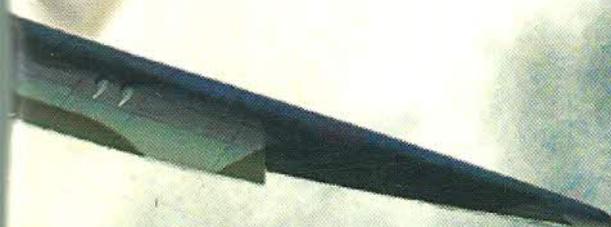


COLLECTION

SERIES



ACES



SIERRA®



Courtesy National Air & Space Museum, Smithsonian Institution

American William Thaw on far left, leader of the Lafayette Escadrille.

CONTENTS

FOREWORD	5
GETTING STARTED	
About This Manual	10
System Requirements	11
Installation	11
Starting <i>Aces</i> CD Programs	13
Changing Preferences	14
USING THE ON-LINE MANUALS	
<i>Aces of the Deep</i>	18
<i>Aviation Pioneers</i>	75
<i>Quick Reference Cards</i>	80-89
Customer Service	
Troubleshooting	90
Technical Support	93
Customer Service	100



Courtesy Ray Rimell, Albaros Productions Ltd.

The Nieuport 28. Fragile and not very maneuverable, the 28 was soon replaced by the SPAD 13.

FOREWORD

Welcome to *Aces: The Complete Collector's Edition* CD, including all of the award-winning historical flight simulators from Dynamix. These simulations ("sims") redefined "State of the Art" for the industry, and still are unsurpassed for their balance of historical authenticity, comprehensiveness, and playability. They not only depict pivotal eras in aviation history, but contributed tremendously to the success of Dynamix and our parent company, Sierra On-Line.

In 1989, Damon Slye, along with a small team of artists and programmers, set out to create the company's first flight simulator. By the spring of 1990, their effort paid off with the shipping of *A-10 Tank Killer*. It featured campaigns based on a fictional European WWII, external camera views, and introduced our now-famous 3Space simulation environment to PC flight sims. After the Gulf War, the simulation was updated to include Desert Storm scenarios and improved graphics, and was re-released as *A-10 1.5* (included here). *A-10* is one of the few products Dynamix



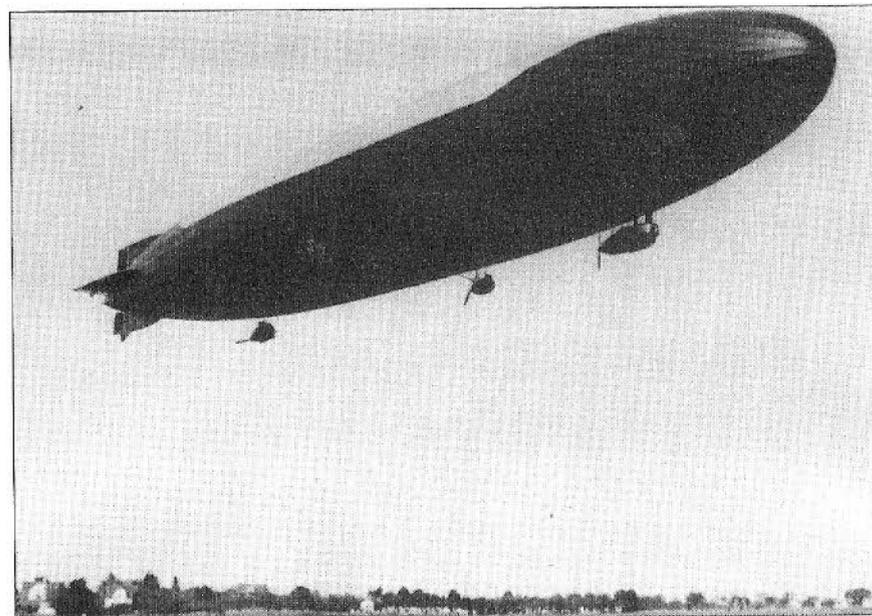
Courtesy National Air & Space Museum, Smithsonian Institution

One of the few Fokker D.VIII's delivered before the end of WWI. The D.VIII's excellent flight characteristics were offset by weak construction. Several pilots were killed when the parasol wing snapped in flight.

produced as an independent company. A few months later, Sierra On-Line purchased Dynamix, providing us with the means to build bigger and better products.

1990 proved to be a busy year. Damon and the team began what turned out to be the best World War I flight simulation ever: *Red Baron*. Shipped on Christmas Eve, *Red Baron* allowed players to fly careers for either side, challenge historical aces, and replay the best moments with a VCR-style mission recorder. But most importantly, it provided the tension and exhilaration of dogfighting within an authentic and immensely playable simulation. *Red Baron* was an instant success, and in just months blew all other WWI sims off the shelves. Even today, *Red Baron* is a steady seller, and most flight sim aficionados still consider it the best WWI sim ever shipped. The successful *Red Baron Mission Builder* (included here), an expansion pack that shipped a year and a half later, allowed the player to "program" their own missions, and added several new aces, planes, and features.

In the spring of 1991, after recovering from the final push for *Red Baron*, we set to work on our follow-up sim: *Aces of*



Courtesy National Air & Space Museum, Smithsonian Institution

A late model Zeppelin. The panic that Zeppelin raids caused in British political arenas led to the birth of the first independent air force, the RAF.

the Pacific. For the next year, we updated our technology, improved our graphics, and spent immense effort researching the Pacific air war. It paid off—to date, no other flight sim lets you experience the full scope of the conflict and fly for either side from Pearl Harbor and Clark Field all the way through to V-J day. Released in May, 1992, *Pacific* did not have an easy birth—the programmers basically lived in their offices for the last three months, with some work-weeks topping 100 hours. But seeing *Aces of the Pacific* on the shelves and the rave reviews that summer made the long hours more than worth it. We had another winner.

Even as *Pacific* was finishing up, we began work on the add-on disk. *WWII:1946* proposed an entirely plausible "what if" rewrite of the Pacific war's end. What if the A-bombs weren't dropped, and the Soviet Union remained neutral—the U.S. would have been forced to invade Japan's main islands to end the war. Based on actual U.S. invasion plans, *WWII:1946* lets you fly for or against the invasion campaigns in the awesome new aircraft that appeared just after the war's end.



