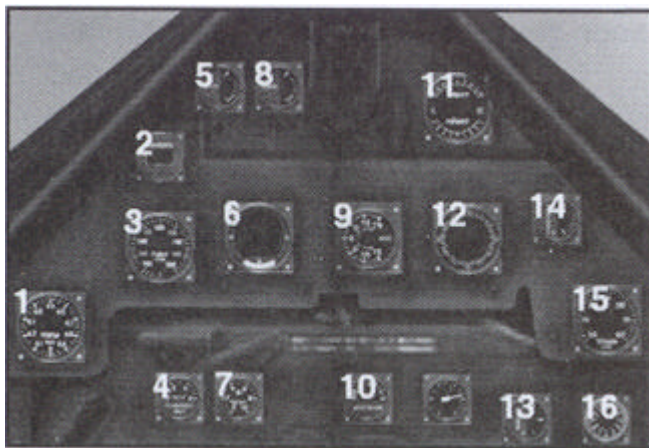
300 meters = 1000 feet
600 meters = 2000 feet
1000 meters = 3500 feet

100 kilometers = 50 miles
250 kilometers = 150 miles
500 kilometers = 300 miles

COCKPIT LAYOUTS

GERMANY

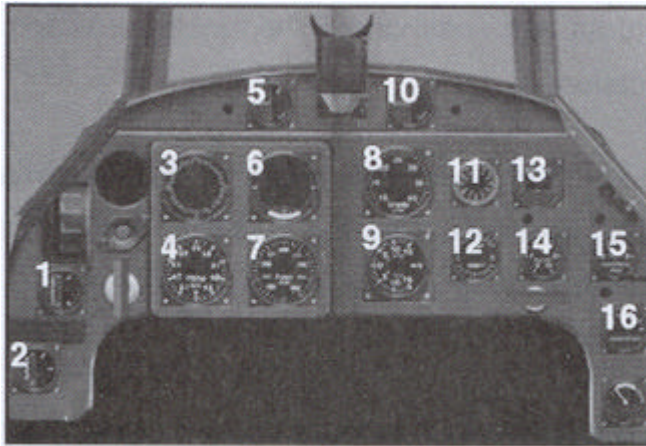
Focke Wulf 190



1. Altitude
2. Rocket Count
3. Air Speed
4. Hydraulic Pressure
5. Cannon Ammo
6. Artificial Horizon
7. Oil Pressure
8. Gun Ammo
9. Climb Rate
10. Fuel

11. Slip Indicator
12. Compass
13. Landing gear
14. Flaps
15. R.P.M.
16. Chronometer

Messerschmitt Bf109



1. Flaps
2. Landing gear
3. Compass
4. Altitude
5. Gun Ammo
6. Artificial Horizon
7. Air Speed
8. R.P.M.
9. Climb Rate
10. Cannon Ammo
11. Chronometer
12. Slip Indicator
13. Rocket Count
14. Oil Pressure
15. Hydraulic Pressure
16. Fuel

Messerschmitt 163



1. Rocket Count
2. Hydraulic Pressure
3. Chronometer
4. Compass
5. Air Speed
6. Altitude
7. Artificial Horizon
8. Climb Rate
9. R.P.M.
10. Cannon Ammo
11. Fuel
12. Slip Indicator
13. Landing gear

Messerschmitt 262



1. Chronometer
2. Flaps
3. Landing gear
4. Air Speed
5. Altitude
6. Rocket Count

7. Artificial Horizon
8. Compass
9. Cannon Ammo
10. Climb Rate
11. Slip Indicator
12. R.P.M.
13. Oil Pressure
14. Hydraulic Pressure
15. Fuel

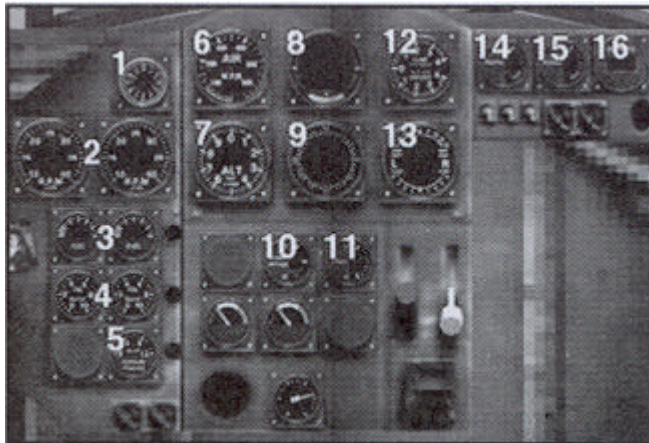
GREAT BRITAIN

Hawker Hurricane



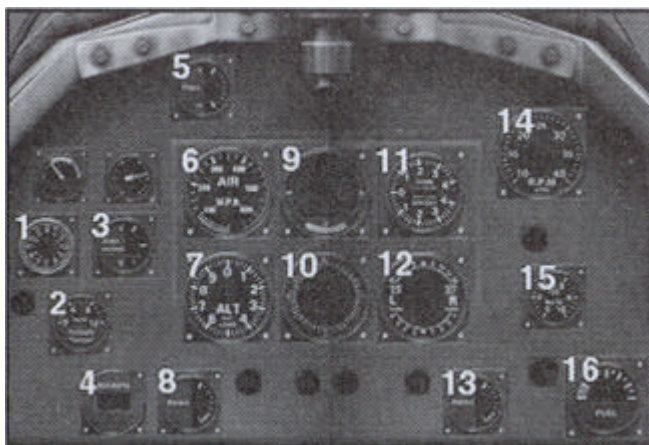
1. Flaps
2. Rocket Count
3. Landing gear
4. Chronometer
5. Air Speed
6. Altitude
7. Artificial Horizon
8. Compass
9. R.P.M.
10. Climb Rate
11. Slip Indicator
12. Gun Ammo
13. Oil Pressure
14. Fuel
15. Hydraulic Pressure

De Havilland Mosquito



1. Chronometer
2. R.P.M.
3. Fuel
4. Oil Pressure
5. Hydraulic Pressure
6. Air Speed
7. Altitude
8. Artificial Horizon
9. Compass
10. Landing gear
11. Flaps
12. Climb Rate
13. Slip indicator
14. Gun Ammo
15. Cannon Ammo
16. Rocket Count

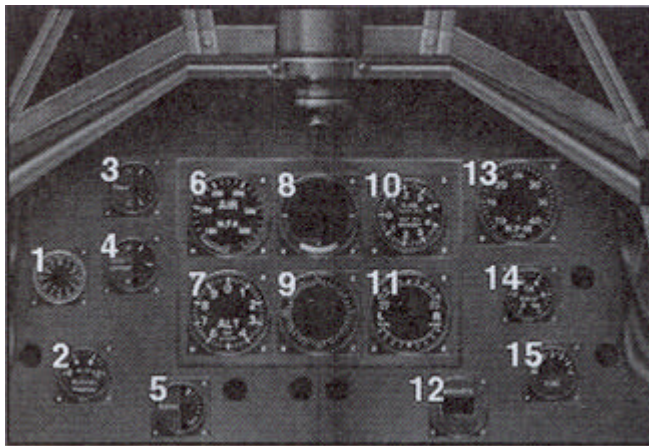
Supermarine Spitfire



1. Chronometer
2. Hydraulic Pressure
3. Landing gear

4. Rocket Count
5. Flaps
6. Air Speed
7. Altitude
8. Cannon Ammo
9. Artificial Horizon
10. Compass
11. Climb Rate
12. Slip Indicator
13. Gun Ammo
14. R.P.M.
15. Oil Pressure
16. Fuel

Hawker Typhoon



1. Chronometer
2. Hydraulic Pressure
3. Flaps
4. Landing gear
5. Cannon Ammo
6. Air Speed
7. Altitude
8. Artificial Horizon
9. Compass
10. Climb Rate
11. Slip Indicator
12. Rocket Count
13. R.P.M.
14. Oil Pressure
15. Fuel

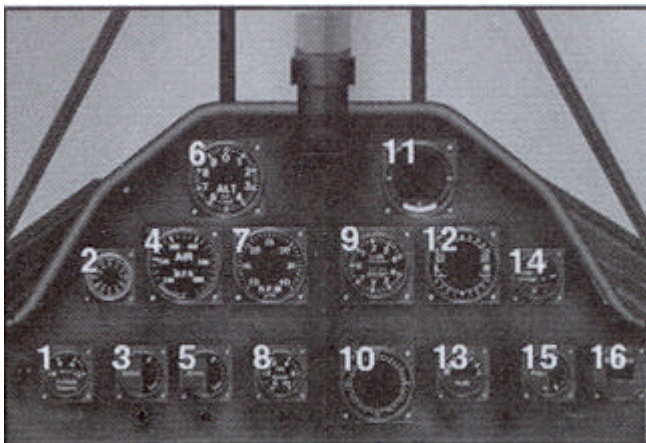
USA

P-38 Lightning



1. Fuel
2. Compass
3. Altitude
4. Hydraulic Pressure
5. Chronometer
6. Air Speed
7. Landing Gear
8. Artificial Horizon
9. Slip Indicator
10. Flaps
11. Climb Rate
12. Rocket Count
13. Oil Pressure
14. R.P.M.
15. Gun Ammo
16. Cannon Ammo

