The 71st Anniversary
of the
617 Squadron RAF
Dambuster Raid
on the
Moehne and Eder Dams
16 – 17th May 1943

FLIGHT SIMULATOR X PROJECT
by
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HOW TO FLY FSX WVA MODE & INSTALLATION

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INTRODUCTION:

THIS DB71 PACKAGE WILL ONLY WORK IN WVA and is not suitable for Standard FSX.

WVA is short for "Wide View Aspect" an option which has been resident in FSX from the very beginning.   Most simmers will not know of its existence.   If you fly with a widescreen monitor then WVA is for you.

You should be very aware the majority of third party and payware aircraft are not designed with WVA in mind. In general WVA will not affect operation of those products because nothing in the aircraft requires accurate positioning as it does in DB71.

Because saved flights save positions and zoom settings they are affected by the WVA option and the simmer must only use saved flights notated as WVA when flying this package.

TO DROP THE UPKEEP WEAPON IN AN ATTACK YOU MUST FLY A WVA SAVED FLIGHT.

HOW DO I ACTIVATE THIS ALTERNATIVE WAY OF FLYING IN FSX?
The setting for it is buried deep in the FSX structure as **WideViewAspect=False**.   To activate the option, notepad can be used to change the setting to "**True**".

In Windows 7 the file is located in:
Users\YOUR PC NAME/AppData/Roaming/Microsoft/FSX/**fsx.CFG**

In Windows XP the file is located in:
C:/Documents and Settings/Your PC Name/Application Data/Microsoft/FSX/**fsx.CFG**

The setting in fsx.CFG is usually the **last entry under the heading [Display]**

INSTALLATION:
After extracting to a clean folder of your choice the following folders will be available:

AddonScenery: Only two of the four provided folders #10 to #13 are required. The choice is based on what scenery you are using in England, Default or VFR.   Choose the correct folder to suit your system for the Derwent Dams.   Choose a suitable folder, default or VFR for the Ruhr and copy both **together with #14** into the FSX AddonScenery folder.

Activate the files in the normal way, **#10 & #11 OR #12 & #13 AND #14.**   Move them down below any DB70 Scenery if still active or listed in the list of scenery. Maintain the number sequence.

NOTE: If you still have the DB70 Anniversary installed then you **must de-activate the DB70 scenery for the Derwent Dams and the Ruhr (#5 & #7 OR #6 & #8)** in the FSX Scenery List. The Scenery **#1 Dambuster 70th_617_TRAINING** may be left active.

Effects: Copy and Paste the contents of this folder to FSX Effects.

Flight Simulation X Files: Copy and paste all of the provided files and the folder into the folder of similar name which may contain other "saved flights" provided by other providers.

Movie: This folder contains a demonstration of the tracking camera provided for the Eder Dam and shows what can be expected if your attack is successful. A similar camera is provided for the Moehne Dam.   See specific notes in **DOCUMENT #2 & #3** on how to operate these and other aspects of the Plane Design Dambuster Lancasters for successful attacks on the Ruhr Dam walls.

SimObjects/Misc: Copy /paste the two folders within, into the FSX Misc folder in SimObjects.

SimObjects/Airplanes: Only two of the four aircraft folders are to be installed into your FSX SimObjects/Airplanes folder and the choices are made on the basis of what video card resolution you are using to fly with:

The following list summarizes the resolutions that may be in use on your system:
  16:9   1920 x 1080   1600 x 900   1280 x 720 (the height is 9/16 the width)
  16:10 1920 x 1200   1680 x 1050   1280 x 800 (the height is 10/16 the width)
 Other **resolutions** will mean the bomb sight & VC dash level altitude gauge will be misplaced.

Choose the two folders within the 16:9 or 16:10 aircraft folders and copy the provided **Sound** to each aircraft. Then copy both aircraft folders 169 **or** 1610 & paste to the SimObjects/Airplanes Folder.

Gauges: This folder contains gauges, copy and paste the contents to your FSX Gauge folder, do not overwrite if already available.

z_Printable Checklists: Mike Faraday of the United States provided the pdf's in this folder in both letter and A4 sizes. They use section headings and content from the Pilot's and Flight Engineer's Notes A.P. 2062 - PN for the Mk III Lancaster but have been adjusted to also include FSX operational details and outcomes.

OTHER: Requires **"Weapons Package"** for the effects file **by Chris Sykes** available from here:

http://www.flightsim.com/vbfs/fslib.php?searchid=24412648
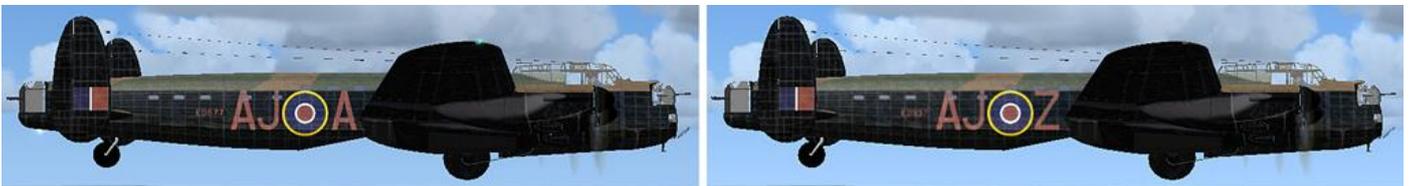
AJA - ED877 was flown by S/L Young on Operation Chastise and was the 4th Lancaster crew to attack the Moehne Dam. AJA & AJG flew as escorts for the three Lancasters making the attack on the EDER Dam   AJA was badly damaged by flak at the Coast on the return journey. She crashed near Castricum-aan-Zee in The Netherlands at 02:58 hrs 17th May 1943.