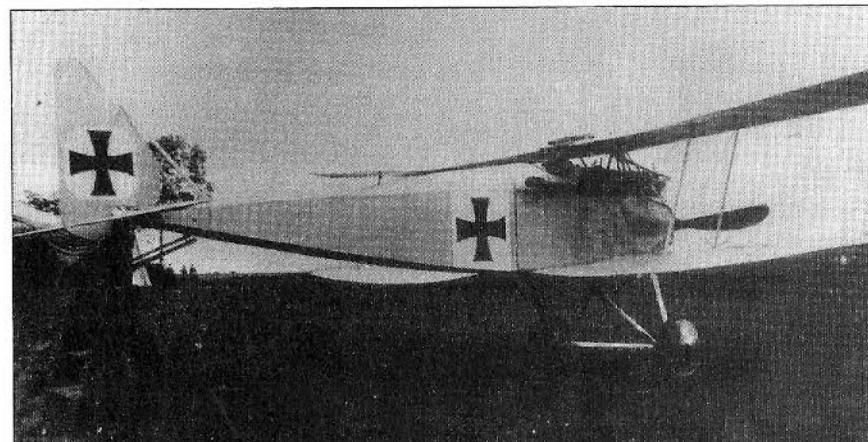
Courtesy National Air & Space Museum, Smithsonian Institution

A Nieuport Scout with rocket rails on its struts. The rockets were fired electronically from the cockpit against targets such as observation balloons.

For our next full simulation, we turned to the European Theater during WWII. Rather than focusing on just the strategic bombing campaign, we decided that *Aces Over Europe* would also explore the tactical air campaign. The unrelenting ground attack and fighter sweep missions before and after D-Day initiated the most desperate battles of the air war, as the Allies tried to establish air superiority and cut off German supply lines and troop movement against grim German resistance. Started in November, 1992, programming continued feverishly (despite a move to a new building) until the release one year later. To the now-classic Dynamix format, *AOE* added enhanced graphics, and even more detailed (and challenging) flight models. Again, the product released to industry acclaim.

Released for the first time on this CD is *Aviation Pioneers*, a new multi-media look at the people and planes that contributed to the advance of aviation between 1903 and 1939. You will also find each of the simulation manuals on the CD, presented on-line.

In a market where games are obsolete in a matter of months, Damon Slye's designs have endured for years, enlightening players as well as entertaining them. We



Courtesy Ray Rimell, Albatros Productions Ltd.

Halberstadt D.II, a sturdy durable German fighter that could handle the best Allied planes of early 1916.

hope our players get a truer sense of the part combat fighter pilots played in World War I and II, and in the process, gain an appreciation for what was accomplished in the skies above Europe and the Pacific.

Looking forward, Dynamix is at work on a new generation of flight simulators. Not only has the Great War Planes series spawned the inevitable competitors, but technology has opened vast new possibilities in computer graphics, modeling, and interactivity that require us to redesign from the ground up. With *Red Baron II* and beyond, we intend to leap ahead of the industry standards all over again. Until then, we hope you enjoy these truly classic simulators for endless hours as you relive the thrilling achievements of the Aces.

— John Bruning, Jr.
Dynamix Historian



Courtesy Robert L. Lawson Photography

Planes being readied for takeoff from a Japanese carrier.

GETTING STARTED

About This Manual

This manual contains the essential Installation procedures and commands for the *Aces Collector's Edition (Aces)* CD. It also shows how to use the Windows on-line manuals, as well as *Aviation Pioneers*.

For a summary of flight commands, refer to the quick reference card for each simulation.

To see detailed historical overviews, and introductions to weapons, tactics, and flight, refer to the Windows on-line documentation for each simulation.

For Technical Help and Troubleshooting, see the back of this manual.

To see any changes made to the *Aces* CD after the manual is printed, click on the READ ME icon in each simulation's Windows program group.

System Requirements

To run the *Aces* CDs, you must have a 486SX or better with the following minimum requirements:

- Four megabytes (MB) of RAM
- MS-DOS® version 5.0 or higher
- Microsoft Windows™ 3.1 or higher (for on-line manuals and *Aviation Pioneers*)
- Microsoft Windows 95™ for A-10 2: Silent Thunder
- Expanded memory manager: EMM386, QEMM386™ or equivalent
- Available hard disk space (for FULL installation):
 - 8 MB *Aces Over Europe*
 - 6 MB *Aces of the Pacific & WWII:1946*
 - 5 MB *Red Baron & Red Baron Mission Builder*
 - 3 MB *A-10 Tank Killer 1.5*
 - 10 MB *Aces of the Deep*
 - 35 MB *A-10 Tank Killer 2: Silent Thunder*
 - 5 MB *Aviation Pioneers*
- VGA graphics
- MPC-1 or better CD-ROM drive

Please note that *Aces of the Pacific* and *WWII:1946* are installed as one integrated simulation, as are *Red Baron* and *Red Baron Mission Builder*.

Installation

Before You Start...

As a collection spanning several years, the *Aces* CDs contain both DOS and Windows programs. The flight simulations (with the exception of A-10 2) are all designed to be played from DOS, but *may* also run from Windows. *Aviation Pioneers* and the on-line manuals accompanying each simulation *must* be installed and run from Windows. **For best results, install the programs from Windows, but run the flight simulations from DOS** (with the exception of A-10 2).

Minimum/Full Installation

For some simulations, you may choose a Minimum or Full installation. The Minimum option puts just a few files on your hard disk (about 120 KB), and leaves the rest on the CD. The Full option puts all the simulation files on your hard disk (as noted in System Requirements). Fully installed simulations will run faster, and can be run without using the CD. However, you must *always* insert the CD to open *Aviation Pioneers* or the on-line manuals.



Courtesy National Air & Space Museum, Smithsonian Institution

Hellcats, Dauntlesses, Avengers and night-fighter Corsairs of the U.S.S. Enterprise, early 1944.

Installing from Windows 3.X:

1. Start up (boot) your PC. Insert one of the *Aces* CDs in your CD-ROM drive.
2. Start Windows. From the Program Manager, select RUN from the FILE menu. Use the BROWSE button to change to your CD drive (usually D:). Click on the file SETUP.EXE, and then click the OK button in the RUN window.
3. Click INSTALL, and then select the program you want to install.
4. Follow the on-screen instructions to set up the game for your PC's specific requirements.
5. To install additional programs, click INSTALL again and repeat for each program you wish to install at this time.

Each simulation will be installed in its own Windows program group, along with its on-line manual and other files.

Installing from Windows 95:

1. Start up (boot) your PC. Insert one of the *Aces* CDs in your CD-ROM drive.
2. Double-click on the My Computer icon. Double-click on the CD-ROM icon. Double-click on the file setup.
3. Follow the on-screen instructions to set up the game for your PC's specific requirements.

Note: To make sure the games are installed correctly, do not try to install the *Aces* simulations to your hard drive with "copy" commands.

Starting Aces CD Programs

Starting Flight Simulations

For best performance, start the appropriate simulations (AOE, AOP, RB, A-10) from DOS. If you used the

Minimum installation option, you must first insert the appropriate *Aces* CD.

