HSFX v6.0 Release Notes

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Contents

1 Introduction

It has been over a year since we last released any kind of update.

The original intention with v6.0 was really just '5.0 updated to 4.11.1' but it never seems to pan out quite like that and there is substantial new content as well as a lot of updates and improvements.

Much this time is 'qualitative' rather than 'quantitative' though and the primary intention has been to improve the quality of what we have rather than to add new content. We also took this opportunity to rationalise and remove duplication where it was possible.

So much has been updated, improved and changed that it became no longer feasible to do this version as a simple update; it had to be released as a completely new all-in-one installation.

In the following text, features added from HSFX v5 will be printed in green, and subtractions in red. Contributor names are listed in *italics*.

2 Installation Procedure

The installation procedure remains the same as for HSFX v5. There are two installation methods:

ι) Install over an old installation of HSFX updated to IL-2 1946 4.11.1
  The new installer will remove your Files/Mods & JSGME mods folders so back these up first if you want to retain anything in those.

ιι) Install over a new clean copy of IL-2 1946 updated to 4.11.1

  If ii) & you have a Direct2Drive or Steam version of IL-2 you need to update it with the direct to drive patch. You can do this before or after installing HSFX, but no mod version will work until you do.

If required, you can get the direct to drive patch here:
http://www.sas1946.com/main/index.php/topic,1531.0.html?PHPSESSID=c41a444f922ff4bb1e0667538cf8292c

We don't include this by default as it is a sizeable download and only relevant to some people.

3   Features

This is not a complete readme in itself and only lists the major changes, updates and alterations from v5.0.

3.1 Core Features

All of the features that we have become accustomed to in v5.0 have been retained, although they have been altered to co-exist with 4.11.1 and in all cases should work the same way, with the following exceptions:

Bomb Bay Door Mod (*Fireball*)
We have removed the limited aircraft views by mod code as this is now available in a very similar form in the stock game.

Squog's SEOW track recording & console cheat fix
This has been extended to include players that try to find which aircraft are in the mission by using the console. This only applies to SEOW missions.

Engine class
Early Spitfires and Hurricane Mk I 12 Lbs now also emit 'negative G' engine smoke (*miss Schillings Orifice*)

Transonic FM factors & G-Suit functionality:-
We have added these functions by *SAS~Storebror* and *Anto* for a few of the fast jets (F-86's, F-84's, MiG-15 & 17) and G-Suits for the US jets used in Korea from 1950 onwards.

Nightime environment
Ivan has modifed the night-time environment to more closely resemble that in 4.10.

3.2 Aircraft Changes

3.2.1 REMOVED Aircraft

We have removed aircraft for the first time because better versions and new methods are now available for doing what they did without requiring new slot aircraft, and there are performance problems if you have too many aircraft in IL-2 (there is a hard limit). Below is a list of these (and usually the reason for removal):

Hs-123 1936
This is now included in 4.11.

MiG-3ud
Does not fit with the beautiful updated 3D models that have been done for the others.

Mosquito MK.VI Coastal Command
4.11 adds the rocket load out to the stock Mosquito so this model is no longer necessary.

Mosquito 'TseTse' FB.Mk.XVIII
Replaced by the one included in 4.11.

Ju-52/3mg6e
This aircraft is identical to the stock version apart from loadouts. We have added the expanded loadouts to the stock aircraft - but for 'Expert' mode only.

C-47A
This aircraft was identical to the stock version.

Hurricane Mk.Ia Trop
Hurricane Mk.Ib Trop
Hurricane Mk.IIb Trop
Hurricane Mk.IIc Trop
All relevant Hurricanes now have the tropical filter automatically when flying a mission on a desert map. It will show up when you start a mission on a desert map.

Spitfire Mk.VIII FB
Spitfire Mk.VIII CLP FB
Spitfire Mk.Vc FB
Spitfire Mk.Vc LF
Expanded loadouts are available now for the default versions when 'Expert' mode is enabled.

Spitfire Mk.XVIe

Me-262V-3
Me-262A

CR.42 Bombe Alari
This loadout has been incorporated into the stock aircraft.

Bf-109D-1 Late
Bf-109F-2 Trop
Bf-109F-4 Trop
Bf-109G-2 Trop
Bf-109G-4 Trop
Bf-109G-6 Trop

Bf-109G-6/ AS
Bf-109G-14 early
The D-1 Late is a duplicate of D-1 and there was no other difference.
Tropical filters now appear automatically when relevant 109's fly a mission on a desert map. Other 109's were originally an excuse for an alternate FM but we do that with 'Expert' mode now anyway.