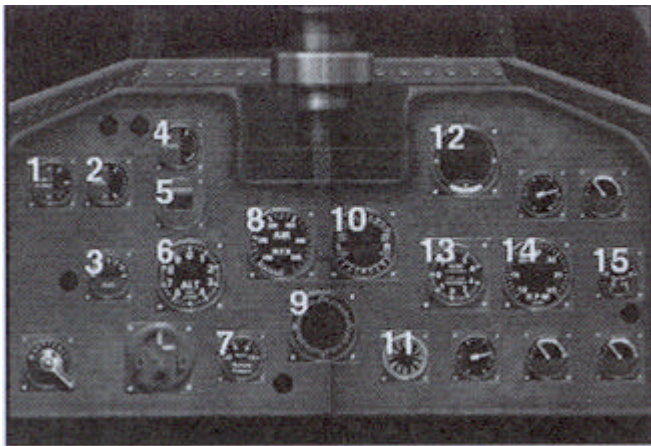
P-40 Kittyhawk



1. Hydraulic Pressure

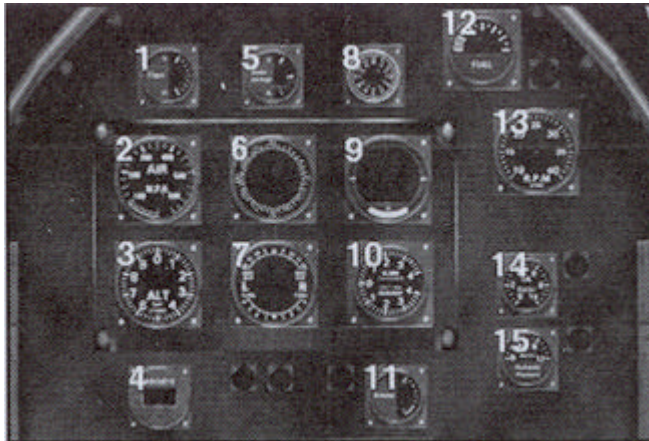
2. Chronometer
3. Gun Ammo
4. Air Speed
5. Cannon Ammo
6. Altitude
7. R.P.M.
8. Oil Pressure
9. Climb Rate
10. Compass
11. Artificial Horizon
12. Slip Indicator
13. Fuel
14. Landing Gear
15. Flaps
16. Rocket Count

P-47 Thunderbolt



1. Landing Gear
2. Flaps
3. Fuel
4. Gun Ammo
5. Rocket Count
6. Altitude
7. Hydraulic Pressure
8. Air Speed
9. Compass
10. Slip Indicator
11. Chronometer
12. Artificial Horizon
13. Climb Rate
14. R.P.M.
15. Oil Pressure

P-51 Mustang



1. Flaps
2. Air Speed
3. Altitude
4. Rocket Count
5. Landing gear
6. Compass
7. Slip Indicator
8. Chronometer
9. Artificial Horizon
10. Climb Rate
11. Gun Ammo
12. Fuel
13. R.P.M.
14. Oil Pressure
15. Hydraulic Pressure

COCKPIT DIAL FUNCTIONS

ALTITUDE

Air pressure outside the aircraft is used to measure altitude above sea level - two needles are used to show the reading. The long needle registers the smaller unit while the short needle registers the larger unit. In the RAF and USAAF aircraft, the units are feet above sea level, so if the long needle points to '3' and the short needle points to '7', the aircraft would be 730 feet above sea level. The Luftwaffe aircraft use meters above sea level to measure altitude.

ROCKET COUNT

This indicator shows how many rockets are currently carried on your aircraft. As you use the weapons, the indicator will register the reduction in rockets.

AIR SPEED

The air speed indicator shows you the forward speed of the aircraft. RAF and USAAF aircraft use miles per hour, while the Luftwaffe aircraft use kilometers per hour.

HYDRAULIC PRESSURE

This indicator shows your landing gear's oil pressure. The yellow light will also indicate when your landing gear is damaged.

AMMO COUNT

These indicators tell you how many guns and cannon ammunition you have remaining. The counters will count down as you use the weapons.

ARTIFICIAL HORIZON

Any kind of maneuver beyond basic flying and turning has potential to disorientate the pilot, and during intense combat this could have fatal consequences. The Artificial Horizon will assist your awareness of your own position relative to the horizon. The white line will be located between the two dots when the aircraft is flying level. When the aircraft pitches or banks, the white line move accordingly.

OIL PRESSURE

This indicator shows your aircraft's engine oil pressure.

CLIMB RATE

This indicator shows the rate at which your aircraft is ascending or descending. RAF and USAAF aircraft will show this reading in thousands of feet per minute, while Luftwaffe aircraft show meters per second.

FUEL

You should remain aware of your fuel level as you won't be flying very far once it runs out. Bear in mind when flying substantial distances that running your engine at around 80 per cent of maximum RPM will use fuel much more efficiently.

SLIP INDICATOR

When your aircraft turns, it also slips. You can compensate for this by using your aircraft's rudder. The indicator shows slip on the top gauge and turn rate on the bottom gauge.

COMPASS

This is a standard compass showing your direction of flight in relation to magnetic north.

LANDING GEAR

The indicator shows whether your aircraft's landing gear is up or down. You should only have the landing gear lowered when you are taking off and landing, though not all missions within the game will require you to do this.

FLAPS

The flaps will normally be raised during flight, although you will need to lower them when coming in to land, as they will increase lift at slow flight speeds. The indicator shows whether the flaps are currently up or down.

RPM

The Revolutions Per Minute reading on this gauge shows you the power currently being produced by your engine. The higher this reading, the more fuel you are using.

CHRONOMETER

This is a standard 12-hour clock.

WARNING LIGHTS

RED - A flashing red light next to an ammo dial indicates you are low on ammo.

When you run out completely, the light will stay on permanently.

YELLOW - A yellow light next to the Hydraulic Pressure dial indicates low pressure.

GREEN - A green light indicates your wheelbrakes are on.

FLIGHT BASICS

Although Nations WWII Fighter Command features many aircraft for you to fly, each with its own strengths and weaknesses, the principles of flight remain the same across all aircraft. This section will take you through some of the fundamental points, hopefully encouraging you to try some new techniques and thereby improving your chances of success when it comes to the fine art of air combat. This advice appears in addition to the section 'Nations WWII Fighter Command - Golden Rules' which summarizes essential gameplay tips and presents them for easy reference at the end of the manual.

Initially, of course, you will simply want to keep your chosen aircraft in the air, but it won't be long before you find yourself flying into a confrontation with one or more enemy aircraft. There are several steps that can be taken to help you attain an early advantage, but remember that your opponent's desire to initiate the action will be equally as strong as your own. In the end, every skill you learn during your practice sessions will prove valuable; the most successful pilots are undoubtedly those who know their aircraft and its capabilities intimately. And remember, too, that this is war. If your nerve fails, it could be the end of your campaign.

Many of the techniques available to you are detailed in the manual section 'Tactics Of Air Warfare'. However, in taking you through the basics of flight, we will also mention a few of the key moves you should definitely bear in mind if you are to take the fight to the enemy and progress further than your first mission.

THE FOUR FORCES OF FLIGHT

In order to fly, an aircraft requires 4 physical forces to interact. These forces are weight, lift, thrust and drag.

WEIGHT

An object's weight is the force acting on that object due to the effect of gravity. All objects are subject to the pull of gravity - in the case of a flying aircraft, weight must balance the lift force for the aircraft to remain at a constant altitude. Once weight exceeds lift, the aircraft will descend. When weight is less than lift, the aircraft climbs into the air.

LIFT

The wing of an aircraft is designed so that the topside is slightly curved whereas the underside is flat. As the aircraft moves, air travels faster as it passes over the curved surface resulting in a lowering of the air pressure above the wing. The result is that air pressure below the wing is able to lift the aircraft off the ground. When this force equals the aircraft's weight, the aircraft will fly at a constant altitude.

THRUST

Thrust is the forward force of the aircraft generated by the engines. In World War II aircraft, the rotation of the propeller pulls the aircraft forwards causing air to pass over the wings and thereby generating lift. Thrust acts in opposition to drag; when the two forces are equal, the aircraft is travelling at a constant speed.

DRAG

Drag is the backward force acting on the aircraft as it moves forwards. It is caused by air resistance and acts to slow the aircraft down. When drag is greater than thrust, the aircraft will slow down. When it is less than thrust, the aircraft will accelerate.

ANGLE OF ATTACK

The 'angle of attack' is the angle at which the aircraft's wing meets the flow of air. This is dependent on both the angle at which the wing has been constructed, and the angle of the aircraft itself as it flies. It is important to bear this in mind, because when the angle of attack becomes too great, the airflow over the upper side of the wing will be disrupted and the lift force will be lost. At this point, the aircraft will stall and go into a dive. However, if you have sufficient altitude to gain airspeed, you should be able to regain control of the aircraft.

G-FORCES AND THE PILOT

The maneuvers performed by aircraft subject a pilot to substantial changes in the forces of gravity acting upon them. Gravity is measured in G - a person standing on the ground is subject to 1G whereas a pilot in a maneuvering aircraft is subjected to constantly changing G-forces. When these forces reach certain levels, the human body is unable to function normally and one of two physical effects will occur.

'Positive' G-forces as experienced in a quick turn or when the aircraft climbs sharply can result in the heart being unable to pump sufficient blood to the brain. Loss of vision will occur, followed by loss of consciousness if the excessive G-forces continue. This is referred to as a 'black out'.

'Negative' G-forces are experienced when the aircraft dives quickly and sharply. When these negative G-forces reach a certain level, they cause blood to flood upwards, filling the eyes and resulting in a 'red out' with consequent vision loss. Both these effects are simulated within Nations WWII Fighter Command. You will lose vision as a black or red effect wipes across the screen - you should take steps to reverse the G-forces if at all possible as loss of vision, however brief, can have fatal results.

WHAT YOU SEE

COCKPIT VIEW

Once your mission has begun, you will be taken to the standard in-cockpit view of your aircraft. Your aircraft's instruments are arranged in front of you and you will be able to see beyond the nose of your aircraft. Some Missions in Nations WWII Fighter Command begin with you on the ground awaiting take-off - if this is the case, you will need to get the aircraft airborne yourself. Other missions begin with you already flying so you should then spend a few moments making yourself aware of the surroundings and the position of other members of your formation, if applicable.