To play go to this subdirectory* and Type

<i>Aces Over Europe</i>	SIERRA\AOE	aoecd [Enter]
<i>Aces of the Pacific</i>	SIERRA\AOTP	aotpcd [Enter]
<i>Red Baron</i>	SIERRA\REDBARON	baroncd [Enter]
<i>A10</i>	SIERRA\A10	a10cd [Enter]

* For example, type c: [Enter] to change to your hard drive, if you haven't already. Then for *A10*, you would type cd \sierra\A10 [Enter]. This puts you in the correct directory to start the game. If you installed to a different drive or directory, substitute as needed.

If you get "Insufficient Memory" message starting a simulation in DOS, try creating a "Boot Disk" for it. See page 96.

Depending on your PC's configuration, you may also be able to run one or more of the simulations from Windows.

Simply open the Sierra program group and double-click the simulation's icon. If you experience problems, however, start the appropriate simulation from DOS. Please note that the Windows "task switching" feature is disabled—you'll still need to exit the simulation to open another Windows program (such as the on-line manuals).

Note: You must install each simulation from Windows to use its on-line manual.

Starting Aviation Pioneers and On-line Manuals

To open an on-line manual for any simulation, or *Aviation Pioneers*, first be sure the appropriate *Aces* CD is loaded in your CD drive. Start Windows.

To open an on-line manual, first go to the program group for the appropriate simulation. Then double-click on the simulation's Manual icon, or select it and press [Enter].

To open *Aviation Pioneers* after you have installed it, go to the *Aviation Pioneers* program group. Then double-click on the *Aviation Pioneers* icon, or select it and press [Enter].

Changing Preferences

You may change your game configuration (sound card, video, etc.) from DOS or from Windows. In DOS, change to the appropriate game's directory on your hard disk and type **install** [Enter]. In Windows, open the simulation's program group and click on the Setup icon.



Courtesy National Air & Space Museum, Smithsonian Institution

Pilots and deckcrew pose in front of the Navy's standard fighter for the last two years of the war, the F6F Hellcat.

USING THE WINDOWS™ ON-LINE MANUALS

The *Aces Collector's Edition* CD includes complete on-line game manuals for each simulation that you can explore at your leisure. Follow the directions to install the simulation(s) from Windows. For each simulation you install, you will see an accompanying icon for its manual.

To open one of these manuals, first make sure the *Aces* CD is in your CD-ROM drive. Then, simply go to the program group for the appropriate simulation and double-click on the manual icon: for example, to see the manual for *Red Baron*, double-click on the RED BARON MANUAL icon.

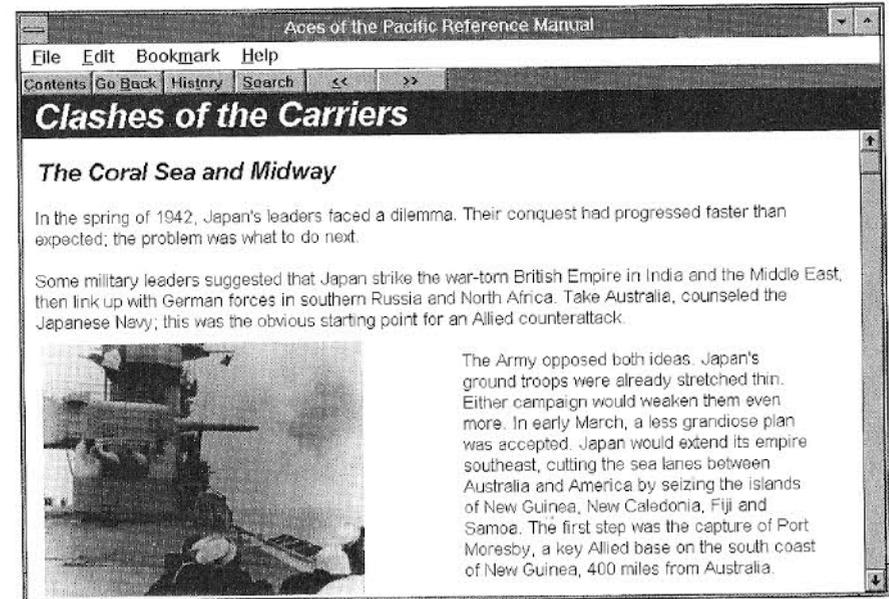
Note: While the manuals must be run in Windows, you may find that the simulations themselves run better when started in DOS.

Navigating through the Manuals

Each manual opens with a Contents screen outlining the major sections and articles. You can return to the Contents screen from anywhere in the manual by clicking the CONTENTS button at the upper left.

Any topic or word you see highlighted in green is a hypertext "jump" to a related article: simply click on the highlighted text to go to the related topic. To return along the path of your jumps, click the GO BACK button.

To see a list of all the topics you have been to, click on HISTORY. From this list, you can go directly to any previous topic by double-clicking it, or by highlighting it and clicking GO TO.



To "scroll" through long articles, click on the scroll bar or the Up/Down arrows at right, or use your [PG UP] and [PG DN] keys.

Click on SEARCH to look for a specific word or phrase in the text. In the SEARCH field, type the word you want to find, and then click OK or press [ENTER]. You get a list of any topics containing that word. Click on the HINTS and OPTIONS buttons to see other Search functions.

To move back and forth through articles in sequence, click on the Browse arrow buttons, [<<] and [>>].

You can place your own notes in the manual with the ANNOTATE feature, or save your place anywhere in the manual by defining a BOOKMARK there.

To close the manual at any time, open the FILE menu and select EXIT.

Note: Windows must be set up for 256-color mode to display the high-resolution color pictures correctly.

ACES OF THE DEEP

GAME PLAY TUTORIAL

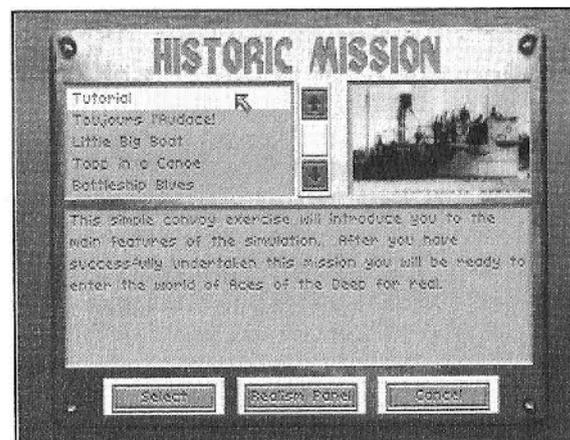
The following "Tutorial" section introduces *Aces of the Deep* through a step-by-step orientation tour as you set up and initiate a convoy attack. This is a good way to learn U-boat command procedures. (Actually, you can learn by playing any mission type, but use the easier Encounter Options and Realism settings until you know your way around.)