26 aircraft removed in total.

3.2.2 ADDED Aircraft

PWS-10
PWS-26
R-XIIID, 1933*
R-XIII Ter, 1934*
R-XIII Ter-Hydro, 1934
All by *Loku*

Avia B-71 (Early), 1937*
Czech version of SBM 100.
By *Magot*

D3A2 'Val'
By *Mrz*

Do 17Z-0
Do 17Z-2
By *Ranwars* & *SAS~Crazyflak*
http://www.sas1946.com/main/index.php/topic,21566.0.html?PHPSESSID=c41a444f922ff4bb1e0667538cf8292c

Letov S-328n-1.
Night fighter variant with 2 upper wing Guns.
(Also a revised cockpit + for the stock aircraft)
By *Stoupa*

Avia Bk-534.
Later variant with single MG/Oerlikon 20mm firing through the propeller hub.
By *Stoupa* & *Magot*

Zlin Z-26 (AI only)
By *Stoupa*

P-51A
Mustang Mk I
By *Aviator Mod team*
http://www.sas1946.com/main/index.php/topic,14806.0.html?PHPSESSID=c41a444f922

ff4bb1e0667538cf8292c

D4Y2
D4Y2S
D4Y3
D4Y3S
By *Ten010*
http://www.sas1946.com/main/index.php/topic,23904.0.html?PHPSESSID=c41a444f922
ff4bb1e0667538cf8292c

FW-190 F2
FW190 A-6 R8
FW190 A-8 R11
+ Update of all 190's
(variants with radar arrays used as night fighters/ radar ranged bomber
interceptors.)
All by *C6_Claymore*

Add the following parameters at the bottom of your Conf.ini :-

[Mods]
SmokeEffect = 1 (with smoke) 0 (without)

This enables realistic engine smoke when the 190's are flown at very high revs.

P-61B 'Black Widow'
By *'Team BlackWidow'*
(proper cockpits are in the works but they didn't make it into this release.)

3.3 3D Updates and Improvements

Ju88C-6
By *SAS~Crazyflak* & *Birdman ?*

Me 410 series
Thorough revamp
By *SAS~Crazyflak*

Cowling updates on many radial-engined aircraft
By *PA_Geronimo*

Exhaust hook corrections
By *C6_Claymore* & *Tiger_33*

There are many more changes (probably hundreds) made by the HSFX team. We
update and correct as we do stuff, and over time and in quantity it all becomes a bit of a

blur.

3.4 Cockpit Revisions and Changes

New 6do code added to ALL new variants of stock planes + 3D updated where there are new derivative cockpits.
Tube sight java code rewritten for all relevant aircraft
Bombsight code updated and revised for the new' zoom to bombsight' routine.
Have also added proper internal/external skin-mapping (in code) in the few remaining cases where it was not there.

There has been revision to almost every aircraft cockpit but the following are of note:

Bf-109B to E-3's
These have a new cockpit (by *maus*) that adds the early cockpit type. (see separate Readme)
All 109's required a bit of revision. All have opening cockpits in 'Expert' mode. Only the new ones are in by default.

Bf-110's Early
Made a new Early cockpit which removes the Fug radio and merges the front and the rear gunner position so that you can see all the way to the rear. Also redid the rear gunner so that the fire arcs are true.

B5N2 & B6N2
Changed the cockpit as the old one was terribly messy with 6do. These are cleaner.

Blenheims
Added *WTE_Newy's* proper nose section for the Mk.I's. Other minor modifications for 6do, and split throttle and pitch levers to work independently.

Cant
New cockpit textures.
By Der Wurstenfurchs

DB-3's
Updated with IL-4 cockpits and positions. For early variants made a 3d edited front turret using the Pe-8 front gun position cut down to just one gun.
DB-3T front gun position does not work as player operated but its useful as an observation position.

DH82A Tiger Moth
Reworked for 6do environment.

FW-190
Completely new and very high fidelity cockpits with opening canopies (in 'Expert' mode) by *C6_Claymore*.

F9F-2
New cockpit by *Freddy*. Ejector seat added, repositioned for 6do. RDF added.

F-80s
Ejector seats added

F-86's & MiG's
Repositioned for 6do. Also added RDF functionality to all of these cockpits.

Hs 123's
Made new cockpits as 'stand ins' until when/if there are proper ones.

I-15's & I-16's
Final texture update by *Mangus*.