Each cockpit has a different instrument layout, although most of the important instruments appear in every aircraft. For a labeled diagram of your aircraft's cockpit, refer to the 'Aircraft Cockpits' section of this manual.

Although all aircraft have 'blind spots' that restrict your view to some extent, you must remain aware of events in all the areas visible to you. If you fail to take periodic glances around yourself, an enemy aircraft will have a devastating advantage and you will find yourself taken by surprise even on occasions when you should have been fully aware of your opponent's presence.

There are 2 ways you can look around yourself to check the skies. Moving the mouse simulates the movement of your head within the cockpit - you can check for enemy aircraft, or you may need to refer to instruments located below the standard cockpit view.

Alternatively, you can use the numeric keypad to quickly glance around yourself - these keys offer a less restricted and more easily controllable view than use of the mouse. You need to hold the key down to maintain the view - when you let go, you will return to the previous view.

The keypad '4' and '6' keys glance left and right respectively, while the keypad 'S' and '2' keys glance forwards and backwards respectively. The keypad '7' and 'g' keys look forward to the left and right respectively, while the keypad 'I' and '3' keys look backwards to the left and right respectively. The views simply correspond to the key positions on the numeric keypad itself. The keypad '5' key looks upwards, and can also be used in conjunction with any of the other numeric keypad direction keys. Using the numeric keypad keys as directed in the previous paragraph results in the view 'snapping' from one position to another. If you prefer a smooth transition between views, hold the numeric keypad 'O' key while pressing the required direction keys on the keypad.

Press and hold the '+' key at any time during the mission to look at the cockpit controls. When you let go of the '+' key, you will be returned to the view you were using when you first pressed the '+' key. This function can be used whether you are using an internal or an external view.

You can return to the default in-cockpit view at any time by pressing the '4' key on the main keyboard.

ZOOMING THE VIEW

You can zoom out of the cockpit view at any time by pressing and holding the 'O' key. The longer the key is held, the further out the view will zoom, although the zoom distance is subject to a limit. The same method is used to zoom back into the cockpit, although the 'I' key is used instead.

FLY-BY CAMERA

Use the 'I' key on the main keyboard to toggle the 'fly-by' camera on or off. This view will remain until the 'I' key is pressed again, at which point the view will return to the in-cockpit view.

FREE CAMERA

Press the '2' key on the main keyboard while on an external view to enter 'free camera' mode. When in this mode, the camera continually points towards the aircraft regardless of its movement. The mouse or the numeric keypad 'glance' keys can be used to move the camera around the aircraft, but it will still look at the aircraft whatever its position.

PADLOCK VIEW

Press the '3' key on the main keyboard to activate the 'padlock view' - this locks the view onto the enemy aircraft closest to the center of your target reticule and is available whether you are in on internal or external view. This is a useful facility that enables you to keep track of the enemy's movements. Your view will follow the enemy until you switch off the function by pressing the '3' key again or until the enemy aircraft flies out of range. If the previously out-of-range aircraft flies back into view and you have not selected another target, the view will switch back to that aircraft.

TAKE-OFF

Not all missions in Nations WWII Fighter Command begin with your aircraft taking off. However, where this occurs, you will have to guide your aircraft into the air before you can progress with the mission.

You will begin the mission on the runway - release the wheelbrakes then use the throttle to begin acceleration. Visibility while on the ground can be restricted in a number of World War II aircraft - this is due to the way the aircraft's nose blocks the cockpit view. However, you will rectify this as you begin the take-off.

Use the throttle to push the aircraft's RPM to its maximum level. As the aircraft passes a speed of 80mph/130kmh, use the Down arrow key to lift the nose slowly until the aircraft is airborne.

You should aim to raise your landing gear as soon as you can once you're airborne. Do this by pressing the 'G' key.

Once off the ground, you will need to maintain acceleration up to a speed of around 150mph/240kmh without climbing steeply - however, beyond this speed, you should have sufficient speed to allow a more effective climb rate. Continue using the Down arrow key to climb until you have reached your desired altitude.

THROTTLE

Increasing your throttle using the 'Q' key increases the power generated by your engine. Use the 'A' key to reduce throttle. However, you should be aware that while the 'Q' key will give you up to 90% of your aircraft's throttle, only the Emergency Throttle (the TAB key) can use 100%. You can use the Emergency Throttle at any time, but it should prove particularly useful when you are in severe danger and need the maximum speed possible.

When using the throttle, remember that this control is not the only factor affecting your aircraft's speed. Flying practice will help you decide when it is prudent to use more throttle and when to hold back on it, but make sure that you are not trying to fly yourself or your aircraft beyond capabilities. Pushing the throttle while engaged in a steep dive could result in too much speed and you may not be able to pull out of the dive.

When you are flying into combat or are already engaged with an opponent, you should try and fly at the speed at which you can turn the fastest. This is known as your 'corner speed'. This speed varies from aircraft to aircraft, but it is essentially the lowest speed at which you can turn while simultaneously experiencing the maximum G forces before damage occurs. Careful throttle control during combat will help you to maintain this speed, ensuring that the maneuvers you make will be as tight and fast as they can be.

The point to remember is that it is not always the best policy to fly as fast as possible. While it is undoubtedly true that a speed advantage over an enemy aircraft is valuable, this should be a controllable speed advantage rather than flat out neglect of the throttle. Speed can also be gained by diving, assuming you have height too, in which case over-use of the throttle would be unwise.

If you are in a strong position flying towards an opponent and about to open fire, an excessive speed over and above the opponent's will mean that you have substantially less time to make a hit. Before you know it, you will have flown past your target. Ease back on the throttle to give yourself a vital few more seconds and your chances of a hit will be greatly improved.

TURNING

Turn your aircraft by using ailerons, with use of the rudder to compensate for slippage. It would be useful to experiment with these controls extensively before entering combat as they have quite different effects on the way your aircraft flies. Expressed simply, use of the ailerons (the left and Right arrow keys) will roll your aircraft, causing it to bank to the left or right respectively. Once the aircraft is banked, the lift force that keeps the aircraft in the air no longer pushes straight upwards - instead, it pushes sideways and the aircraft begins to turn. There are other effects which follow from this and you may have to compensate for a drop in the aircraft's nose by using the elevators to pull the nose up again - this is done using the Down arrow key. As you become more experienced however, you may want too use this effect to your advantage by diving while you turn.

The rudder can also be used to turn the aircraft ~ the 'Z' key and the 'X' key move the rudder and turn the aircraft to the left or right respectively, while the 'C' key will move the rudder back to its central position. If you try using the rudder alone while flying straight and level, your aircraft will turn with less of a banking effect than if the ailerons were being used. However, the turning circle will be so large that if this method were to be used close to a combat situation, you would be in severe trouble. In reality, both ailerons and rudder are likely to be used, as the knock-on effects of each on the other can be used advantageously; your aim will be to create more unpredictable moves which are that much harder for the enemy to read.

Once you have got used to simple left and right turns, you will want to try some more complex turning maneuvers which allow you to move rather more quickly and efficiently. There are many maneuvers that a skilled pilot should have at their disposal, each of which becomes even more effective when used in combination with others. For more detail on these moves, refer to the 'Tactics Of Air Warfare' section in this manual. There is also more information on using tactical turns during combat in the 'Combat Basics' section.

Fundamentally, although turning is clearly a basic maneuver, you should take steps to complicate matters by using alternative planes of movement. If you insist on executing all your turns in the horizontal plane, an enemy aircraft will have no difficulty in reading your intentions and maneuvering around you. Alternatively, try and make use of the vertical and oblique planes as this makes everything far less predictable - if you try and think this way as soon as possible, you have much greater chance of becoming a successful pilot.

CLIMBING AND DIVING

As with turning, it is possible to use a number of different controls in combination to generate different kinds of climb or dive, but it is simplest to begin by using the elevators.

Use the Down arrow key and Up arrow key to move the elevators so that you can climb or dive. In deciding to do this, you will always have to bear in mind your speed, as without speed you will find it very difficult to climb. Conversely, diving while at high speed can also cause problems for you and your aircraft by subjecting you to excessive G forces.

ENERGY LEVELS

A different way to remain aware of your aircraft's ability to climb and dive is to make yourself aware of your energy level. If you are flying low at a slow speed, you have a low energy level - you will be unable to climb due to your slow speed and you will be unable to dive very far because you are too low. On the other hand, an aircraft flying low at speed has a much higher energy level because it can climb a move that slows it down but gains the advantage of altitude. The aircraft's energy level then remains high, because it can dive, exchanging its altitude for speed.

If the low and slow aircraft wanted to climb, it would have to spend some time building up its energy level by using the throttle ~ this could clearly be very dangerous if the aircraft was under threat of attack.

Tight turns that generate high G forces have the effect of sapping an aircraft's energy level, so although such maneuvers can be vital if you are to move into an effective, threatening position, the careful pilot will try and ensure an energy advantage before performing the turn. An aircraft that has lost its energy through too many sharp turns will find it very difficult to climb at all.

The calculation of energy level and its impact on your ability to climb is fundamental to improving your abilities as a pilot. It affects your capability of performing the more complex combat maneuvers to be found in the 'Tactics Of Air Warfare' and 'Combat Basics' sections, and without the awareness of these tactics, you are unlikely to progress.

USING WEAPONS

All the aircraft you are able to fly in Nations WWII Fighter Command are fitted with guns. However, the ways in which they are designed to be used will differ according to the aircraft type. The guns on a fighter, for example, are primarily offensive weapons suited to aggressive flying techniques. On the other hand, the guns on a bomber can be regarded as a defense of last resort, since the bomber's mission is geared towards dropping bombs on a specified target.

Not all the aircraft carry rockets or bombs, however. These weapons are primarily used to attack ground based targets, and a bombing mission will usually be accompanied by a fighter escort instructed to defend the bombers from attack.