For a menu-by-menu description of each mission selection function, see the "Ashore" section beginning on page 132. U-boat controls are described in "At Sea," starting on page 151.

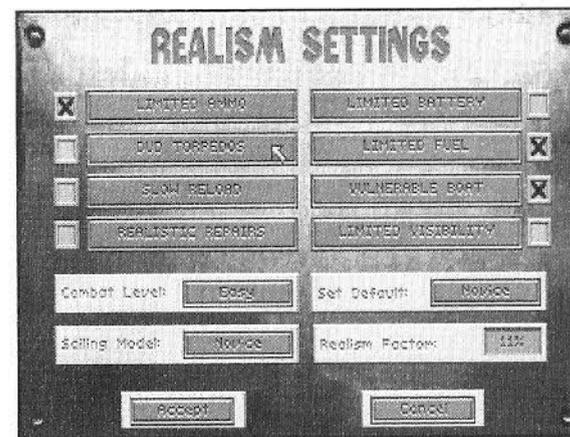
- A. First, install *Aces of the Deep* (AOD) as described on page 8.
- B. After AOD is installed, go to the directory in which you installed AOD, type `aod` and press [ENTER] to start the game. (To skip the title sequence, press [SPACE].) After the title sequence, you will see the Main Menu.
- C. To start the tutorial, select SINGLE MISSION, and then HISTORIC MISSION.

Mission Setup

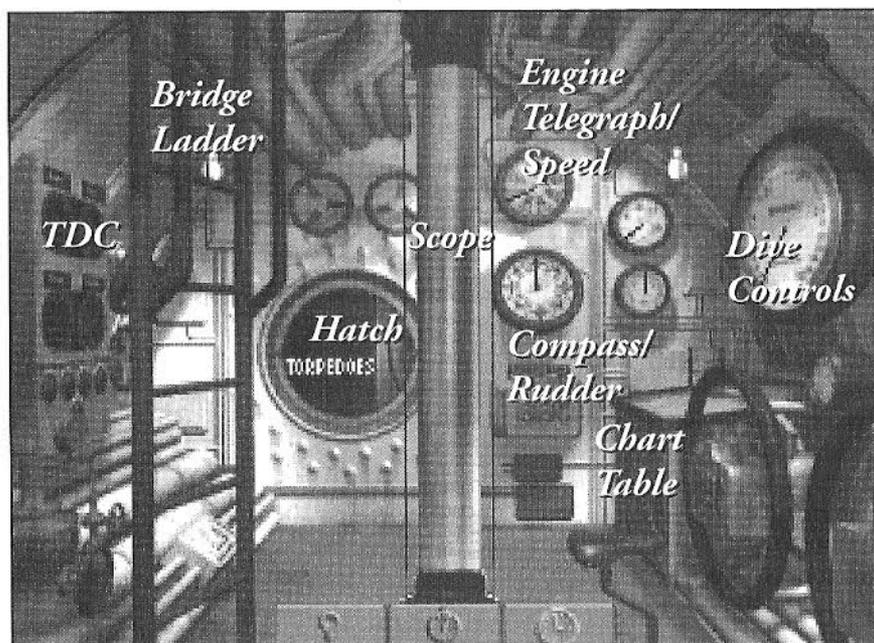
In the Historic Mission screen, click on the first mission, TUTORIAL, to highlight it and read its descriptive text. As with the Historical and Career missions, the TUTORIAL mission conditions (number of ships, aircraft, weather, etc.) are pre-defined. It is dusk, March 1, 1941, and you are commanding a Type VIIC U-boat. The Allies have yet to deploy effective radar or anti-submarine tactics, so you may conduct a night surface attack. Your boat is operating alone, and the sea is calm. (In the Convoy and Warship Encounters, you may define these and other mission conditions variables yourself.)



To adjust the realism settings, click on the REALISM button. The more options you select (X), the more realistic and difficult the mission becomes. For now, use the default settings—press DONE to return to the Historic Mission screen.



With the TUTORIAL mission highlighted, click the SELECT button. You will then see the Mission Briefing screen, which recaps your mission selection. To continue, click ACCEPT. After a few seconds, you will see the Control Room of your U-boat.



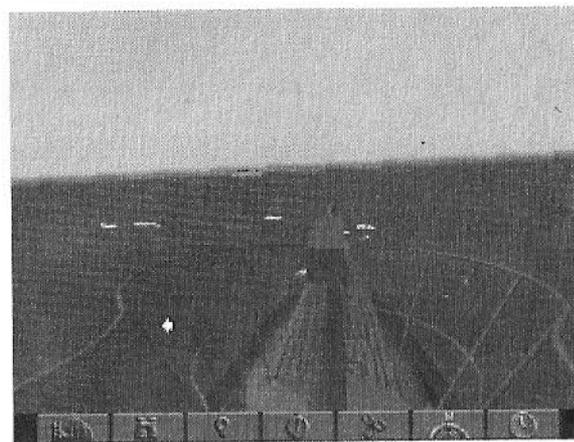
Voice Tube Stopwatch Clock

Control Room

For a quick tour, move your mouse cursor through the Control Room from the left. (You can control the entire mission with the mouse, and many controls also have key commands.) You'll see labels appear as you point to the TDC (Torpedo Data Computer), the Bridge ladder, and the hatch leading to the Torpedo Room, Radio, Damage Report and Captain's Log. In the middle is the Scope, and to the right of that are the Engine Telegraph/Speed controls (top) and Compass/Rudder controls (bottom). The large Dive Controls are on the right bulkhead. Just below (on Type VII boats) is the Chart table. The command buttons along the bottom provide other controls: the Voice Tube (to give crew commands), Stopwatch (for timing torpedo runs) and the Clock (for time compression). Different buttons appear in other screens.

Bridge

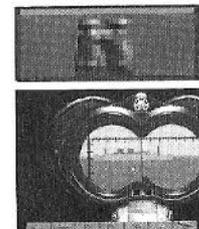
By now, you should have received a contact report from your Watch officer. Click on the ladder to go to the Bridge and investigate. From the Bridge, click the mouse to scan the horizon for ships: click near the middle of the screen (small cursor) to scan slowly, and click near the edge (big cursor) to scan quickly. If you see ships, click on the Binoculars button, and scan with the binoculars to locate the ships again—you'll see their relative compass bearing below the eyepiece. Click on the Engine button at the bottom—the engine room telegraph—and click AHEAD FULL. Then click on the Compass button and drag the compass indicator to the target bearing. Your boat will begin to head directly for the target. Right-click to close the Compass and Telegraph display. Click the far-left "ladder" button to return to the Bridge view.



