

Stiebler4B Add-ons for H.sie's V16B1 Patch for SH3.exe

Silent-running Fix

When your U-boat is silent-running, all powered pumps are switched off in order to reduce the noise. This means that water seeps in at depths below 100m, especially from leaks, and cannot be pumped out and accumulates in the bilges. As a result, the U-boat becomes slowly heavier, and sinks very slowly. This effect is seen only when the U-boat is moving too slowly for the hydroplanes to be effective at maintaining depth.

The slow-sinking effect when silent-running was a feature of the old Aces of the Deep simulation, but never made it to SH3. We have now corrected this oversight. Your U-boat will sink very slowly if the switch for this option is toggled on. It makes it very important to control how you use silent-running now, below depths of 100m. You have to manage the operation of silent-running, on and off. It is even more of a challenge when you are deep and trying to creep away from an attacking escort. In fact, you need some skill to know when to use silent-running and when to turn it off.

Our fix is a kludge. What happens is this:

When you go to silent-running, the player-set depth-gauge is decreased very slightly (depending on underwater speed). This process drags the U-boat very slowly downwards. There are issues with this coding approach, but we have been unable to find anything better. A particular advantage is that U-boat buoyancy is irrelevant, so that the downwards buoyancy of NYGM, the upwards buoyancy of GWX, and the neutral buoyancy of stock SH3 has no effect on how well this mod works!

- a) When you reach the depth you required, you must click in the depth gauge again at that depth, to prevent further sinking - assuming that you have sufficient speed not to sink anyway. Levelling off your depth with key 'A' has little effect, it does not affect the depth gauge.
- b) When you blow tanks, the depth gauge will not be updated, and you must click on a higher depth on the gauge.

Managing your depth when very deep and being hunted by escorts has now become a real challenge!

Known Defects:

1. Blowing tanks in an emergency will not set the depth gauge to surface level, which you must do yourself.
2. If you once ordered e.g. 200m depth in silent running, you cannot order a lower depth e.g. 190m.

Thus, this mod is provisional and will be replaced or enhanced when a better solution is found. If you do not want to use it, you must deactivate it using the Options Selector.

Surrender/Abandon Option

The option of 'surrender' of the U-boat when conditions are sufficiently severe. This was a feature of the old Aces of the Deep, which gave a small chance of being rescued by U-boat and returned to active service. SH3 lacks this feature, and other players in the past have requested the option as a mod. Currently, whenever the U-boat is sunk in SH3, all the crew are killed, and players who play 'Dead-Is-Dead' might as well remain submerged and take their chances when a real crew would certainly surface in order to try to save their lives. So it is desirable to introduce this feature, partly to encourage the 'Dead-Is-Dead' players to surface in the hope of being 'rescued by another U-boat', and partly to save some or all of the crew.

There are other reasons why you might want to abandon your U-boat; for example, after running out of fuel in mid-Atlantic, or after severe damage by an aircraft which has then flown off. The U-boat might have become unmanoeuvrable!

PROCEDURE:

1. You must signal the intention of abandoning your U-boat. This is done by clicking on the new red 'Abandon U-boat' radio button (made specially for this mod by SquareSteelBar, this button was formerly the unwanted 'Report Contacts' button, NOT to be confused with the 'Send Contact Report' radio button.) Once clicked, this action CANNOT BE UNDONE! (except by saving the game and reloading.) The button can be clicked on the surface or underwater.
2. You then send a radio status message to BdU. This can be done only on the surface, you must rise to the surface if submerged. This radio message has the following effects:
 - a) It announces to BdU that you are abandoning the U-boat (check the message).
 - b) It starts a self-destruction bomb with a timer of just 10 minutes! You will get a dialog box on screen to remind you of what you have just done.
 - c) After you have sent your status message to BdU, you must 'Abandon ship'. In order to mimic this, you go to high speed and press 'Dive', so that the U-boat sinks to destruction.
 - d) After 10 minutes, the bomb will "explode" (there is no visual effect), setting your hull integrity to just 2.0. This hull integrity will not survive even at periscope depth, so there is no problem in self-destruction even in shallow waters.