R5
A 'stand-in' cockpit position .

R-10
Substituted an I-16 T5 cockpit into this with its nice tube sight etc. It fits much better.

Me 210/410
Revised for 6do plus included some of the updates from *SAS~Crazyflak's* rework.

Miles Magister
Reworked for 6do environment.

P-26
Reworked for 6do environment.

RWD-8
Reworked for 6do environment.

SB 2M & Avia B-71
The Avia B-71 has just a cockpit and bombsight.
The 100A also has a player ventral position. We don't have a top gun position with anything like the sliding canopy, so this remains AI only. It's the same crewman for both dorsal and ventral positions and you can only control the gun if the AI crewman happens to have gone into the ventral position.
The 103A has both working dorsal and ventral positions.
All have AI-only front gunner positions as before.
(These are getting proper cockpits anyway in 4.12, so further work by us is not time well spent.)

Su-2
Updated rear gunner position.

Swordfish Mk.I
6do rework and clean up.

TBD-1
New cockpit added. Made a modified rear gunner position with a single .50 cal.

TBM's
All made flyable. Revised rear gunner cockpit, updated bombsight code.
Also added in the ventral gun position (in an IL-4 style...)

U-2VS
Reworked for 6do environment.

MS 406, 410 & Morko
6do rework of *Tyrl's* version of these cockpits.

B-29 Cockpits
Main cockpit model by Sven Groetsch aka "*Kami_1*"
Export etc. & other (temporary) positions by HSFX team.

Reticle Corrections
IAF_Viff has spent time going through some of the reticle alignments and fine tuning them.

Plus countless other little updates and fixes across the board....too many to list.

3.4.1 Known Issues
- Nose gunner for DB-3T not functional.
- SB 2 Cockpits rough and top and ventral gunner position can be quirky.
- Swordfish rear gunner arcs are not correct until an enemy aircraft gets within range, when the gun elevates automatically.
- B-17 cockpits are rough and long in the tooth by now, but there are proper ones being worked on.

3.5 Flight Model Changes

On-going tweaks, improvements and corrections. (This aspect is endless...)

Aachen has reworked the following in addition to those looked at for v5.0:

   F4F-3
   F4F-4
   F4U's
   F6F-3
   F6F-5
   ('Expert' mode only)

F9F-2
F-84's
F-86's
(all)

4.11.1 has required pretty extensive revision of the overheat parameters; we have done quite a lot of work to try to incorporate this but there are a lot of aircraft, and not so many of us, so it may need to be an ongoing process to get all as they should be.
Please report any glaring exceptions or inconsistencies if you find them and wish to help out.

3.6 Tanks, Guns & Moving Ground Objects

3.6.1 REMOVED Ground Objects

Fiat M13, M15, M40 & M42 tanks
These are superseded by the Italian armour in 4.11
Note that the composition of the Italian Columns have changed slightly to reflect this, and also the Autoblinda.

3.6.2 ADDED Ground Objects

3.6.2.1 Tanks
L3 'Carro Veloce' tankette
Vickers Mk VI
Pz 1A
Pz 1B
Cruiser Mk.III
Somua Char 1B bis
Type 97 Teke
Type 89 Chi-Ro
All by *Giotto*

Vickers Mk.E (used in Poland)
M7 Priest
Sdkfz 124 'Wespe'
Sherman Vc 'Firefly'
Tiger 1 Early
All by *Wngflyr*

Sdkfz 234 50mm 'Puma'
By *Loku*

Re skins of T-89, Tiger Early & Vickers Mk .VI

By *Archie*

Of special note is *Wngflyr's* continuing update of the L0 detail of almost ALL of the tanks in IL-2 by this point. There are too many to list but it covers almost all of the stock armoured vehicles, which now have proper segmented tracks and are modelled to a higher level of detail than stock.

This is only at LOD 0. At a further distance they are not that different and this allows the inclusion of this detail without a corresponding loss of game rendering performance.

3.6.2.2   Cars

Horse-drawn Artillery Limbers, Limbers without Artillery and a couple of Carts
By *SAS~Epervier*

IJN Bulldozer
2 x IJN Fuel trucks
By *Magot* & *Archie*

3.6.2.3   Artillery

Leopold and German Railway Guns
By *Magot*

Flak Tower
By *Wngflyr*

You have to assemble the Flak Tower in the FMB. The tower base is Object 1755. The gun and radar nacelles are Artillery or Stationary Objects that slot onto the corners of the Tower base.