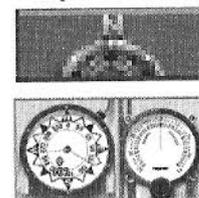
Clock

From the Bridge, click on the Clock button. The clock shows the time (in 24-hour notation) and lets you speed time up while getting into position, and slow it down again when ready to attack. Click the right-hand scroll bar arrows or press the [+] key until the display shows 32X or so. (Each click greatly increases the speed: be careful with time compression, or you may zip right past the convoy.) Press [ENTER] to return to 1X time.

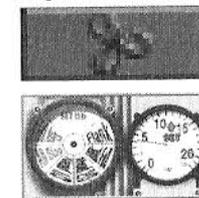
Binoculars



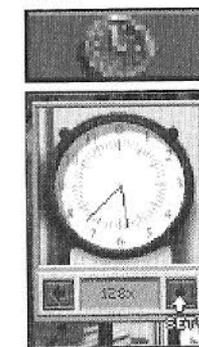
Compass

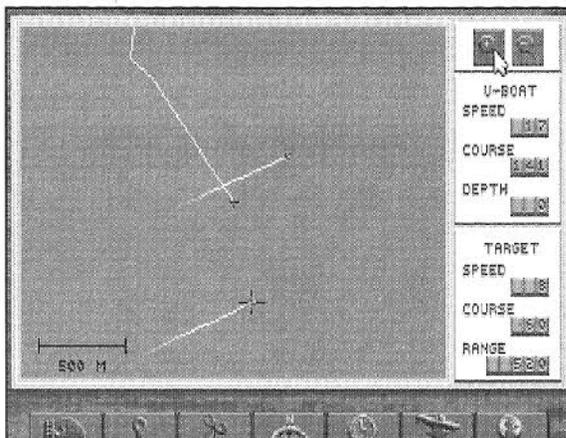


Engine (Propeller)



Clock

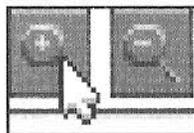




Tactical Chart

To see a “map” view of the convoy as you approach, press [F5] to open the tactical chart. This display helps you see the convoy’s zigzags and true course, range, and can also show where the largest targets and escort ships are if you zoom in close. Click the magnifying glass buttons to zoom in and out. By clicking the Compass button here, you can adjust your intercept course more accurately. Now click the Globe button on the far right. This gives you the strategic chart you’ll use to navigate to and from base in Career missions. For now, click the Globe button again to return to the tactical chart.

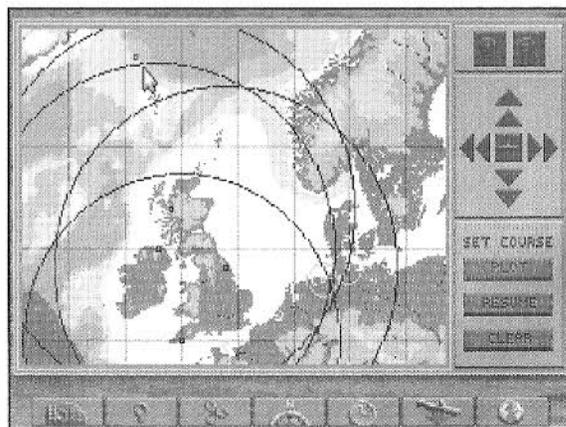
Magnifying Glass buttons



Compass



Globe



Setting Up the Attack

While stalking the convoy, you can switch directly between the Chart [F5] and the Binoculars [F3] to monitor target course and range. You want to pull even with or ahead of the convoy at a safe distance (5,000 meters or so), and then angle in from the side to firing range (under 1,000 meters). Remember, the Binoculars bearing display is relative—a reading of 90 degrees means you are looking 90 degrees starboard of the bow, regardless of your boat’s compass heading. When you start getting close, click on the Clock button to slow down time again to 1X (normal). Keep an eye on the escort—if you see an escort suddenly head for you, your surprise attack is blown. At any time, you can press [CTRL]+[P] to Pause the game if you need a moment to decide your next move.

Clock



Aiming with the TDC

When your U-boat is to the side of the convoy, go to the bridge Binoculars view [F3]. Locate a ship in the vertical crosshair and press [SPACEBAR]. This selects the target, distinguishing it with a red crosshair and entering its data into the TDC. Click the Torpedo button to see this TDC data, which includes target bearing (relative to your boat’s heading), speed, range, and actual compass heading (if within range). The crosshairs grow brighter the longer the target is selected, showing the increasing accuracy of the firing data. To see your Watch Officer’s estimate of the selected target vessel’s type and gross tonnage, press [I].

Before firing, you want the U-boat pointed within 20 degrees of the target for best accuracy. (To turn toward a selected target you’re currently viewing, press [H]—this turns your heading to the current view. To change the view to the current heading, press [V].) You want to be between 300-1,000 meters from the target, and perpendicular to it—check your firing angle using the chart.

Torpedo



Fire

When the firing conditions are acceptable, click the red fire buttons I and II on the TDC. You can switch to the chart to see the torpedoes' course, and switch back to the binoculars in time to watch them hit (if your aim was true) or watch them hit using "Victim View" [F10]. Two torpedo hits will sink all but the largest ships.

Evade

Once your first "eel" hits, the escorts will be alerted and will try to attack you quickly. In many night attacks early in the war, you can evade slower escorts on the surface by using your speed and the chart to outmaneuver them. You may be able to line up and sink other targets while the escorts pound the wrong area to a froth. If the escorts are cornering or overtaking you, you should dive before their deck guns hit your boat and prevent you from diving (track them in the TDC to check range).

Diving

If forced to dive, return to the control room [F1]. Click the Voice Tube button, select CHIEF ENGINEER, and order CRASH DIVE. You may also click the Dive Controls and drag the depth indicator to the desired depth. Below 150 meters, depth charges will have little chance of hitting you (this changes later in the war). Once you reach your depth, go to your Engine ("propeller" button) and reduce speed to Ahead 1/3—this will reduce your engine noise so the escort hydrophones cannot detect you as readily, but gives you enough headway to turn. You can also use the noise from the merchant ships to cover your sounds.

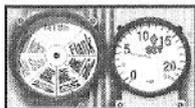
Go to the chart. You should see the escort charging to the point where it saw you last. If you make it safely below, the escort will start "pinging" with ASDIC (sonar) pulses as it tries to box you in with its search patterns. Keep turning your boat end-on to these pulses to reduce your echo. You can also use the noise of the merchant ships to cover your sounds. Using depth and the chart, and constantly angling away from the escort, you should be able to slip away fairly soon.