AJZ - ED937 was flown by S/L Maudslay on Operation Chastise. It was a last minute replacement for AJX ED933 which was damaged whilst dropping a concrete filled Upkeep weapon at Reculver 12 or 13 May 1943.   AJZ was the 2nd Lancaster crew to attack the Eder Dam. In the attack the weapon was dropped late at the third attempt, striking the crest of the wall and exploded in the valley. The explosion badly damaged AJZ. It came under fire from flak batteries and crashed 1.5 miles east of Emmerick near the Dutch-German Border at 02:36hrs 17 May 1943..

This project is a Tribute to all those who made these attacks possible.
It is hoped that simmers will honour these persons
and fly the Dambuster Lancaster in the way
they were flown in 1943
AT TREE TOP LEVEL

APPENDIX & NOTES

This project was developed in Windows 7 64 bit Pro in 16:9 and has been tested in 32 bit XP and is DESIGNED with the following restrictions/limitations:

(a) FLY IN FULL SCREEN MODE ONLY. Minimize will change the cockpit views and
    make an accurate attack on the Derwent Water and Ruhr dam walls impossible.

(b) Scenery setup is based on Scenery Complexity set at VERY DENSE,
    Autogen Density set at DENSE. Other settings may cause higher and more
    trees and in the recorded flight the trees may get in the engine radiators.

(c) The Celebration is based entirely on the use of saved flights.
    You cannot drop the Upkeep object without flying a saved flight (FSX logic not ours).

(d) It is not designed for using Real Weather. It was a clear night when the
    Dambusters attacked in 1943 so it is unrealistic to activate weather.

(e) The attacks are flown at -12 hours rather than in the ineffective FSX moonlight.

It should be realized that boost levels in horizontal flight at attack speeds (sim 220mph)
will be higher than the boost used in the attacks that required a big descent to attack altitude.

The 16:10 versions were based on setting a 16:10 resolution for the video card and viewing it on a 16:9 computer screen with black bands down the sides.   I do not have access to a 16:10 monitor.
Beta testing of the 16:10 aircraft has not raise any issues.

All aircraft in this project are Plane-Design FS9 Dambuster Lancasters updated for FSX as freeflight flyable and were provided in DB70. The two in this version have been commissioned with pilot views rather than the Flight Engineer views of DB70. They have been re-titled so as not to interfere with the other aircraft.

The outcome from the attack on the Moehne Dam is spectacular as a result of flak and guns being activated by the aircraft as it flys the attack.
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KNOWN ISSUES:

(1) The Upkeep graphic provided in the Plane-Design Lancaster does not drop, another object designed by Koos van Menen does drop and the PD graphic remains on board rotating backwards at 500 rpm until stopped by the pilot.

(2) The gun graphics in the Moehne Dam area, depending on your computer setup, might be rendered with rectangular graphics rather than the circular shell outcome.

(3) The scenery used in development is default MS or Horizon VFR for England and default or Aerosoft West German VFR. It is not known what the outcomes will be with other brands of VFR. Feedback would be appreciated.

(4) The MS default scenery at the Eder Dam is poor and quite incorrect and as a result the wall will be partly on land and partly in the water. This was unavoidable without making a new layout for MS default and making it impossible to provide a common set of recorded flights.   It was not possible to make curved walls for VFR.

(5) Due to the fact that only half of the width between the wall towers is capable of creating an explosion, it is possible to have an attack result with no explosion. Flying at too greater angle at the walls can produce this outcome.   That is why the target box at the Derwent is of that shape and size. Similarly it is possible for the Upkeep to pass through the wall without exploding on the way through.

(6) The documentation does not describe all functions or facilities available in the cockpits. Only those used in the Attacks are described. Other details such as autopilot, radios, starting and shutting down engines are covered in the DB70 documentation or are still available from the kneeboard.

(7) As in 1943 it is one thing to provide the specification of what is required to achieve a breach and quite another to meet the requirements and so it is in the simulator.. Barnes Wallis designed the Upkeep and specified how it was to be dropped. There were 8 Lancaster crews that dropped the Upkeep at the Moehne and Eder and all attacks had different results. It will be the same in this project and simmers will not be successful very often. The recorded flights used in Document #3 are therefore not perfect. The simmer has the opportunity to do better.

(8) The biggest problem faced by the crews in the attack was to get the speed of 240 mph correct at release (220mph in the sim). The Eder in particular was difficult because there was a 900 foot difference in altitude from when they came around the Castle to when they attacked from +60 feet. The Flight Engineer of AJN (Sgt Grayson) shut the engines to idle and AJN glided down. When appropriate the FE pushed boost to its limit thus controlling the speed.   AJG's Pilot (P/O Les Knight RAAF) got it right on his second try and the dam was breached with the last available Upkeep. This method of control had not been practised, it was developed whilst watching 9 other attempts by the other two crews. They had no idea if the Merlins would respond and come up quickly enough for success.

(9) Any Known issues from DB70 still remain in this version.

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The package is provided as freeware and is not to be used for any commercial purpose.   It is not to be modified in anyway and/or uploaded to any sim site without permission.

We take no responsibility for any conceived problems as a result of installing this software. You install it at your own risk.
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YouTube Movie: DB71
http://youtu.be/7fC5QdrPzaM

YouTube Movie "Sink The Tirpizs":
https://www.youtube.com/watch?v=2iSnmqwwwMA&feature=youtu.be

YouTube Movie: Anatonov AN 225 Visits Zurich:
http://www.youtube.com/watch?v=XKnNVULkrZY&feature=youtu.be

14 May 2014
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