3.6.2.4   Barrage Artillery

We have added a new form of Artillery available under the Rocketry menu. You plot these guns in the same way as you would a V1 or V2 Rocket (using a target Set point in FMB).

These artillery pieces have a minimum range. If you plot a fire plan with a range less than the minimum then they won't fire. (Use the standard Artillery versions in this case).

Rocket Launchers > 3000 m
Howitzers > 4000 m
SPGs > 3000-4000 m

As they are constructed using the IL-2 Rocketry class, they have no maximum range; so it's the mission builder's responsibility to build a mission realistically.

Historically, rocket launchers could fire to about 7000m. Howitzers usually could fire to between 9000 -15000m, depending upon calibre and muzzle velocity.

Within the SEOW system the ranges are defined so that this is taken care of. Now in SEOW commanders can order artillery fire on specific areas as part of the planning routine.

By *Emil & 4Shades*

3.6.2.5 Trains

D-311 Diesel Locomotive and a variety of new cars and train types.
By *Magot*
Used to pull the Leopold rail gun but also other kinds of cargo.

3.6.2.6 Infantry

Many improvements.

3.7 Ships

3.7.1 REMOVED Shipping

Italian Littorio BB
All Ship Pack Entries

All ships are now available under the conventional Ships menu, rather than appearing in duplicate.

If you have old missions that this may affect then:
- Open the mission .mis file with a text editor.
- Find and replace 'Shippack' with 'Ship' and the mission will work fine.

3.7.2 ADDED Shipping

RM 'Caio Duilio' BB
HMS Eagle
Lexington CV2 1942
By *Asheshouse*

Type IX U-boat
By *Magot & SaQSoN*

IJN Yamato BB
By *DivingHawk*

Colorado BB45
Tennessee BB43
By *Gofo*

Hunt Class Corvette
Italian Gabbiano Corvette
Italian Tuffeto Corvette (KM)
IJN Shiga Escort
IJN Type-Tei(D) Escort
By *Giotto* & *Western*

IJN Carrier rework & new ships:
IJN Hiryu CV
IJN Unryu CV 1943
IJN Kaga CV
IJN Soryu CV
IJN Chitose CVL
IJN Zuiho CVL
All by *Western*

IJN Hosho CVL
By *Giotto*

Kawiko Maru Seaplane tender
USS Noa DD343 Seaplane tender
By *Archie*

Note: The Seaplane tenders do not work as seamlessly as they did in v5.0 but they do work if you add stationary versions of the seaplanes that you want to fly, and associate your flyables with them (as per stationary aircraft on runways under 4.11) and then they will spawn in and take off OK. AI do land near them, but cut their engines and glide in. Players, of course, can land fine.

3.7.3 HSFX Multi-turret ships

In 'Expert' mode only, ships with turrets with multiple guns now also have multiple fire hooks. So for example, a triple turret will actually fire three times from individual barrels.

The corresponding Rate of Fire of all guns has also been tripled (so it tends to reduce the load, as many turrets are double or single). This reflects Capital ships fire-power much more directly in the game and creates more historical results in surface engagements.

Destroyers and Cruisers get the most relative benefit from this. Battleships are more accurately represented relative to each other also.

(If you feel like testing this out I suggest setting up an engagement between some IJN

and US Destroyers, and watching the action in stock and then HSFX 'Expert' mode.)

3.8 Command & Control (beta)

CY6'*s* excellent C&C set of triggers and functions is available from a new menu in the FMB (see included Readme).

We have not had time to thoroughly test many of these and some are not multi-player qualified (and those that are have not been tested as thoroughly as we would like) hence the 'beta' moniker.

3.9 Maps

3.9.1 New Maps Added

Donbass Summer
Donbass Winter
Both by *Sergei*
An excellent pair of maps with some great new objects.
The Summer map has been augmented by HSFX for use in mission building, which involved connecting all of the Highways/Country Roads through the urban and village areas, with bridges added where necessary.
The Winter map still retains the roads stopping at the edges of the built-up areas.

Marianas Expanded
By *DaveOD06*
A wonderfully textured and greatly expanded Marianas map, with more of the island chain and a greater sea area. A huge improvement over the stock map.

MTO
By *redko*
A beautifully re textured and repopulated version of the MTO map. A really great-looking map.

Northern Borneo
By *farang65*
Detailed map of Northern Borneo with attention to oil refineries and pipelines. A very useful supply map for SEOW events.

North Africa
By *Jir*
Large map of North Africa stretching from Tripoli to Alexandria.