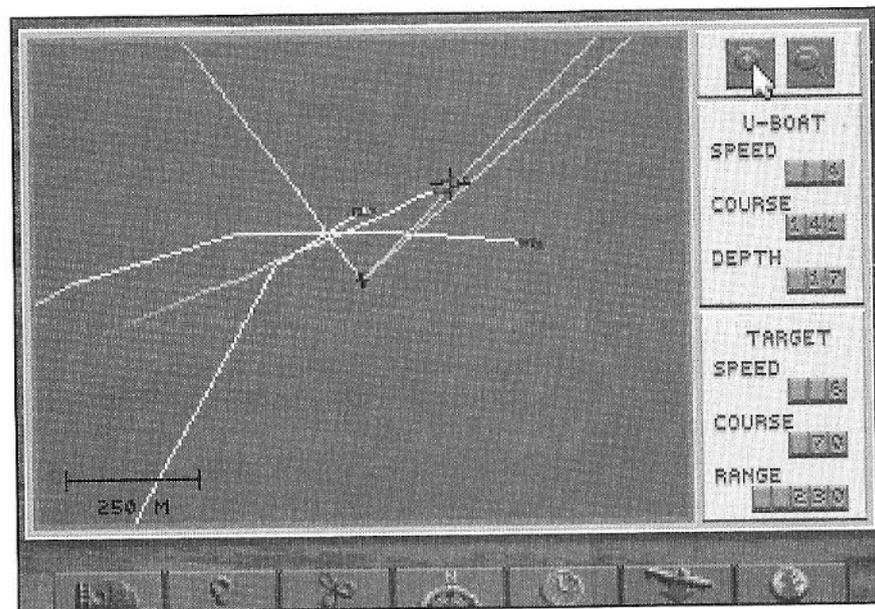
Voice Tube



Engine (Propeller)



You may then surface and make another approach on the convoy, or retire from the engagement.



Ending the Mission

Any Single Mission where you sink a ship and get away is a good one. The mission will continue as long as you maintain contact with the enemy—if you lose contact with the enemy ships or sink them all, the mission ends. (Naturally, the enemy can end your mission by sinking or capturing *you*.)

In Career mode, you end missions (war patrols) by navigating back to a friendly base and radioing for an escort into the harbor.

You can also end missions in progress by selecting ABORT MISSION from the Simulation Options menu ([CTRL]+ [O]), or by pressing [CTRL]+[D]. If you abort the mission while engaged in combat, however, your mission score will be zero.

ASHORE

Main Menu Overview

This section introduces the AOD mission setup options, starting with the main menu. Each subscreen is described in detail on the following pages. For a guided tour of the U-boat, try the preceding "Tutorial" section. For a U-boat control reference, see "At Sea" starting on page 151.



Single Mission

Launch one U-boat combat mission at a time, selecting all aspects of the mission conditions and setup. Single missions get you into specific convoy, warship, or historic actions quickly, and are scored independently. (See page 134 for more.)

Career Menu

Undertake an entire career as a German U-boat commander, starting with assignment to your first command. Your career will be composed of patrols, each a series of actions that correspond to the actual circumstances, technology, and events in the Battle of the Atlantic. Career scores are cumulative, accounting for performance on all missions. (See page 143 for more.)



Wolfgang Lüth, second highest scoring U-boat ace, and his new bride.

Hall Of Fame

Review your highest-scoring single missions and careers. You may also view profiles of the most famous historic U-boat aces. (See page 149 for more.)

Vehicle Preview

View the ships and planes you will encounter on patrol, and learn to recognize them from any direction or distance. The more familiar you are with appearance and capabilities of the enemy units, the better your chances of surviving your encounters with them. (See page 150 for more.)

Exit To DOS

Leave *Aces of the Deep* and return to DOS.

SINGLE MISSION

The options on this menu let you undertake one combat mission at a time, and give you control of each mission's setup. If you select CONVOY ENCOUNTER or WARSHIP ENCOUNTER, you may select the number of ships, time of day, weather, as well as the difficulty and realism levels you will encounter. In a HISTORIC MISSION (including the TUTORIAL), the mission options are predetermined, but you may still adjust the realism settings.



To begin the selected mission using the current Encounter Options (page 136) and Realism (page 139) settings, click SELECT. This takes you to the mission briefing, which will describe your objectives for this mission. You may CANCEL from the Mission Briefing and return to your mission menu. If you ACCEPT the mission, you will go to sea in your U-boat.

Single missions begin with your boat near the enemy, and end when you lose contact with the enemy or are killed or captured. When your mission ends, you will see the Patrol Summary screen, which shows the number of ships you sank, their cumulative gross tonnage, and your mission score based on your achievements, mission difficulty, and realism factor. Unlike Career missions, you cannot save a Single Mission in progress.

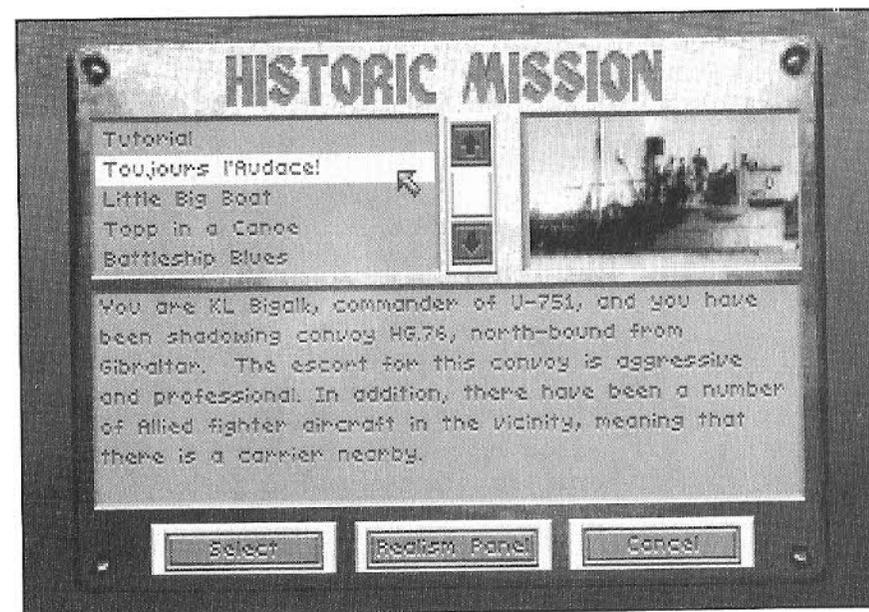
Note: If you abort a mission ([CTRL]+[D]) while engaged in combat, your mission score will be zero.

MISSION TYPES

This section describe the types of missions you will encounter in AOD Single Missions or Careers.

Historic Mission

The screen lets you experience an actual historical U-boat action from the Battle of the Atlantic. The mission conditions and forces will be those of the actual battle, but now you will be commanding the U-boat. Also included is the Tutorial mission, which guides you step by step through an example convoy action. (The "Tutorial" section starts on page 124.)