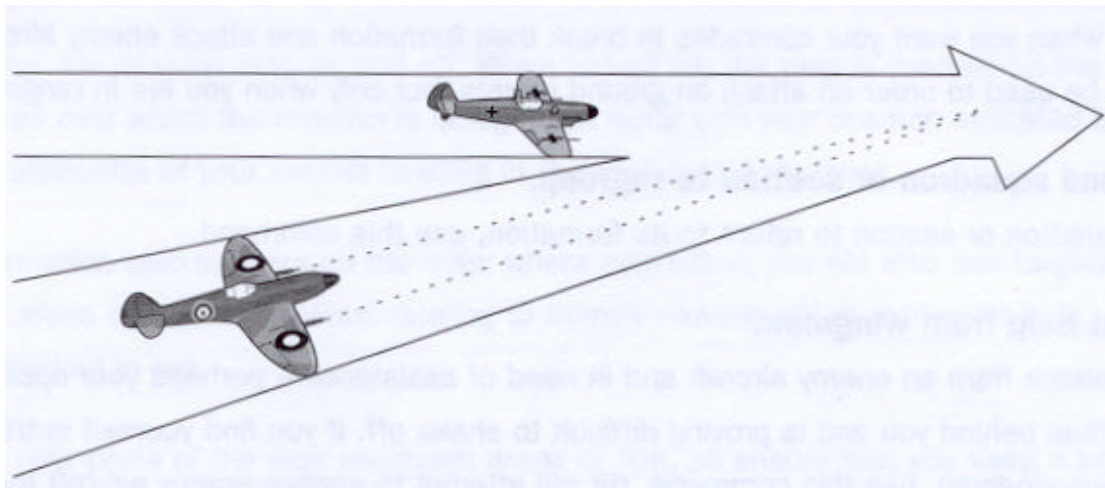
FIRING GUNS AND CANNONS

The left CTRL key is used to fire your guns and cannons (when applicable). Your gun sight is located in the center of your cockpit display - as other aircraft pass through the sight, a circular targeting reticule will appear. The reticule turns green to indicate an enemy aircraft and turns white to indicate a friendly aircraft. On aircraft with guns mounted on the wings rather than on the fuselage, the gunfire converges at a fixed distance (300m) in front of the aircraft. This distance is where the maximum damage

is inflated. To aid pilots in judging this distance, the reticle is set so that when the enemy aircraft's wingspan fits the circle, the aircraft is the correct distance away. During World War II, the size of the reticle could be changed by the pilot between settings for each enemy aircraft, but in Nations WWII Fighter Command it grows or shrinks according to which aircraft is currently in its sights. Be aware that this feature will appear even when the enemy aircraft is too far away for you to see it by eye.

DEFLECTION SHOOTING

If your opponent is out of the guns' range when you open fire, your shots will of course be wasted. However, even if you are within range and aiming straight at the target, the likelihood is that you will miss. The reason for this is that the target aircraft will have moved in the time it takes your bullets to reach the point at which you aimed. In order to anticipate and compensate for this effect, you should practice 'deflection shooting'. This means that you aim for a spot in front of your opponent so that the bullets hit as he moves into the anticipated space. This is a skill that can only be improved with practice, and it demands an awareness of factors such as the relative speed of the 2 aircraft and the angle between you and your enemy.



As the angle between yourself and the enemy aircraft is reduced, the distance that you must aim in front of the opponent becomes smaller. Once the angle has narrowed to such an extent that you are immediately behind the enemy aircraft, there is no need for deflection shooting, though this desirable situation is unlikely to arise very often.

FIRING ROCKETS

When rockets are available on your aircraft, they are fired by pressing the SHIFT key. They fire straight ahead of your aircraft and should primarily be used against ground targets.

DROPPING BOMBS

When bombs are available, they are dropped by pressing the SHIFT key. Bombing missions will be against specific ground targets - you will be expected to drop your bombs as close to the target as possible.

When assessing your proximity to the target, it may help you to use an external view of the aircraft so that it is easier to judge when you are over your objective.

USING THE RADIO

Radio Messages are used to keep you in touch with other members of your squadron, to give orders and to request help when necessary - they carry important information, so make sure you pay attention to what is said. You will hear the message in the language of the side you are flying for, but you will see subtitles in your installed language at the bottom of the screen.

In addition to the messages that you hear, you can also send messages yourself if you find yourself needing help or you wish to tell your squadron to attack. If you have sufficient rank to give orders to wingmen or squadrons, pressing the F5 - F8 keys will bring up a subtitle for the command given, although you will not hear an audible voice message. Use the following keys to pass on information to your comrades:

F5 key - Command to break and engage.

Use this command when you want your comrades to break their formation and attack enemy aircraft. The command can also be used to order an attack on ground targets, but only when you are in range of the target.

F6 key - Command squadron or section to regroup.

If you need your squadron or section to return to its formation, use this command.

F7 key - Request help from wingman.

You may be under attack from an enemy aircraft and in need of assistance - perhaps your opponent has taken a strong position behind you and is proving difficult to shake off. If you find yourself in trouble and you need the help of your wingman, use this command. He will attempt to engage enemy aircraft that are threatening you.

F8 key - Order wingman back in position.

Summon your wingman back to his position with this command. This will usually afford you a degree of protection since you and your wingman are responsible for helping the other avoid being taken by surprise.

Note:

Please remember that although Nations WWII Fighter Command has been developed with the utmost regard to historical accuracy, all aircraft markings and call-signs have been deliberately modified, where possible, in order to protect the memory of those pilots who died during the course of World War II.

IDENTIFYING OTHER AIRCRAFT

With practice, you will become accustomed to the shapes of other aircraft types you encounter, and very importantly, you will learn whether they are friendly or dangerous. There are other factors that will also help you identify aircraft in the heat of battle, such as coloration, markings and the aircraft's behavior. If an aircraft is diving on you with its guns blazing, you will safely be able to assume it's on the enemy's side.

Use the 'Aircraft Reference Information' section of this manual and the in-game database to study images of the various aircraft and compare their performance statistics so that you can quickly ascertain how a rival aircraft performs in comparison to your own.

You will become more proficient at identifying aircraft the more you fly, but you can also play Nations WWII Fighter Command with identification makers turned on.

While this function will not tell you a specific aircraft type, it will mark aircraft in the

distance as British, German, American or Italian. However, this feature will not mark aircraft located within shooting range - you will still need to develop identification skills of your own so as not to be caught out by unfriendly aircraft at close range. Toggle the identification markers on and off using the 'T' key.

MISSION MAP

The 'M' key toggles the mission map on and off. When turned on, the map is overlaid on the game screen - it shows you the area over which the mission is being flown along with your position indicated by a moving marker. This marker is a silhouette of your aircraft heading in the appropriate direction.

Other useful information also appears on the map; where applicable, you will also see targets, intercept paths, patrol zones and areas of flak. Information relating to friendly movements is marked in blue, whereas enemy movements are marked in red.

Large red circles over parts of the map represent areas of flak, so ensure that you keep a look out when approaching these zones.

LANDING

Not all missions in Nations WWII Fighter Command will require you to land your aircraft, and in fact, even when landing is involved, successful completion of the mission won't be dependent on this operation. However, if you want to develop a complete set of flying and combat skills, you will probably want to learn how to land your aircraft.

Approach the landing strip at an angle just under 10 degrees below the horizontal and aim to reduce your speed to just over 80 mph. Lower your landing gear by pressing the 'G' key and hold down the 'S' key to lower the flaps. This increases the lift force acting on your aircraft despite your reduced speed.

Once you have touched down, decrease your throttle rapidly until the aircraft comes to a halt.

In the event that you overshoot the landing strip or you fail to land for another reason, remember that you need to accelerate again before attempting to climb. If you fail to do this, your slow speed and high angle of attack are likely to result in your aircraft stalling. The extremely low altitude makes this disastrous.

COMBAT BASICS

ATTACK

There are 3 fundamental factors that you will need to bear in mind at all times while flying. If these 3 points are in your favor, then you are in a very strong position when it comes to tackling an enemy aircraft. If they are not in your favor, you will need to remedy the situation or escape ... if you can.

Altitude: With a high altitude, you are considerably safer than at a low altitude. Your attacking options are so much greater, plus you are able to swap your height advantage for a speed advantage by diving if required. When you have an altitude advantage, your opponent is forced to attempt to gain height, thereby reducing his own speed still further.

Speed: A speed advantage over your opponent also increases your options, allowing you to take the initiative and gain on him for a clear shot.

Surprise: Perhaps you are approaching your opponent from out of the sun or another of his 'blind spots'. If this is the case, the chances are that he literally cannot see you,

giving you time to instigate an attacking maneuver of your own. You will also have a surprise advantage if you make unpredictable moves, so learn the value of practice and keep the enemy wondering.

Even by just considering these points, you will be able to see how the 3 factors can be combined together to give you a significant opportunity of making a kill. If you are flying high and approaching your prey from out of the sun with the intention of gaining speed in a dive, your opponent will be forced into a defensive move which will hopefully worsen his situation by forcing him to lose speed in a turn or by trying to gain some height. Of course, the best pilots would react to such a situation by concentrating on trying to maneuver an attacking position of their own; however, such pilots are few and far between. Most will be panicked into desperate measures that will improve your position still further.

POSITIONING

In a one on one confrontation, the most advantageous position to be in is right behind your opponent. This gives you the chance to line up a shot while he is unable to fire back. This position is often referred to as 'being on your opponent's six', as in the six o'clock position. It is likely that a large proportion of any confrontation will involve you both trying to take this position in order to get in a good, clear shot.

TURNING FOR COMBAT

When you need to turn, you should remember that some aircraft turn better than others, and also that all aircraft have optimum performance levels when it comes to carrying out the maneuver. If we ignore other factors for a moment, an aircraft that turns faster and tighter than an opposing aircraft should be in a strong position to outmaneuver its opponent.