Spain Central
By *Jir*
Another beautiful Spanish map from *Redeye_Jir.* The elevated terrain in parts of the map mean that working bridges aren't possible. Mission builders will have to find a workaround to get vehicles and trains to cross the rivers in these areas. It is too nice a map to omit because of that though.

WestFront 1940
WestFront Winter 1940
WestFront 1944
WestFront Winter 1944
All by Ash & *GilB57*
These replace Battle of France 1940 and Battle of France 1940 Online.
They are total re-workings of *Ash's* originals, re-textured and populated by *GilB* to a high standard. Absolutely essential maps for a whole host of European scenarios.

3.9.2 Enhanced Maps

Cross Channel map
By *352nd FG*
New update from *352nd*, plus FPS friendly fix included.

KhalkinGol Expanded
By *Mixx*
HSFX Team has re-heighted this map to make the terrain appear closer to the real thing. This has removed the dramatic valleys and the map does not look so exciting any more, but the height difference between salient points is now roughly correct. No other changes.

Zapolar'e Murmansk Summer
By *Mixx*
Runway updates by *spdr109.*
Approximately 100 km of extra sea added by HSFX Team to the top of the map. This has been done to make Arctic Convoy scenarios possible. Missions previously made on this map may or may not work - the bridges had to be remade for the enhanced map. No other detail was changed, so test them and see.

Channel 1942-45
By *Can*
We have added quite a lot of new detail to *Canon's* Channel map in order to make a realistic Dieppe Raid scenario possible. Features include
- Seven new airfields
- Historically accurate town of Dieppe
- Important French villages added
- Cliffs and woods around Dieppe close to topographically correct

- Improved road and rail network around the important areas

There are also a few small map corrections that have been attended to. See below.

Readme for the Dieppe add-on to Canon's Channel 1942-45 map

This update adds the airfields and infrastructure necessary for a Dieppe scenario.

New Airfields added:
- RAF Fairlop
- RAF Friston
- RAF Gatwick
- RAF Heston
- RAF Thorney Island
- RAF Thruxton
- Dieppe - St Aubin

Note - all airfields are to scale except Thorney Island and Dieppe - St Aubin. Because the map is at about 2/3 scale Thorney wouldn't fit on the island, neither would Dieppe on its hill.

The airfields have been made as accurately as possible from wartime photographs and plans, except in the case of Dieppe where I couldn't find any. Dieppe - St Aubin has been based on the modern airfield layout.

Because of the scale restrictions it is not possible to use Thorney Island for aircraft larger than medium bombers.

WARNING!
It is not possible to have AI aircraft take-off from Dieppe - St Aubin. They spawn halfway down a hill because the runway is too short.
Fw190s and other AI fighters will land successfully though. Use as an Emergency Landing Ground only.

Dieppe
The harbour, town and docks have been completely rebuilt from scratch. Although in reality there was, and still is, a swing bridge taking the road across the northern part of the dock area, this has been omitted. Dieppe has been based on period air photographs and maps.

Several important villages in the Dieppe area have been added:
- Berneval-le-Grand
- Bracquemont
- Longueil
- Quiberville
- Pourville
- Puys
- Varengeville.

The road and rail network around Dieppe has been modified to a small extent; plus there are now added historical Highway and Rail links to Rouen.

Cliffs and bays either side of Dieppe have been changed to reflect the actual topography, and allow for historical situations to be recreated.

Map tweaks

- Removed the farm on Bassingbourn runway.
- Removed buildings from the sea in three locations along the south coast of England.
- Removed the duplicate Beachy Head lighthouse.
- Reduced the size of Eastbourne, as it affected RAF Friston.
- Repositioned the London-Brighton railway line to make it pass close to Gatwick.
- Removed all previous buildings from the sites of Heston and Fairlop airfields.
- Added Thorney Creek.

Channel 1940-41 map.
Some of the changes made affect this map as well as the 42-45 version. Although, as yet, I have done no extra work on this map, I have removed all detail on the sites of Heston, Fairlop & Dieppe. Dieppe, is now empty countryside on this map.

242Sqn_Cat

4 Credits

All of the contributors above …

But in addition special thanks are due to the following for dedicated testing:

Loading Screen:-
       22GCT_Perru

Flight Models:
       352nd FG
       150 GCT

General:
       102nd _Shtele
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       242Sqn_Tanker & 242Sqn_Prof
       IAF_Viff
       JP_Dore
       22GCT_Gross
       Hawk5
       4Shades