The menu at the upper left lists the available missions. Click on the mission name to highlight it and see its corresponding description below. To see other missions on the list, click on the scroll bar arrows.

Convoy Encounter

On this mission type, you will intercept a convoy and attempt an attack.

Warship Encounter

On this mission type, you will intercept and attempt to attack a group of Allied warships. Warships are much faster than convoys—often faster than your U-boat—and are always heavily guarded and risky to attack.

Encounter Options

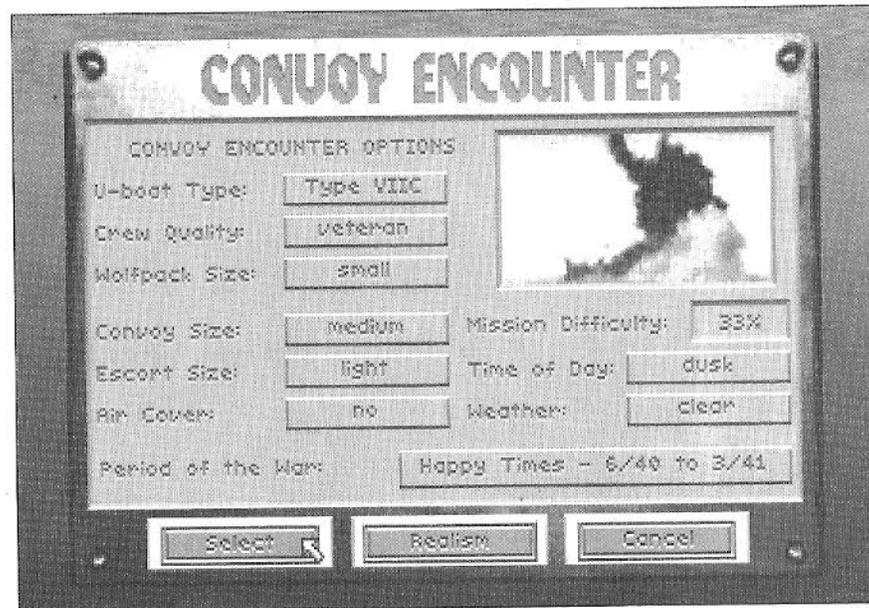
When you select a Single Mission Convoy or Warship Encounter, you may change the encounter options that, together with the Realism Settings you select, will affect the difficulty and scoring potential of your mission. The same options are available in both Encounter types, except WARSHIP TYPE replaces CONVOY SIZE in the Warship Encounter screen.

To change a default encounter option, first click that option button to open its menu. Double-click the option you want, or highlight the option and then click the SELECT button. Long option menus have scroll bars: click the arrows to see other options. The CANCEL button takes you back to the previous menu without changing the setting.

U-boat Type. Choose which type of U-boat you will command for this encounter. Selecting a Type II U-boat will increase the difficulty of this encounter, since these smaller U-boats were not as fast as the larger Type VII and Type IX boats, and carried fewer torpedoes. See the “U-boats” section (page 78) for details on each type and variant.

Crew Quality. Choose the quality of the crew of your U-boat. Crews may be GREEN, VETERAN, or ELITE. Skilled crews are able to crash dive more quickly, reload torpedoes more rapidly, etc. The more highly skilled your crew, the less difficult your mission will be.

Wolfpack Size. Select the size of the U-boat pack attacking the enemy ships: NONE, SMALL (2-3), MEDIUM (4-6), or



LARGE (6 or more). The more U-boats there are to gather at the convoy, the less likely it is that the escorts will be able to concentrate on you.

Convoy Size. (Convoy Encounter only). Choose the size of the convoy you wish to attack: SMALL (5-15), MEDIUM (20-35), or LARGE (40-60). Larger convoys decrease the mission difficulty since they provide more targets and their escort perimeter is easier to penetrate.

Warship Type. (Warship Encounter only). Select what kind of warship group to attack: a CRUISER, BATTLESHIP, or CARRIER group. This option defines the main target in the warship group, the one you should try to sink. All warship attacks are difficult. There is no greater glory for a U-boat skipper than to sink one of the enemy's priceless capital ships. However, warship tonnage is not added to your tonnage list, since your primary mission is to sink merchant shipping.

Note: You must radio in convoy contacts to gather a wolfpack.

Escort Size. Select the number of warships escorting the target: NONE, LIGHT (2-3), MEDIUM (4-6), or HEAVY (7+) escorts. The more escorts there are, the easier it will be for them to detect and attack you successfully. Increasing the escorts greatly increases the mission difficulty: it is very difficult for even the most skilled skipper to evade a coordinated attack by several escorts.

Air Cover. Choose whether or not your target will have air cover: YES or NO. Anti-submarine aircraft will make operations much more difficult for your U-boat, subjecting you to the constant threat of sudden attack.

Mission Difficulty. This displays the relative difficulty of the mission encounter options you have currently selected, indicated as a percentage. The tonnage you sink on a given mission is weighed against the Mission Difficulty, Realism Factor, and other variables to determine your mission score.

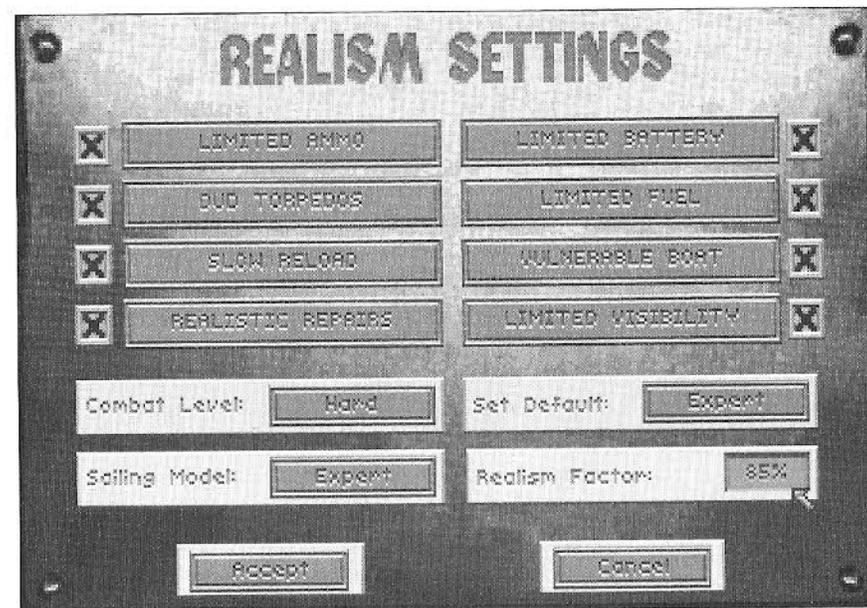
Time of Day. Select what time of day the mission simulation begins: DAWN, DAY, DUSK, or NIGHT. Early in the war, U-boats conducting night attacks on the surface are almost invisible. Later, radar makes night approaches much more difficult.