After the U-boat has sunk, you will get the usual 'Black Screen of Death' (BSD). However, instead of the usual case that all your crew have been killed, only a random number will have been killed, and the remainder rescued.

You will also be told whether you have been rescued by the Allies or by another U-boat. If you have been rescued by U-boat, you may legitimately start a new career, to begin after the date you were sunk at sea, even for the Dead-Is-Dead players. This is completely realistic; there are several real-life examples of U-boat crews being rescued by U-boat and returned to active service in new U-boats. However, if you have been rescued by the Allies, you may not start a new career. Your career is over.

The probability that you will be rescued by U-boat depends directly on your hull integrity at the time you sent your radio status report to BdU. Therefore, as commander, you must make a difficult decision about when to surface a damaged boat under attack, and when to stay deep in an attempt to get away.

If, after sending your 'Abandon U-boat' message, the enemy then sinks you, even on the surface, your crew will NOT be rescued. You will get the usual message "U-boat destroyed." on the 'Black Screen of Death'. This should be taken to mean that your U-boat exploded, or sank suddenly, after being hit by shells or bombs from ships or aircraft. In order to survive, you **must** sink the U-boat yourself! For Dead-Is-Dead players: your career has ended after the "U-boat destroyed." message. No new career is permitted.

LIMITATIONS:

1. A limitation of SH3 is that radio messages will not be acknowledged unless you space them by at least two hours. Thus, if you have recently sent a radio message, your emergency abandon message may not be sent.
2. After you are sunk, I would advise very strongly that you close SH3, then restart it in order to reset some internal variables. You will probably want a pause to think anyway.
3. Alternatively, if you choose to restart from an earlier saved game (because you don't like to be

sunk), send a radio status message as soon as you can, even if you have no hull damage. This will reinstate changed variables.

4. After you have closed the 'Black Screen of Death', you will see another screen 'Career Summary', which shows that all your crew are dead. It would take too much effort and spare bytes in the program code to change this - ignore it.

"Smoke on the Horizon" mod

This mod tries to emulate the excitement of the old 'Aces of the Deep' U-boat simulation (Sierra Online), by an announcement of "Smoke on the Horizon, sir!" when a convoy is located in good weather. A message is also scrolled onto the text console.

How does it work?

1. A "convoy" is defined as two or more ships together in the same group, which are visible from the surfaced U-boat. The ships can be Allied or Neutral (or a mixture of both), but never German or Italian (while Italy was on the German side). A battle-group of warships will also be detected as a convoy.
2. "Good weather" is defined as Fog/Sea-mist/Visibility = none (or clear), or light mist. The mod does not work in medium visibility and 'fog', nor does it function at night-time. How can you see "Smoke on the Horizon" when you cannot see the horizon, and you cannot see dark smoke against a night sky?

Limitations:

The new code uses the same code to detect convoys that the devs provided for the player when you click on "Send Contact Report". Any experienced player will know that the original code to detect convoys was not perfect, and occasionally it was necessary to try several times before you could send a contact report for a convoy, even if it was already mostly in view.

This defect has now been fixed in code, and you will normally receive the "Smoke on the Horizon" call as soon as one of the ships of the convoy is in sight. The code is now a little too sensitive and, owing to what appears to be a bug in the original code, you may occasionally find that single Allied ships may trigger the "Smoke on the Horizon" alert.

CAM-ship mod

Iambecomelife (IABL) created two or more CAM (catapult-merchant) ships for his well known Merchant Ship mod. The earliest release, M36B, is stable, and incorporated with the major super-mods, including NYGM and GWX. More recent releases include IABL's M21B and T14B. The ships must be included within campaign_RND.mis or single-mission files as warships (UnitType=8) if they are to fly off aircraft. Note that the original SH3 did NOT include any CAM ships, and therefore, naturally, the devs made no provision for code for them.