CORNER SPEED

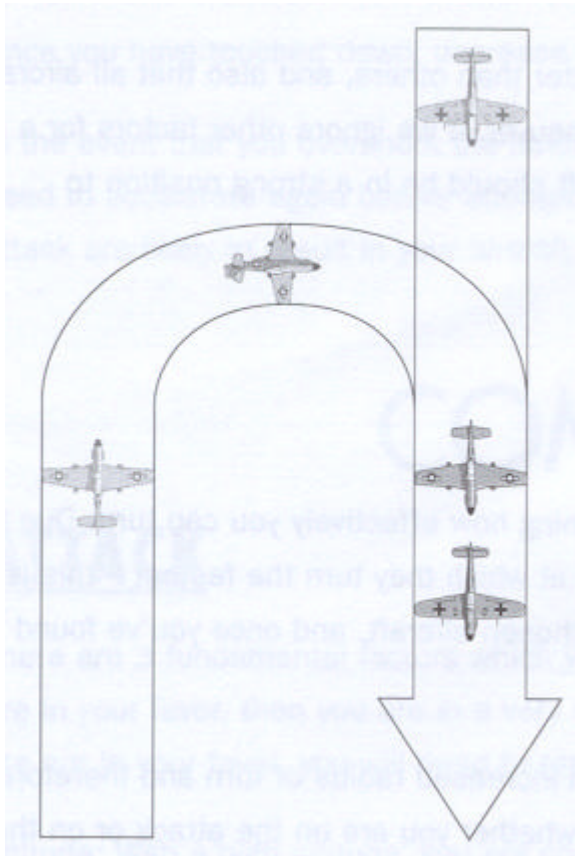
The speed at which you are travelling plays an important part in determining how effectively you can turn. Due to differences in their design and build, all aircraft have an optimum speed at which they turn the fastest - this is the 'corner speed'. It would be advantageous to find this speed in your chosen aircraft, and once you've found it, try and fly at this speed or as close to it as possible while in combat.

Flying at a speed greater than the optimum corner speed will result in an increased radius of turn and therefore the rate of turn will be reduced. Clearly, this puts you at a disadvantage whether you are on the attack or on the defense. Flying at a speed lower than the corner speed also results in a reduced rate of turn due to the amount of drag and lift generated - it could even result in physical damage to the aircraft. You should also be aware that aircraft with a high corner speed will have a larger radius of turn and lower rate of turn than aircraft with a low corner speed. The result of this is that in combat involving a lot of turning, an aircraft with a low corner speed is at a significant advantage over an aircraft with a high corner speed.

Remember also that a turning aircraft will be losing speed and an aircraft at corner speed will be subject to lots of drag - it may therefore be necessary to angle the aircraft's nose down a little as you turn. This will exchange some altitude for speed. If you need to find your corner speed, you are looking for the lowest speed at which you can turn while simultaneously experiencing the maximum G force before damage occurs.

LEAD TURNS

When you first fly, the temptation on spotting an enemy aircraft is to fly towards it, maybe trying a few shots as you both approach, before flying past and turning to repeat the procedure again. For a pilot lacking in combat ability, this is the simplest maneuver to make, but it is really not very satisfactory. Both aircraft would have much advantage and both would find it extremely difficult to get a shot on target. Ultimately, the aircraft with the superior turning capability would gain the advantage. The simplest way to try and break out of this pattern while flying towards your opponent is to take the 'lead turn'. This is an early turn made with the intention of flying onto your opponent's six.

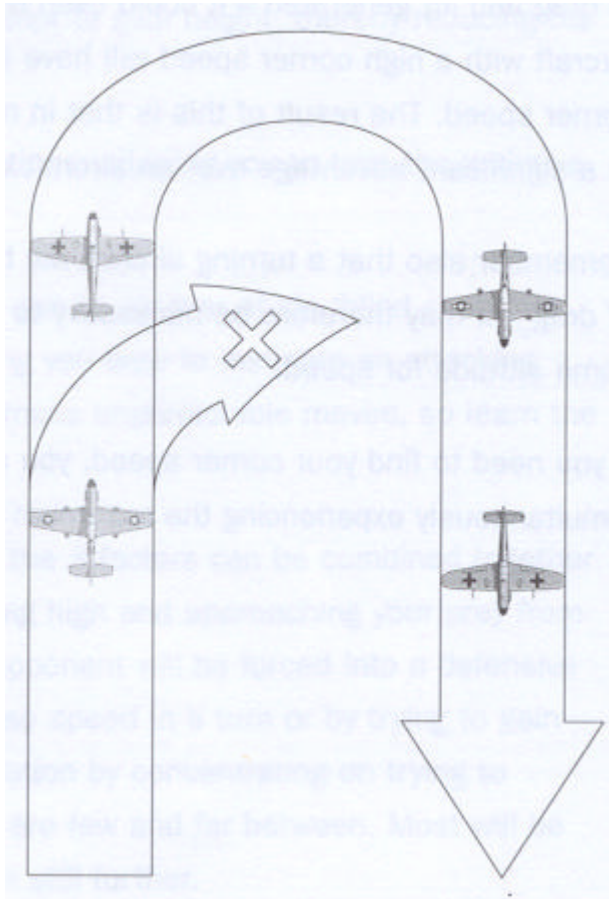


If completed correctly, you begin your turn before you pass the other aircraft (the point at which you pass is known as 'the merge'), so if he flies straight ahead, you finish the maneuver with his tail in your sights. Of course, this basic technique comes with its own dangers; if you turn too early, you will find yourself with the other aircraft on your six. You will then be the hunted pilot.

Almost all aggressive maneuvers you can perform are executed with the intention of getting onto your opponent's six. This is the position in which you are safest while the other aircraft is in most danger. However, although a successfully completed lead turn puts you in this position, it is a dangerous maneuver to make in that it makes no use of those key factors; altitude, surprise, or speed.

DRIVING TO THE CORNER

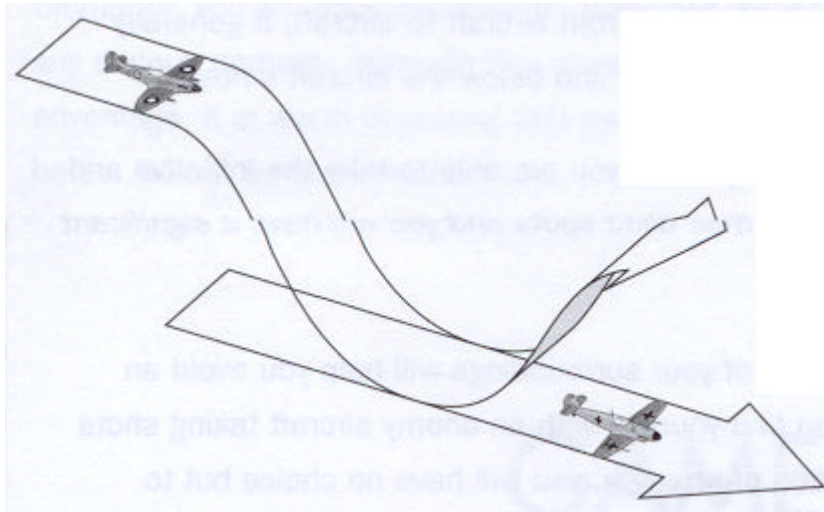
If you are on an enemy's six, you are in a strong position. However, your opponent will undoubtedly attempt to turn away somehow in order to remove your advantage, in which case you will need to be aware of 'driving to the corner'.



If you are following an opponent and are attempting to gain on him before opening fire, you may see him begin to turn. If you immediately follow suit, you will turn into the path of the enemy - he will have taken the advantage and will now be on your six. Instead of turning at the same time as your opponent, you should fly to the point your opponent was at when he turned. If you then begin your own turn, you should maintain your advantageous position with a similar distance remaining between the 2 aircraft.

BOOM AND ZOOM

If you remain constant aware of altitude, speed and surprise, you will be forcing yourself to think more aggressively and consequent you will always be working to gain the advantage. This cannot guarantee success, particularly for a novice, but it will hopefully entourage good habits that will stay with you throughout your flying career. If you have won an altitude advantage, a technique known as 'boom and zoom' can provide a simple yet effect means of exploiting your position.



You begin the move above and to the rear of your opponent's aircraft. Depending on the circumstances, he may well be unaware of your presence, particularly if you're approaching from the direction of the sun - it is virtually impossible for a pilot to clearly see anyone located between himself and the sun. Even if he is aware that you're there, he does not pose an immediate threat and will have to work hard to pose any danger.

You begin with a dive on your opponent. Although you lose altitude, you are trading it for an increase in speed. Once you have reached your opponent's altitude, level your aircraft and fly towards him - your speed should allow you to gain on him. If you get close enough and feel confident that you have him in your sights, take a shot.

Don't worry too much if you miss as you're going to do it all again in a moment.

Once you reach the enemy's position, begin to climb. Once you have used your speed to climb back to a reasonable altitude, you will need to maneuver yourself back into the position in which you began the first boom and zoom. The manual section 'Tactics Of Air Warfare' details a number of moves which can return you to this position.

It is likely that at some point during the maneuver, your opponent will try and take an evasive action, probably involving a turn of some sort. This will cost them speed, leaving them even less able to gain altitude.

Repeat the whole boom and zoom procedure as many times as necessary - your opponent will soon be lacking in any useful speed and will be unable to maneuver out of trouble.