Weather. Select the weather conditions for the mission scenario. You may choose from CLEAR, OVERCAST, CLOUDY, or STORMY. Inclement weather reduces visibility, which usually favors the U-boat (but also conceals approaching aircraft).

Period of the War. Choose the time period in which the encounter will take place. Different periods will present different advantages and challenges to the player (see the "Historic Overview" for details). In general, the later in the war, the more difficult the mission will be. Note: You may select Encounter Options that do not correspond historically to the selected period (i.e., selecting a Type VII C in 1939, before they were available).

REALISM SETTINGS

This screen lets you determine how realistic and difficult your mission conditions will be, and is available for both Single Mission and Career play.



You may set the default realism level at NOVICE, INTERMEDIATE, or EXPERT to match your level of experience. You may also turn the specific realism settings on or off, and set general difficulty settings for COMBAT and SAILING independently. Once you have defined your Realism settings, press ACCEPT to continue with your mission setup using those settings, or press CANCEL to return with no change in the default settings.

You may switch the following eight specific realism settings on ("X") or off (blank) by clicking on them. Each box selected increases the Realism Factor of your mission, and thus also increases your potential score in proportion to its relative difficulty. Once you begin a mission or war patrol, you cannot change the realism settings until your return.

Limited Ammo—If selected, this setting limits your submarine to the actual number of torpedoes your U-boat type could carry historically: 14 for a Type VIIC, for example. Running out of torpedoes effectively ends your offensive mission, and indicates a good time to return to base. Turning this setting off gives you an unlimited number of torpedoes.

Dud Torpedoes—If selected, this setting subjects you to an historically accurate percentage of “dud” torpedoes: some of your torpedoes will go too deep, explode early, or fail to explode even if they hit a target. The percentage of duds on a given mission depends on the period of the war in which the mission takes place. Turning this selection off means your torpedoes always work if you aim and fire them correctly.

Slow Reload—If selected, this setting imposes realistic torpedo reload times on your crew. If you switch it off, you can reload torpedoes much more rapidly than was actually possible. On either setting, better crews reload the tubes faster.

Realistic Repairs—If selected, this setting makes damage repairs at sea much more realistic. Some repairs may put you out of action for days—others may force you to surface, or return to base in Career missions. If you switch this option off, you will be able to repair any damage to your U-boat relatively quickly.

Limited Battery—If selected, this setting models the U-boat's consumption of battery power realistically. (If you run out of battery power when submerged, you may sink!) If you switch this option off, you will not run out of battery power.

Limited Fuel—If selected, this setting models the U-boat's consumption of diesel fuel realistically. You will have to monitor fuel carefully, or you might run out in mid-ocean. If you switch this option off, your sub will not run out of diesel fuel.



Courtesy National Archives

Depth charge exploding behind an American escort vessel.

Vulnerable Boat—If selected, this setting makes your U-boat vulnerable to damage from enemy weapons. If this option is not selected, your boat cannot be damaged by enemy depth charges, torpedoes, hedgehogs, or guns.

Limited Visibility—If selected, this setting limits your [F5] tactical chart to show only those ships currently visible from the bridge as indicated by the red ring. At more difficult combat settings, the chart will not show ships beyond the visible horizon, and won't show any ships if you submerge below periscope depth. If you switch this option off, all vessels in your area will be visible on the tactical display.

Combat Level—This setting determines your general advantage, if any, in offensive and defensive action. For example, it affects visibility, the accuracy of your torpedo targeting computer and of your deck gun and AA fire, as well as the damage caused by your weapons' hits.

It also determines how easy you are to spot on radar, how much damage your boat suffers from an enemy hit, and how much information is displayed on your tactical chart (including ASDIC pings and torpedo tracks). On the EASY setting, your boat is relatively hard to hit, while you can hit and sink enemies rather easily. On MEDIUM or HARD, your advantage is reduced. On EXPERT, you have no advantage.

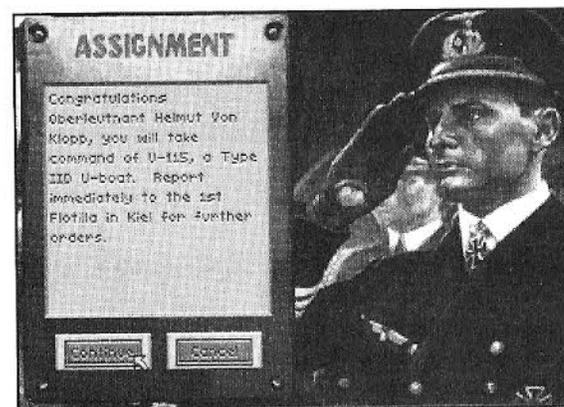
Sailing Model—This setting determines the realism of your U-boat's maneuverability, a critical factor in avoiding enemy attacks. Specifically, it affects how long it takes your boat to crash dive, change depth by a given number of meters, or complete a turn at a given speed. The NOVICE setting makes your boat much more maneuverable than historical boats, while EXPERT models maneuvering rates realistically.

Set Default—This setting lets you define all your Realism Defaults with a single selection. The options are NOVICE, INTERMEDIATE, and ADVANCED. You may still modify the individual default settings as you wish.

Realism Factor—This setting displays the realism level (and scoring potential) of the realism settings you have currently selected. This level is expressed as a percentage, with 100% as a maximum. Your mission score is determined as follows: tonnage (or warship sinkings) are combined with your selected realism factors and mission difficulty (Encounter Options). At 100%, your achievements at sea can be scored at their highest potential value. You will see your score in the Patrol Summary screen that appears at the end of each mission.

CAREER OPTIONS

Select CAREER to begin or resume a career as a U-boat commander in the German Navy, the *Kriegsmarine*.



Careers begin with your assignment to your first command. Your career will then be composed of war patrols. Each patrol is a mission that corresponds to the actual circumstances, technology, and events of that period in the Battle of the Atlantic. You will sail from historical bases and navigate the hazardous course to your patrol area. Following radio orders from BdU (U-boat Headquarters) or engaging targets of opportunity, you may encounter enemy convoys or warship groups and then return to base.

Between patrols, you may relax on well-deserved shore leave. You may also be assigned to a new base or U-boat, be decorated for your victories, or be promoted. If you succeed and survive, your weapons will become better, and your crew more proficient—as will those of the enemy. You may become a legendary skipper, competing for medals and glory and the top ranking in the Hall of Fame. You may end up in an a prison camp. Or you and your crew may end up in a dark iron tomb on the cold floor of the Atlantic. Your luck and skill as a commander will decide.