The problem with the warship CAM-ships is that they continue to attack your U-boat when within range, time and time again. In real-life, the CAM-ship carried ONE Hurricane fighter-bomber, which was catapulted off the deck of the ship, and had to be abandoned when it ran out of fuel. Just one suicide mission (for the aircraft, the pilot was rescued when he landed on the sea next to the CAM-ship).

The purpose of this mod is to reduce the number of aircraft flying from a CAM-ship (usually one), after each flight over the U-boat. Thus the CAM-Ship aircraft will not keep attacking the U-boat.

It is necessary to add a new aircraft "CAMHurricane" to the Data\Air folder, and to the Data\Roster\British\Air folder. The CAM-ship should contain "CAMHurricane" for the aircraft in its

cfg file (eg, M36B.cfg). The mod folder “Stiebler4B_Addon_for_V16B1” supplied with this package should be installed with JSGME, see main instructions for the patch.

Installation

As well as creating the patch, and installing the folder “Stiebler4B_Addon_for_V16B1” with JSGME, as in the basic instructions, you must also locate your CAM-ship (M36B or other), open its cfg file, and set the “UnitType” to 8, ie, “UnitType=8” (denotes warship), and change the aircraft in its Airbase from one FLBHurricaneMk1 to one CAMHurricane (spell “CAMHurricane” correctly). You may also need to add the airbase itself to the CAM-ship’s cfg file. For an example, see the M36B.cfg file for NYGM supplied in the “Stiebler4B_Addon_for_V16B1” folder.

In order to avoid Crashes-to-Desktop (CTDs): It is particularly important to note that the UnitType of the M36B ship needs to be changed in these places: data\roster\british\sea\M36B.cfg and data\sea\M36B.cfg, (change UnitType=102 to UnitType=8), and data\campaigns\campaign\campaign_RND.mis (change ‘Type=102’ to ‘Type=8’ in the campaign file; you may need to check campaign_SCR.mis also.)

If you do not have any M36B ship installed at all, then you MUST first delete the SEA folder from Stiebler4B_Addon_for_V16B1\data\Sea before you install the remainder of the Stiebler4B_Addon_for_V16B1 folder with JSGME.

You must also use the Options Selector supplied with this package to select the CAM-ship Fix. Set this option to ON only if you use one of the super-mods with a CAM-ship installed, otherwise set it to OFF.

Technical

The method used to identify the aircraft from the CAM-ship is complicated, and requires the installation of the CAMHurricane aircraft supplied with this package.

The code for flying the single CAMHurricane is then identified, and the aircraft is allowed to make up to five attempts to locate the U-boat. These can take up to 10 game-hours, depending on game-play, but typically require only a few game hours. After that, the CAMHurricane is assumed to have been lost, and the number of aircraft in the CAM-ship is set from 1 to 0. *This number of aircraft will remain on the CAM-ship in all convoys until you reload a saved game or career.*

When you reload a game, the number of aircraft on the CAM-ship will be restored to 1 for the last CAM-ship type which flew off an aircraft. That is, if you have an M36B CAM-ship, and an M21B CAM-ship, and first the M36B flew off an aircraft, and then the M21B, it will be the M21B’s Hurricane which is restored. However, most players will have only the M36B CAM-ship, so they will never notice this detail - the aircraft will always be restored to the M36B.

“Shallow-water Asdic” mod

It was always much harder to detect U-boats with asdic in shallow waters than in deep water, due to tides, wrecks, rocks and similar. From October 1944 - May 1945, U-boats with schnorchels patrolled very close to land around the British Isles, the so-called ‘Inshore Campaign’, relying for their protection on the poor detection ability of Asdic in shallow waters, with their fast tides, large rocks and ancient wrecks.

SH3 does not model the failure of Asdic in shallow water at all. This mod changes asdic capability according to the depth of the sea. Specifically, the ‘minimum surfaces’ (MinSurface, MS) of asdics (original values found in file ‘AI_Sensors.dat’) are now changed according to sea-depth in four bands:

Depth > 150m: MS = 100 (m², metres squared).

Depth >100m: MS = 150.

Depth >50m: MS = 200.

Depth < 50m: MS = 300.