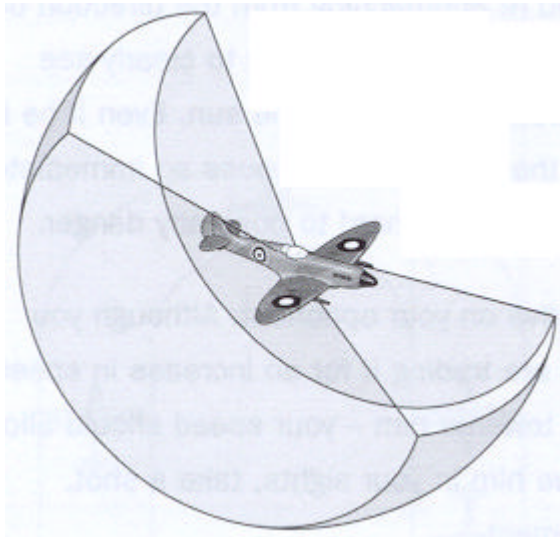
DEFENSE

If you are able to think aggressively, always considering the importance of altitude, speed and surprise, then you will automatically be trying to take the initiative in each confrontation with the enemy. However, it is also worth remembering that the vast majority of air combat kills in World War II occurred without the victim ever being aware of their attacker's presence. While this serves to emphasize the importance of surprise, it also demonstrates that if you do not prepare yourself to think defensively and are not constantly expecting the unexpected, you will soon find yourself in trouble.

If you acknowledge that tempering your aggression with a defensive awareness is not an admission of defeat, the first and most basic step you can take is to simply be alert. Be aware of everything that is happening round you, and keep looking around yourself constantly. If you are flying in formation, make sure you know where your

comrades are. Once you encounter enemy aircraft, ensure you know how many you are tackling. Try to track them mentally as the confrontation develops, assessing their speed and direction so that you can more easily predict where they are likely to have gone if you lose sight of them.

Be very aware of your own 'blindspots' - these are the areas you are unable to see. The presence of a wingman will help, but do not assume that he can always see you ~ he may have been the victim of a surprise attack himself. Although the precise blind area differs slightly from aircraft to aircraft, it generally extends from an area above and behind your aircraft to an area in front and below the aircraft's nose.



Awareness of your own blind area will also help when you are able to take the initiative and attack another aircraft. Hide yourself within their blind spots and you will have a significant advantage.

As you can see, remaining aware of your surroundings will help you avoid an attack, but once you find yourself with an enemy aircraft taking shots at you from a position of strength, you will have no choice but to defend yourself.

AN ENEMY ON YOUR TAIL

If you are in the worst position of all, with the enemy aircraft on your six and within range, you must attempt to alter the conditions even if only for a moment. By introducing unpredictability into the engagement, you will improve your chances of survival, though your respite may only be brief.

The most difficult type of shot to set up for an attacker is when the target is flying at 90 degrees across their flight path, therefore you should try and get as near to this scenario as possible. Use the ailerons to roll your aircraft as hard as possible one way or the other until you are descending at an angle. If your opponent knows his aircraft has superior turning abilities to yours, he may follow you and try to line up the shot again. Alternatively, if he is following boom and zoom principles he may climb so as to gain altitude ready for another attempt.

There are many other factors which will affect the outcome, such as the proximity of each aircraft to its own corner speed, but at the very least you are likely to make it difficult for your opponent to see you if the turn is hard enough. Also, do bear in mind the differences between the two aircraft - if you cannot turn well, you may be able to dive at high speed. You may be able to climb well while your opponent may stall, so try and get accustomed to the relative strengths of the aircraft you are likely to face.

A number of maneuvers are detailed in the 'Tactics Of Air Warfare' section, and you will find that extreme moves will be the most effective if you are under attack. However, you should remain aware of your speed and ability to climb. Some looping maneuvers will slow you down too much leaving you with very little option if your opponent is still within range. Maneuvers that incorporate a downward element, such as the Split-S, will increase your speed, but if you are already at a low altitude, these may prove dangerous in their own right. Alternatively, try and confuse your opponent by turning one way with the ailerons while simultaneously turning the other way with the rudder. The intention is to briefly mislead so that he is not sure which way you are likely to go. Ultimately, you will have successfully defended yourself if you manage to escape from an attack without taking any serious damage. Although this does not mean you have abandoned your urge to continually look for the advantage, it is worth accepting that escaping from a very dangerous situation means you live to fight another battle. Do not be frightened to run.

GAME MODES

TRAINING

The Training game mode gives you the chance to practice a number of key maneuvers such as take-offs and landings, as well as providing opportunities to practice shooting at targets and other important skills. These skills tend to be required throughout the different mission types, so make use of the Training mode.

To select specific training missions, pass the mouse over the required mission button and click on it.

INSTANT ACTION

The Instant Action game mode allows you to fly straight into the heart of an intense confrontation based around a number of different pre-determined scenarios. There will be a default aircraft for the mission, but you will have the opportunity of selecting a different aircraft from any of the player controllable aircraft featured in the game, and you will also choose the confrontation type from the Instant Action Menu. Many of the Instant Action missions give you the opportunity to practice specific combat skills which will prove invaluable when flying a full campaign, so bear in mind the basic combat advice given in this manual and think about where and when to employ these tactics.

INSTANT ACTION MENU

Once you choose Instant Action from the Main Menu, you will be taken to the Instant Action Menu.

This mission options appear on this menu as illustrated buttons. Pass the mouse over the buttons to read the descriptor – you select your chosen mission type by clicking on the appropriate button.

Some of the mission categories contain several specific missions to choose from. These appear on-screen on a scrollable menu that can be scrolled by clicking on the 'UP' and 'DOWN' arrows on either side of the list. Click on mission names to highlight them, then when your chosen mission is highlighted, click on the 'CHECK MARK' icon to confirm your choice. Alternatively, click on the 'X' icon if you want to cancel the menu without choosing any mission.

Once you have chosen a mission, you will be taken to the Briefing Screen.

BRIEFING SCREEN

The Briefing Screen lets you set some options before you begin flying, then lets you access the mission once these are all set correctly. It also shows a map of the region over which the mission will be flown, as well as a text briefing describing the mission, your aircraft type, the mission start point and the current weather conditions. Where this text briefing occupies more than one page, you can flick through the pages by clicking on the 'UP' and 'DOWN' arrows that appear on the right of the screen.

Pass the mouse over menu items to read the descriptor:

Change Aircraft

Most of the Instant Action missions allow you to choose your aircraft. Click on this option if you wish to do this - you will be taken to the Select Aircraft Menu. Click on the flag of the nation you want to fly for, then click on one of the 4 aircraft. When you have chosen your aircraft, click on the 'LEFT' arrow to return to the Briefing Screen.

Difficulty

There are 3 difficulty levels available to you - these are Easy, Normal and Hard. Click on the icon repeatedly to cycle through the difficulty levels.

Realism

Click on this icon repeatedly to cycle through Relaxed Realism, Realistic and Ultra Realistic. This option will affect the way your aircraft handles - the more realistic the flight model, the harder the aircraft will be to control. If you are not used to flying combat missions, you may find it useful to use Relaxed Realism for a while until you are more accustomed to the control systems. If you are very experienced, Ultra Realistic adds further realistic elements to the aircraft's behavior such as engine cut-outs and wheel damage at high speed.

Record Mission

The Record Mission facility records your flight to allow playback in the future. This may prove helpful as you try to improve your flight and combat techniques - it allows you to study mistakes and successes for future reference. If you turn the option on, you will be prompted to enter a file name for the recording. Type in your chosen name, making sure you retain the '.rec' file extension, then once the file name has been entered, click the 'CHECK MARK' icon to confirm or the 'X' icon to cancel.

Start Mission

When all options are set correctly, click on this icon to begin the mission.

MISSION TYPES

The Instant Action mission types are as follows:

One On One

Dogfights can break out during virtually any mission, and only pilots who have practiced the art of aerial combat will be able to survive repeated dogfights for long. The One On One missions take you into battle with one enemy aircraft, and without back-up of any kind you will have no choice but to engage in combat. The advice given in the 'Combat Basics' section of this manual will prove invaluable, and you

will also have the opportunity to attempt maneuvers from the 'Tactics Of Air Warfare' section under combat conditions.

Squadron Duel

Although a battle between 2 squadrons may well break up into a number of individual dogfights, the presence of multiple friendly and enemy aircraft changes the nature of the combat. You will be able to call on the assistance of your comrades if necessary, although they may well be occupied with their own confrontations and you will need to remain aware of as many enemy aircraft as you can. This type of mission will help you improve your awareness of other aircraft - you should try to constantly scan the sky so that you know where all aircraft are from one moment to the next.

Bomber Escort

As bombing strategies developed over the course of World War II, it became usual practice for bombing missions to be accompanied by fighter escorts charged with safeguarding the bombers and allowing the mission objectives to be achieved. As a member of a fighter escort, you will need to bear in mind that you are protecting your bombers from attack - if you are drawn too far away from the bomber squadron, they will be left very vulnerable.

Bomber Interception

The interception of bombing missions by fighters was a basic part of the defense against bombers. It had initially been thought that there was virtually no defense against bombers, but some kind of resistance had to be offered and it was found that successful missions could be flown against them. Be aware that groups of bombers are likely to be protected by a fighter escort.

Fighter Interception

You will be briefed to meet a group of enemy fighters and engage them in combat. They may be threatening the successful movement of a convoy, or they could be targeting an important ground installation such as an airfield.

Opportunity Target

Engage in attacks on ground targets and cause as much damage as possible. It will be particularly important to hit industrial targets in order to hamper enemy operations.

Anti-Shipping Strike

Attacks by fighters on shipping convoys were vitally important, particularly to Germany, as Britain was so reliant on supplies transported by sea. There were a number of very important shipping areas in which fighting was heavy - these included areas around Malta and North Africa, and the shipping routes from the US across the Atlantic.

Ground Target

Target specific ground installations as detailed in the brief and ensures they are put out of action. Particularly sensitive targets are likely to be protected by anti-aircraft guns on the ground.

Surprise!

An element of surprise gives an attack perhaps the best advantage of all. In these missions, you will attempt to carry out your objectives before the enemy is able to co-ordinate a full response. Delays will mean the enemy is able to summon all its defenses and the initiative will have been lost.

Scramble!

A rapid response and efficiently implemented take-off will be necessary in these missions as you will be required to counter an imminent threat.

CAMPAIGN

The Campaign game mode is the heart of the Nations WWII Fighter Command challenge. You can choose to join the British, US or German forces and fly your way through 15 missions based on actual events from World War II. Although you will have the opportunity to temper the realism to suit your own abilities, the missions have been carefully researched so that the tasks you are briefed to carry out reflect the progress of your chosen nation. You will also have to complete each mission successfully before you are able to move onto the next.

PILOT SELECTION MENU

Choose 'Campaign' from the Main Menu to begin your campaign - you will be taken to the Pilot Selection Menu.

Campaigns are identified by the name of the pilot flying them. You can have several campaigns running at any one time - for example, you may want to start a campaign for one nation before you have completed all 15 missions for another.

The name of the current pilot, if any, appears on a panel at the bottom of the menu. However, you can create a new pilot or load a previously created one using the menus illustrated buttons.

Create Pilot

Select this option to create a new pilot and begin a campaign from scratch. When you click on the button, a text panel appears in which you can enter a pilot name via the keyboard. Once the name has been entered, click the 'CHECK MARK' to confirm or the 'X' to cancel. If you confirm the name, you will be prompted to select the nation they fly for - click the appropriate flag from the choice of Britain, USA and Germany.

Load Pilot

Once a pilot has been created the details and mission records can be loaded again at any time. When you click the button, a scrollable list of all the created pilots will appear. Click on your chosen pilot name to highlight it, then click the 'CHECK MARK' icon to confirm. If you need to scroll the list, click on the 'UP' and 'DOWN' arrows above and below the list. Click on the 'X' to cancel the menu without selecting a pilot name.

Mission Folder

Clicking the 'RIGHT' arrow on the right of the Pilot Selection Menu takes you to the current pilot's Mission Folder.

The Mission Folder contains information on all the pilot's completed missions, as well as allowing you to access the next one. Pass the mouse over the mission images to bring up a small descriptor at the bottom of the screen - if you click on completed

missions, you will be taken to a Pilot Log. If you click on uncompleted missions, you will be able to make an attempt on them.

UNCOMPLETED MISSIONS

Only the next uncompleted mission in the campaign will be available from the Mission Folder. When you click on it, an archive movie sequence will give you some background information on the progress of the war, then once this has played, you will see the Briefing Screen.

BRIEFING SCREEN

Before you undertake your campaign mission, you will receive a detailed text briefing via the Briefing Screen. Where the briefing takes up more than one page, you can browse through the pages by clicking on the 'UP' and 'DOWN' arrows on the right of the screen. You will also see a map of the area over which the mission will be flown, along with information on your aircraft type, the mission start point and the weather.

DIFFICULTY

There are 3 difficulty levels available to you - these are Easy, Normal and Hard. Click on the icon repeatedly to cycle through the difficulty levels. The difficulty level can only be set at the beginning of a pilot's campaign. Once it has been chosen, it cannot then be altered.

REALISM

Click on this icon repeatedly to cycle through Relaxed Realism, Realistic and Ultra Realistic. This option will affect the way your aircraft handles - the more realistic the flight model, the harder the aircraft will be to control. If you are not used to flying combat missions, you may find it useful to use Relaxed Realism for a while until you are more accustomed to the control systems. If you are very experienced, Ultra Realistic adds further realistic elements to the aircraft's behavior such as engine cut-outs or wheel and flap damage at high speed. The realism level can only be set at the beginning of a pilot's campaign. Once it has been chosen, it cannot then be altered.

RECORD MISSION

The Record Mission facility records your flight to allow playback in the future. This may prove helpful as you try to improve your flight and combat techniques - it allows you to study mistakes and successes for future reference. If you turn the option on, you will be prompted to enter a file name for the recording -type in your chosen name, making sure you retain the '.rec' file extension. Once the file name has been entered, click the 'CHECK MARK' icon to confirm or the 'X' icon to cancel.

REPLAY MOVIE

Click this option to see the archive movie sequence again.

START MISSION

When all options are set correctly, click on this icon to begin the mission.

COMPLETED MISSIONS

When you click on completed missions, if any, you will be taken to the Pilot Log which details information relating to your own performance and that of your squadron.

PILOT LOG

Where the mission information takes up more than one page, browse the pages using the 'UP' and 'DOWN' arrows on the right of the screen.

VIEW MEDALS

Click the medal to view all the medals won during your current campaign. 3 medals can be awarded throughout the campaign, with a further 2 depending on your performance at the end of the game. Medals awarded are as follows:

GREAT BRITAIN: Air Force Medal, Air Force Cross, Distinguished Flying Medal, Distinguished Flying Cross, Victoria Cross

GERMANY: Luftwaffe Pilot's Badge, Day Fighter Clasp, Mannerheim Cross, October 1938 Medal, Iron Cross

USA: Bronze Star, Silver Star, Distinguished Flying Cross, Purple Heart, Congressional Medal of Honor

REPLAY MISSION

Click the photograph to replay the mission. This gives you the opportunity to improve your mission statistics. The page number beneath the statistics will increase as you replay missions - the latest mission played is the highest page number.

RETURN TO MISSION FOLDER

Click the left-hand arrow to return to the Mission Folder.

COMMENDATION

The design of this non-clickable square icon differs according to which nation you are flying for. When 5 commendations have been won, you will receive a medal.

RANK

As you progress, you will be promoted through the ranks of your air force. The ranks attainable are as follows:

GREAT BRITAIN: Flying Officer (starting rank), Flight lieutenant, Squadron Leader

GERMANY: Ober Leutnant, Hauptmann, Major

USA: Lieutenant, Captain, Major

MULTIPLAYER

NETWORK SCREEN

To play a Nations WWII Fighter Command Multiplayer game click on the Multiplayer icon on the Main Menu. A list of DirectPlay's connection protocols will appear in a scrollable menu. Select one by clicking on an option to highlight it, and then clicking on the 'CHECK MARK' icon to confirm your selection. The actual protocols that appear depend upon your particular machine, however several common ones are:

IPX Connection

This is commonly used by Local Area Networks (LAN).

Internet TCP/IP Connection

TCP/IP is the protocol used to transfer information over the Internet, although it is also used by some local Area Networks (LAN). Selecting this option brings up a Windows dialog box asking for the hostname or the IP address of the server you want to connect to. Leaving the box blank will search machines on your local network.

MULTIPLAYER SETUP SCREEN

Once you have selected your protocol, you will be presented with the Multiplayer setup screen. What follows is a description of each individual element of the screen, but for step-by-step guides on setting up and joining multiplayer games, please refer to the sections titled 'Setting Up A Game' and 'Joining An Existing Game' further in the manual.

Along the top of the screen are your current player settings. From left to right they are:

Team

Indicates which team you will play for. Clicking on the flag cycles through the different teams available.

Player Name

Shows your current player name. Clicking on the panel lets you change your name, although you can only do this while you are not connected to any game.

Text Color

Shows the color your messages will appear in the chat window. Clicking on the circle cycles through the different colors.

Aircraft Type

Shows your currently selected aircraft. Clicking on the aircraft icon to the right of the panel brings up a scrollable menu showing all the aircraft allowed for this game (this will have been set by the host prior to opening the game). The list can be scrolled by clicking on the 'UP' and 'DOWN' arrows on either side of the list. To make a new selection, highlight the aircraft you want by clicking on it, then click on the 'CHECK MARK' icon to confirm your selection. Clicking on the 'X' icon exits the list without changing your aircraft.

The rest of the Multiplayer Setup screen is divided into three main areas. On the left is the Player list panel, on the right is the Game List and the Game Options panel, and across the bottom is the Chat window.

Player List

The Player List panel shows the people who are connected to the current game waiting to play. Alongside each player is a flag indicating their chosen team. Additionally, the game's host is marked with the phrase '(HOST)', and your own entry is marked with an asterisk. The 'UP' and 'DOWN' arrows to the left will scroll the list when there are more players than can fit on the panel.

Game List

The Game List panel shows the current games available for you to join. Each entry shows the host's name and the name of the game selected by the host. You can refresh the list at any time by clicking on the 'Search For Games' button. To join a game, click

on its entry to highlight it, then click on the 'Join Game' button underneath. Alternatively, just double click the entry to join the game.

Game Options

Once you have joined a game, the panel on the right becomes the Game Options panel. The list now shows a number of settings that can be altered to configure the current game, though only the host can make the alterations. See the section titled 'Network Game Options' for information on what these are and how to change them. The icons underneath these two panels are used to set up and configure games. From left to right, they are:

Kick Player

This forces the currently highlighted player in the Player List panel to leave the game. This can only be done by the host.

Unlock Game

Opens the game for people to join. When locked, the icon flashes to indicate people cannot join yet. Once the game is open, certain parameters cannot be changed, such as the excluded aircraft list, the maximum number of players and the teams available for people to play.

Exclude Aircraft

This allows you to ban certain aircraft types from the game. All of the aircraft are presented in a scrollable menu with a check mark or a "X" next to them indicating the aircraft's current status.

Check marks represent available aircraft, X's mean the aircraft is banned from this game. Clicking on an aircraft toggles its state. This can only be done by the game's host.

Select Protocol

Opens up the protocol selection list again for you to select a different protocol.

Search for Games

Scans the network for available games. Any that are found will be presented in the Game List panel on the right of the screen.

Create Game

Creates a new multiplayer game for people to join. A list of all of the multiplayer missions appears in a menu that can be scrolled if necessary by clicking on the 'UP' and 'DOWN' buttons either side of the list. Click on the mission you want to play to highlight it then click on the 'CHECK MARK' icon to confirm your choice. Click on the 'X' icon to cancel without creating a game.

Join Game

Joins the game currently highlighted in the Game list panel.