The 'MinSurface' refers to the amount of U-boat hull (in square metres) that must be impacted by the Asdic ping, if the warship sending the ping is to get a detection echo. These changes are not dependent on the year, they will apply throughout the war. Now you can prowl around the British Isles with much less chance of being detected.

It is necessary to use a single unique value for asdic minimum surfaces in AI_sensors.dat in all the supermods, if this mod is to function. The unique value of 100.0 has long been used in NYGM, and appears effective in practice. Other supermods may use different figures, for Asdic 'MinSurface', and these will need to be changed in the super-mods' AI_Sensors.dat file (found in silenthunteriii\data\library). For example, both the stock SH3 game and GWX have values for MinSurface of 0.0.

A list of the Asdics is given below:

QGAA, QC1A, QCeA, 147A, 144A, 128A, 123A.

Unfortunately, you cannot change these values in a text editor. You must use a data editor, such as TimeTraveller's 'FileAnalyzer', or Skywas's 'Sd3Ditor'. FileAnalyzer is easier to use for this purpose.

Once these changes to MinSurface have been made, then install your new AI_Sensors.dat file to replace your original file. The mod will now be active. Alternatively, you can disable the Shallow-waters Mod with the Options Selector.

“Warning Dialog Box” fix

It often happens that, as your U-boat chases after a convoy in mist, a warship appears briefly and then disappears again from visual view. Each time that it reappears, you get a warning dialog box announcing 'WARSHIP SPOTTED', with a range of three options, and the time-compression (TC) drops to 1. Chasing after a convoy under such circumstances can be very tiresome.

This fix prevents the TC from dropping to 1, after the first encounter with any ship from a convoy or battle-group. Instead, the TC will continue at the value that it would have obtained, if the TC had not dropped to 1. Thus, if the crew has just announced 'ship spotted, Sir', then the TC will continue at 8 (or whatever your default settings for 'EnemyDetected' may be in file silenthunteriii\data\cfg\main.cfg). If your U-boat is in 'HunterState' (TC typically 32 or 128), then TC will continue at 32 or 128.

Note especially that this Mod-Fix affects only the function of the warning dialog box. It will not affect TC changes caused when your watch-crew or the hydrophone operator detects a ship under circumstances when the warning dialog box would not normally be activated.

LIMITATIONS

In order to protect your U-boat from sudden disasters, the following limitations apply:

1. The warning dialog box will always appear, even though the TC has probably not been set to 1.
2. The 'AIRCRAFT SPOTTED' dialog box will *always* bring TC to 1, to give you time to defend yourself.
3. The first time you encounter any ship where you would normally have got the dialog box 'WARSHIP/MERCHANT/SUBMARINE/GROUND-UNIT SPOTTED', your TC will drop to 1.

4. The maximum TC that will be allowed with a warning dialog box on screen is TC=128.
5. Six game hours after the first warning dialog box was encountered, the above rules are ended, and the warning dialog box reverts to its usual function.

“Change Patrol Grid” mod

This mod requires the installation of new lines to these files:

- a) menu_1024_768.ini.
- b) en_menu.txt (or de_menu.txt).
- c) commands_en.cfg (or commands_de.cfg).

Instructions for this are supplied separately. Together, they create for the first time a new button in SH3, specifically a button for the radio-man, and also code bound to the button.

USE OF CHANGE-GRID MOD

The mod is operated in this way:

Either click on the new left-hand button for the radio-man.

Or press the key combination Shift+M.

In either case, you will receive instant confirmation from BdU, in a radio message, that the message has been sent, and telling you to wait for a reply.

After about two (game) hours, you will receive an answer in two forms:

- a) A large dialog box on screen, which you cannot possibly overlook!;
- b) A duplicate radio message from BdU.

Follow the BdU instructions.

Conditions to be met to request/receive a change of patrol grid:

- a) You cannot send the message while submerged; the U-boat must be on the surface (same for all radio messages).
- b) You must have >50% fuel remaining.
- c) You must have already spent 24 hours in the original patrol area.
- d) There is a 50% chance that you will be told to remain in the same grid square - that is why you were sent there!
- e) You can ask only for ONE change of patrol grid.

TECHNICAL

The mod checks your existing patrol area, and assigns it a local sea-area corresponding to the general sea areas in the Atlantic (Atlantic and North Sea only). There are 16 local sea-areas in this mod. The code then selects one out of the random grids assigned to this area, after first checking that it is not the same as the original patrol grid.

The grids chosen at random have been very carefully selected. The NYGM super-mod has long supplied a small tool ‘SH3Patrol’ that assigns grids to patrols before you leave base (or when at a U-tanker). The grids used in SH3Patrol were themselves generated by a computer-search for the most common patrol grids in file flotillas.cfg, and a selection of these most common grids is now used with the ChangeGridMod. If you ask to go to a new patrol grid, you can be sure that the replacement grid will have a lot of traffic!

LIMITATIONS

1. The new radio button does not become grey (inoperable) when you submerge. However, the code prevents the button from having any effect when clicked when underwater.
2. The radio-button cluster usually does not disappear after you click the main map screen. However,

it will disappear if you select another crew function (eg radar), or you select a new viewing screen.

3. Much more serious: if you SAVE and RELOAD a game in mid-patrol, the original patrol grid square will always be restored. It would require a huge effort to fix this. Don't save your game inbetween asking for a new grid and reaching the new grid.

4. As soon as you reach the new grid, you have patrolled it. This is fair, because you have already spent time in your original patrol square.

I acknowledge with thanks assistance from H.sie with the code used to create the Dialog Boxes and the code used to send BdU messages.

“Minimum TC Mod” fix

Time compression (TC) becomes lowered when you encounter ships, aircraft or other threats, including the ocean floor. These values are set for the different threats in file 'Main.cfg' under the heading 'TIME COMPRESSION'. Typically, TC will be lowered to 8 when an enemy spots you, to 1 if the enemy is an aircraft, and to 4 if the U-boat is too close to land or the sea-bed while submerged.

However sometimes, despite these threats, you would like to increase time compression anyway, but only for a short time. Obvious examples of such occurrences are these:

1. To travel along the Kiel canal, or quickly out of the bases of Lorient or Bergen.
2. To rise up quickly off the sea-bed, after coming too close to it.
3. To shadow a convoy while reporting its position (H.sie's Wolfpack mod). Stiebler's earlier 'Warning Dialog Box fix' already addresses the problem of warships being repeatedly sighted as they come in and out of light mist, but this 'Minimum TC' mod over-rides the DialogBox.
4. To escape quickly, when the game code indicates that you have been spotted and pursued, and the TC has fallen to 8, but you are sure that really the threat has gone.

Now, it is evident that careless use of this mod will be very dangerous to your U-boat. You may be attacked suddenly by an aircraft - no drop in TC to 1, the TC remains at 128! (default setting).

If a destroyer attacks you at periscope depth as you move in on a convoy, at minimum TC of 128, there will be no time to lock onto the destroyer, set the manual torpedo dials and fire a torpedo.

If you dive deep, you will move quickly down to a depth at which the U-boat is destroyed.

Use this mod **VERY** carefully!

USE OF MINIMUM-TC MOD

Press the keys 'SHIFT+N' (shift key + 'N' key) to toggle this option ON. You will see a warning dialog box.

Press 'SHIFT+N' again to toggle the option OFF. Again, you will see a warning dialog box.

The default minimum TC is 128. You can change this value between 32, 64, 128 and 256 with the Stiebler Options Selector (version 1.6).

Applies only to MAP (F5-key) view.

Status Reports and Replies from BdU (3)

You can send a status report at any time while at sea, provided that you are on the surface and the radio station is manned. However, the responses from BdU are unvaried, in the original SH3. If you have sunk nothing at all, you get the message 'Acknowledged'. If you have sunk anything, from a lifeboat to six battleships and an entire convoy, the message is 'Keep up the good work!'. If you have used all your torpedoes, the message is 'Return to base'.