Leave Game

Leave the game to which you are currently joined. If you are the host, this closes down the game and forces everybody currently joined to leave.

Start Game

Starts the game itself. Only the host can start the game.

Finally, across the bottom half of the screen is the Chat window where you can talk with people connected to the game and discuss game options, tactics, and sort out teams. Various server messages and some game instructions will also appear here. Clicking at the bottom of this window allows you to type in your own messages to be sent to the group.

SETTING UP GAME

To set up your own game, follow these steps:

1. Click on the Multiplayer option on the Main Menu.
2. Select your connection protocol from the list.
3. Click on the 'Create Game' button.
4. Select the mission you want to set up.
5. Set the maximum number of players and the available teams in the Game Options panel.
6. Click on the flashing 'Unlock Game' button.
7. Wait for people to join.
8. Set the remaining Game Options to your liking.
9. Click on the 'Start Game' button to start.

JOINING AN EXISTING GAME

To join in a game someone else has set up, follow these steps:

1. Click on the Multiplayer option on the Main Menu.
2. Select your connection protocol from the list.
3. Nations WWII Fighter Command will search for any existing games automatically and list any games found in the Game list panel. Click on the 'Search For Games' button at any time to refresh this list.
4. Highlight the game you want to join and click on the 'Join Game' button.
5. Choose your aircraft and team.
6. Wait for the game to be started by the host.

NETWORK GAME OPTIONS

There are a number of settings that can be adjusted to tailor a network game to your liking. These appear in the Game Options panel on the right of the network screen. The options can only be altered by the host, but everyone connected to the game can see the current configuration. To change an option, the host should click on its current value to cycle through all of the available values. The exact options available and the values of these options depend upon the individual mission.

The options available are:

Max Players

Set the maximum number of players you wish to join the game.

Teams

Sets the teams available for people to join. The highlighted flags indicate teams that are to be available in the game; teams not highlighted will be unavailable. Click on a flag to change its status.

NOTE: The two previous options should be decided before the game is unlocked and cannot be changed afterwards. The following options can be changed right up to the start of the game:

Power Ups

This enables or disables the use of power ups in the game.

Regeneration

Switch this OFF to stop aircraft regenerating when they are destroyed. This turns the game into a sudden death competition.

Relaxed Realism

Use this to switch all aircraft into relaxed realism mode - this makes the aircraft less realistic but easier to fly.

Same-Team Kills

This option determines how your score is affected when you kill an aircraft of the same team. 'COUNTED' means you are awarded a kill point if you kill a player on the same team as you, 'IGNORED' means you are not. 'PENALTY' means you will lose a kill point for such an action.

Kill Limit

This sets a limit to the number of kills that can be scored in the game - when this limit is hit, the game ends. Switching it to 'OFF' disables any limit.

Time Limit

This limits the length of time the game will last. The value is in minutes and the game ends when the time is up. Switching it to 'OFF' disables any limit.

POWER UPS

In Nations WWII Fighter Command's multiplayer games, various power ups can often be found dotted around the landscape. They appear as large spinning shapes with colored sparkles flying around them - the shape itself and the color of the sparkles indicate the effect of the particular power up. Collecting a power up is simply a case of flying through one, at which point the power up will disappear. Another power up will regenerate in the same spot some time later.

The power ups are as follows:

Speed Up (Light Blue)



Effectively doubles the speed and maneuverability of your aircraft for a short time. Large fiery trails coming from the wings make this power up unmistakable.

Invincibility (Pink)



Surrounds your aircraft with a lightning sphere that gives you brief invincibility to damage from other aircraft or from the ground.

2x Damage (Yellow)



For a short period of time your bullets will inflict twice the normal level of damage on any aircraft unfortunate enough to stray into your firing line. look out for extraordinarily large muzzle flashes and some heavy-sounding gunfire.

Shield (Dark Blue)



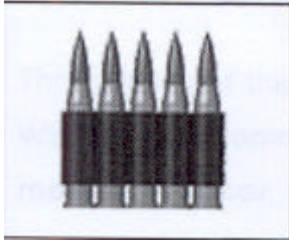
Puts a protective cage around your aircraft that will absorb damage from other aircraft's gunfire. The brightness of the shield indicates its status - as it takes damage it will get dimmer and dimmer before it disappears completely.

Rockets (Red)



Arms your aircraft with a fuel complement of rockets. (In multiplayer mode, all aircraft can carry rockets regardless of their type).

Ammo (Gold)



Arms your aircraft with a fuel load of machine gun rounds and/or cannon rounds.

Fuel (Green)



Restores your fuel level to full.

Health (White)



Restores your aircraft to perfect condition.

Crate



This has no sparkles, but is usually found in an open hangar on an airfield. It is a combination of the Rocket, Ammo, Fuel and Health power ups.

IN-GAME MENU

Press the F1 key while flying to access the in-game menu. The game will pause and you will be presented with a number of options that you can alter to suit the speed of your machine. Highlight options using the Up and Down arrow keys, then use the Left and Right arrow keys to cycle through the options. Press the F1 key again to exit the menu.

SCREEN RESOLUTION

Increase or decrease the screen resolution to suit your machine's speed.

EFFECTS VOLUME

Increase or decrease the volume of in-game sound effects.

MUSIC VOLUME

Increase or decrease the volume of in-game music.

MINIMUM FRAME RATE

Attempt to keep the game running at the species frame rate or above.

CLOUD RENDERING

When this is set to 100 per cent, very realistic cloud effects will be used in-game. As you reduce the percentage, clouds will become progressively less realistic but this will improve the game's speed on slower machines.

QUIT GAME

Press the ESC key to quit the game and return to the Nations WWII Fighter Command Main Menu.

PLAYING RECORDED MISSIONS

The missions you have recorded while flying in Nations WWII Fighter Command can be replayed by selecting 'SHOW RECORDED MISSIONS' from the Main Menu. When you select the option, a list of your recorded missions, if any, will appear on-screen. Click on your chosen mission to highlight it, then click on the 'CHECK MARK' icon to confirm. Click on the 'X' icon to cancel without selecting a recording. If the mission list fills the screen, scroll up and down by clicking on the arrows at either side of the menu.

DATABASE

To access the Nations WWII Fighter Command database, click on the Database button on the Main Menu. The database contains information and pictures of all the aircraft featured in the game along with cockpit layouts for each of the aircraft you will fly as a player.

The database opens with a picture of a desk on top of which are three aircraft models - one German, one British and one American. Select one of these aircrafts by clicking on it to bring up a list of all the featured aircraft from that nation. Clicking on an item on this list brings up the information related to that particular aircraft. On each page you can click on the arrow to the left of the screen to return to the previous page. The information pages also have an arrow on the right of the screen that will bring up pictures of the aircraft - you can click on these pictures to enlarge them, then again to reduce them.

Back on the desk screen, there are three cockpit diagrams underneath the aircraft models. These bring up lists of cockpit diagrams for the selected nation. Selecting an aircraft from the list brings up a picture of the aircraft's cockpit, annotated with the function of each dial. Clicking on the arrow to the left of the screen will return you to the previous page.

NATIONS WWII FIGHTER COMMAND – GOLDEN RULES

This section of the manual summarizes some of the golden rules that will prove invaluable when playing Nations WWII Fighter Command. For more detailed information on flying and combat, refer to the relevant sections of the manual. However, for concise gameplay assistance, look no further than the points raised here.

AIR ATTACK

Keep a close eye on your ammunition levels. Some aircraft have very little in the way of ammo capacity compared to others. Don't be wasteful.

Spot your target from a distance with the use of the nationality ID flags or the gunsight and home in on the enemy aircraft, cutting down the angle in order to catch up with it.

Wait until you are quite close to the target before firing. This helps to achieve a greater hit ratio and you will conserve ammo that will prove valuable later.

As soon as you see an enemy on your tail, press the F7 button to call for help if you have wingmen.

When trying to shake an enemy, keep turning in the same direction to avoid his fire. Reversing the direction of your turn could lead you right back into the enemy's sights. An aircraft which is being chased is at its most vulnerable at the top of a climb where its airspeed is at its lowest. This allows the attacker to close in and leaves the defending aircraft with little maneuverability.

If enemies are in range and have wingmen, take the wingmen out of the air first. If you don't, they will close in on you quickly and effectively.

Try to maintain height throughout a dogfight, as this will give you a significant energy advantage.

When protecting bombers, be aware of their gunfire. Don't get too close.

When attacking a bomber, try to approach from an acute angle and swing from side to side thus avoiding the aim of the turret gunners.

GROUND ATTACK

When attacking ground targets, start from a good altitude and dive in a straight line keeping the target steady in your sights. After firing, use your momentum to climb back up to a good height before coming in for a second run if necessary.

When attacking a convoy, shoot vehicles vigorously - commit to the attack and don't hesitate. Release a good quantity of your payload to ensure an effective hit.

When attacking ships and boats, aim for the hull while judging the speed of the enemy aircraft.

When attacking trains, try to take out one carriage to de-rail it. It makes the next sweep much easier.

Pay attention to the range of your rockets and how they fly. This will help in deciding where to aim and when to fire.

FORMATIONS

When leading your squadron, don't fly erratically. Doing so makes it difficult for the rest of your squadron to keep in formation behind you.

Remember to use the 'Break Formation' key (F5) when in range of your target. This commands your squadron to attack.

CONTROLS

Be aware of the rudder slowing aircraft down on a turn, especially when flying at a low altitude.

When flying a new aircraft for the first time, use the fly-by camera to judge the flight characteristics of your aircraft.

Get used to using both hands on the controls. If you learn how to use the mouse or keys with your spare hand (i.e. the hand which is not using the joystick), you will

have a great advantage by increasing your awareness of what is happening around you.

Don't forget to release your wheel brake before you attempt to take off, and don't put the wheel brake on at high speed when landing as it could cause your aircraft to up-end itself.