Originally a Stiebler mod, the code was reworked extensively by H.sie for his V16B1 patch. However, now congratulations from BdU on your successes are graded according to how much total tonnage has been sunk between messages to BdU. I think that they should be graded according to total tonnage sunk during the whole patrol to this point, as in my original code, and have made this small change.

Null Grid Fix

As players will have discovered, if you return to a base which was not the home-base, you cannot alter equipment and when you return to sea you have a patrol grid of NULL. The devs intended that a stop in a port-not-home-base should be temporary. Perhaps for fuel and repairs before a return to home-base. The NULL grid was **not** a bug - it was an intention.

The NULL grid has always been an irritation, because some players prefer to start a patrol in Kiel in 1939, move to Wilhelmshaven until 1940, then return to Kiel. Other players like to patrol from Penang, or to switch bases in the Mediterranean. And docking with a U-tanker at sea always resulted in a NULL grid being assigned when you started a new patrol, until H.sie and I created the pseudo-docking concept in code.

This fix assigns new patrol grids selected randomly from a look-up table which takes into account the current year of the War, the current U-boat Flotilla to which your U-boat is assigned, and the U-boat type (II, VII, IX, XXI). U-boats in the 12th Flotilla are assumed to be patrolling to the Cape-Town area or to the Far East. U-boats with the 29th Flotilla are assumed to be operating in the Mediterranean. In 1945, all U-boats are assumed to be operating in the North Atlantic. This new system provides much better results, but retains these defects:

1. When you return to base, you **MUST** return to the main menu screen to update parameters, before returning to the office to restart a new patrol.
2. You must sail away from the port, before the New Orders screen is activated.
3. Reloading a saved game gives a **new** random grid, which will be different from that which you saved originally.
4. The line 'PatrolArea=NULL' is now absent from the mysave.psc text files, so your original random-grid cannot be reloaded when your patrol is reloaded.

Weather Meter (Icon by SquareSteelBar)

This mod requires the installation of new lines to these files:

- a) menu_1024_768.ini.
- b) en_menu.txt (or de_menu.txt).

The mod converts the existing 'Stealth Meter' (which measures the extent to which a nearby ship can detect the U-boat) into a 'Weather Meter'. It is necessary to toggle the Stealth Meter ON before you start a patrol, from the list of options provided just before the patrol is loaded from the main menu screen. The Stealth Meter is ON by default anyway; naturally, it no longer functions as a detection indicator.

The Stealth-to-Weather Mod can be toggled ON or OFF from the Options Selector. When toggled OFF, the Stealth Meter continues in its usual role. When toggled ON, the Stealth Meter serves as an indicator of the weather. It measures predominantly the visibility ('Fog', 'Sea-Mist') reported by the U-boat crew.

The original U-boat icon for the Stealth Meter (also known as a ‘Noise Meter’) was changed for this mod by the multi-talented SquareSteelBar, who also made the icon for the radio cluster for the Stiebler ‘Surrender’ mod (see above).

A constant reminder of the weather can serve for a number of tasks:

1. It reminds you if the visibility is so bad that the watch-crew cannot see anything. (This function does NOT replace H.sie’s existing reduction of Time Compression to 16 whenever ‘fog’ begins, and again when it ends.)
2. It reports to you when aircraft are not a threat (aircraft do not fly from airbases in ‘medium fog’); however never forget that *scripted* aircraft (with defined flight paths) can still fly in all weathers. Scripted aircraft are encountered in only a few places, usually over parts of the Bay of Biscay.
3. It reports to you when you need radar ON or OFF (if radar is fitted). Use radar with medium or thick ‘fog’, turn it off (since it advertises the U-boat’s presence to warships and aircraft) in light fog or clear visibility.
4. It informs you when schnorchelling may be difficult, since bad weather is usually associated with high waves, which exhausts the crew.

The Colour Code for the ‘Weather-Meter’:

Colour	Meaning
Bright-yellow	Perfect visibility, no fog
Bright-pink	Light fog
Dull-white	Medium fog, winds up to 9 m/s
Orange-brown	Medium fog, winds 9+ m/s (so heavy fog likely to occur soon)
Dark-grey	Heavy fog, visibility < 1000m.

If you dive below 20m depth, the Weather Meter will turn always to bright yellow. At periscope depth, or on the surface, it is assumed that the crew can check the weather condition.

Ship-Speed Mod (Idea originally proposed by Hitman.).

This mod reduces ship speed according to wind-speeds.

As Hitman has pointed out, it is not correct that the U-boat’s speed should be reduced (in the original devs’ code) when trying to escape on the surface during a storm, yet the pursuing escort’s speed remains at a maximum. The mod reduces all ship speeds by a factor that depends on the wind speed, but is independent of the direction of the wind. This is fair, since the U-boat’s speed as originally programmed is affected only by the size of the waves/wind, not by their direction. The U-boat’s speed is not affected by this mod.

The mod is found exclusively in the SH3Sim.act file provided with the Stiebler patch, which replaces the original file, and therefore there is no toggle for the mod in the Options Selector.

IMPORTANT: This file replaces H.sie’s original SH3Sim.act file, and is also necessary for the operation of the Stiebler Asdic-in-shallow-waters mod. It will cause a CTD if used to replace any other SH3Sim.act file (including that provided with stock SH3.exe, or H.sie SH3Sim.act file.)

Air Torpedo (Fido) Mod.

The American acoustic homing torpedo (known as 'Fido' because it 'sniffed out' the enemy) was deployed from aircraft against U-boats from June 1943.

This innovation was present in the old U-boat simulation 'Aces of the Deep', but was omitted by the devs from their creation of Silent Hunter III owing to a false belief that inevitably it sank the U-boat, which would make the simulation unplayable.

In fact Fido was no more infallible than the German acoustic torpedo, fitted to U-boats and intended to sink ships. In both cases the acoustic torpedo was intended to steer towards the nearest loud sound in the water. For a German acoustic torpedo, intended as a defence against convoy escorts, the 'loud sound' was expected to be that of a closing warship making about 10-12 knots, and the sound receiver was attuned to the sound of the propellers at that speed.

Fido was even cruder, because it steered directly towards the loudest sound. When a ship moves through water, the rotation of the propellers causes 'cavitation', the name given to the popping of bubbles. Cavitation is much more audible when the propellers turn quickly (high speed) than when they turn slowly. A U-boat caught on the surface by an aircraft would crash-dive at full speed in an attempt to get away - thus the propellers would be causing very loud cavitation. Under these circumstances, Fido was an effective weapon, and it has been credited with a hit-rate of some 25%. By contrast, the German acoustic torpedo T-V had a hit-rate of only 10% according to post-war analysis. However, the T-V was aimed only at a difficult target, which would probably be deploying decoys (such as the noise-making device 'Foxyer', or even by dropping random depthcharges) whereas Fido faced no such distractions.

If a U-boat dived very slowly, then Fido would be almost ineffective. Therefore orders were given to Allied air crews that Fido was never to be dropped under conditions where the enemy could see the presence of an acoustic torpedo. In practice, this meant that it was always dropped onto a U-boat that was already submerged (or in the act of submerging). The idea that a hit by Fido always destroyed the submerged U-boat is wrong. U 256, U 456 and U 333 all survived to return to the surface, where they reported that they had been hit by 'bombs' in the region of the propellers. There may have been other examples.

'Aces of the Deep' modelled this very well, with a warning to the U-boat commander that the soundman could hear a torpedo approaching. The trick to avoid being hit was then to reduce to slowest speed, when Fido would miss.

Technical:

I have added the same effect to SH3. The rules of the code are these:

1. If the aircraft would have dropped depthcharges, it is assumed also to have dropped an acoustic torpedo.
2. The U-boat receives a warning from the console of 'torpedo incoming', and a spoken warning 'Torpedo in the water' from the soundman. Time compression also drops to 1.
3. For the next 10 minutes of game time, the torpedo tries to locate the U-boat. If it has not succeeded after 10 minutes, then the torpedo is lost.
4. If the U-boat is located, a simple test of the U-boat speed is made. A probability factor is also applied. The slower the U-boat is moving at that time, the less likely it is to be hit.

5. If the U-boat is hit, then hit-points are deducted equivalent to 75% of the original maximum U-boat hit-points. (If the result is less than 0, as a result of earlier damage, the U-boat is sunk at once). You will also receive a console message from the Chief Engineer telling of the hit.

6. Fido is not used in this mod before 1 July 1943.

This should cause the player to lose enthusiasm to wait around when seen by aircraft. Although it will occur only rarely, you *may* be hit by a torpedo even when moving at slowest speed (2 kts) underwater. In fact, I would advise manually moving the speed on the speed-dial to 1 kt while the torpedo is in the area.

In real life, attacks by a pair of carrier-borne Avenger aircraft on a U-boat were quite common. One of the Avengers would carry a Fido. In order to mimick this, you need to add depthcharges to an Avenger, to replace part of the standard bombs loadout. Special files for this purpose are supplied as part of the mod.

Finally...

Several experienced and talented modders have tried previously to model the effect of an aircraft dropping a torpedo onto the U-boat. None of these attempts has been sufficiently successful to create a mod which could be released.

I lack the skills of these modders, therefore:

No graphic effects will be seen with this mod, it is entirely computational. You will not see the aircraft dropping a torpedo, you will not see the torpedo in the water, and there will be no visible explosion if it hits its target. My objective has been to improve game-play.

Instructions for Stiebler fix for Radar on Turms. December 2014.

In the stock game, there is no satisfactory way to permit any one U-boat to have EITHER an FuMO29 fixed radar on the front of the conning tower (turm) OR an FuMO30/61 rotating radar attached to the side of the conning tower, owing to incomplete, original code. The turm/1 conning-towers lack any position on the side for a rotating aerial.

This defect is now fixed. HOWEVER . . . it requires the installation of modified conning towers (turms) which will not function properly without the Stiebler fix. Therefore, if you wish to use your original conning towers, you MUST tick this option OFF with the latest Options Selector, HsieOptionsSelector_V16B.exe.

The turms provided are those originally created by the talented ANVART for NYGM, and the complete package - modified by Stiebler - is supplied as a separate folder: the ANVART_STIEBLER_TURMSR01R02 folder.

DO NOT INSTALL this folder if you wish to retain your original conning towers.

DO INSTALL this folder if you wish to use the turm fix.

A characteristic of this package is that both the rotating aerials (radar and the DF receiver) can be raised or lowered on your conning tower.

Commands:

Raise radar aerial: SHIFT-R

Lower radar aerial: CTRL-R

Raise D/F aerial: SHIFT-V

Lower D/F aerial: CTRL-V

Please note: *the original position of the rotating aerial when you sail out from base will always be at right angles to the side of the conning tower.* I don't know of a way to prevent this.

You will need to make some changes to your file `commands_en.cfg` (or `commands_de.cfg`) to enable the rotation of these aerials. Note that you must search for the key NAMES in your existing file (eg 'Name=Radar_toggle_on_off'), the [Cmd] numbers may vary with your installation. If you are using the NYGM super-mod, then all these changes will have been made for you already in your NYGM installation (after adding NYGM 3.6E).

```
[Cmd142]
Name=Radar_toggle_on_off
Ctxt=1
;;Key0=0x52,Cs,"SHIFT+R" <- DELETE THIS LINE by adding two `;`
```

```
[Cmd461]
Name=Radar_continuous_sweep
Ctxt=1
MnID=0x3F2B0003
Key0=0x52,Cs,"SHIFT+R"
```

```
[Cmd462]
Name=Radar_turn_off
Ctxt=1
MnID=0x3F2B0004
Key0=0x52,Cc,"CTRL+R"
```

```
[Cmd450]
Name=Radio_operator
Ctxt=1
Key0=0x56,Cs,"SHIFT+V"
GoBack=Radar_view
```

```
[Cmd470]
Name=Radio_operator_end
Ctxt=1
Key0=0x56,Cc,"CTRL+V"
```