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## Hi-Fidelity AI Douglas DC-8-61/61F for Microsoft FS2004 & FSX Version1.10

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## **DC8 DIGEST - THE SUPER 61**

Text by Mark CRANSTON

DC8 SUPER 61" was first of the new family of Stretched DC8 aircraft. This version combined 2 fuselage plugs stretching the body 36ft 8in with the standard wing and fanjet engines from the DC8-50 series, offering 45% greater capacity and better economics for a slight range penalty. It was produced in both PAX and convertible versions.

Convertible models (capitalizing on Douglas's successful DC8 JET TRADER) featured the same 140in X 86in port side forward fuselage main-deck cargo door of DC8-50F aircraft for flexible or mixed PAX/freight operations with capacity for 4 to 18 LD3 containers or up to 75,000lbs of cargo. All SUPER DC8 series aircraft featured enlarged 56in X 60in starboard side lower fuselage baggage/freight hatches with upward sliding doors and strengthened center sections with thicker skin and frame modification to withstand flexing imposed upon the elongated fuselage in-flight. Despite the increased size some 2,000lb were shed from the weight of the larger structure (substituting some interior metal components for plastic substitutes) in order to certify the aircraft according to DC8-55F MTOW, though flight testing later proved the aircraft substantially more capable. Additional forward and rear emergency exits were incorporated into the longer fuselage to comply with FAA emergency evacuation regulations and the aircrafts greatly enlarged capacity. The location of both these exits and cabin window configuration on some aircraft varied according to airline specifications. DC8-61 improvements included a revised cabin air conditioning system to more efficiently service the aircrafts greater interior volume, enlarged leading edge wing slots, minor revisions to the flap system, and a DC9 type flight deck which became a standard feature of all production DC8-60 type aircraft. The very first DC8 SUPER 61 was rolled out at the Douglas Long Beach California plant on January 24 1966. It first flew on March 14 1966. Flight testing revealed slightly improved T/O performance/reduced field length requirement, slightly less noise, enhanced climb characteristics, greater in-flight stability than previous DC8-50's, and slightly shorter landing roll. Performance and reliability evaluation of DC8-61 were conducted between August 16 1966 and August 18 1966 with a test flight from Long Beach to Tokyo, operated in 11 hrs 50 mins, then Tokyo to Winnipeg, operated in 11 hours. The FAA certificate for the standard DC8-61 was approved on September 1 1966, followed by certification for the -61CF model on June 11 1967. United Air Lines took delivery of the first DC8-61 (L/n #252) on May 7 1967, followed by the first -61CF which was delivered to Trans International Airlines on June 16 1967. Prior to service entry and much to the concern of contracting airlines, DC8-61's were under threat of being banned from some airports around the world due to misconceptions by both noise lobbyists and airport authorities whom were initially concerned by prospective impact of such a large aircraft upon surrounding airport environments and existing airport facilities. The DC8-61 was ultimately proven less noisy than DC8 JET TRADER aircraft and increasing ground support services associated with aircraft turnarounds considerably minimized impact upon airport resources. A total of 88 DC8-61's were produced by McDonnell Douglas. 10 of these were built as CF models. Although originally offered by Douglas, DC8-61's were never produced as pure freighters. Upon conclusion of their PAX service a number of these aircraft were converted to freighters during the late 1970's, re-designated DC8-61F such as those which served Air Transport International, Airborne Express, Fine Air and others. These aircraft mostly featured plugged cabin windows and had capacity for 18 LD3 containers or payloads of up to 88,490lbs. 53 DC8-61's were later upgraded to -71 and -71CF aircraft during the early 1980's, re-engined with quieter, more powerful, and fuel efficient CFM56 hi-bypass fanjets. Many of these aircraft still remain in service today with major freight operators around the world. All DC8-61 aircraft had a fuselage length of 187ft 4in, wingspan of 142ft 5in, capacity for 210 PAX in a dual First/Economy Class layout or up to 269 PAX in a Super Economy Class cabin (depending on airline/aircraft configuration), and range of some 3,256nm (depending on payload and reserves). Standard DC8-61's had a MTOW of 325,000lbs whilst both convertible -61CF and pure freight -61F models were certified for up to 328,000lbs. All series -61 DC8's were powered by 4 P&W JT3D-3B fanjet engines each rated at 18,000lbs/st.

Parallel to developing DC8-61 for high density medium/transcontinental operations, Douglas also sought to address

ultra long range/intercontinental markets. European carriers wanted an aircraft capable of flying non-stop and with a full payload between the continent and US West Coast. Re-evaluation of the DC8's aerodynamic efficiency in order to increase range and compete more effectively with B707-320C became the company's priorities in response to this request, which evolved into both DC8 SUPER 62 and -63 jetliners.

Full Text:

<http://tonymadgehig.proboards.com/index.cgi?board=jetlinerfacts&action=display&thread=768#ixzz1QEJCAUKP>



DC-8-61 passenger aircraft

Thank your downloading the Historic Jetliners Group's AI model of the Douglas DC-8-61.

Unlike most AI aircraft, which are only designed for being looked at as a distance, this model is designed to be looked at close up, a Hi-Fidelity AI model.

It has opening main deck doors, and the freighter has an opening cargo door which also set it apart from other AI aircraft.

It has been built from the ground up in FSDS V3.51 to fit in the footprint of the existing HJG DC-8 series.

It achieves this goal quite well, but is not and cannot be a perfect clone, but with the help from Dee Waldron and his source files, it has got a lot closer. Thank you Dee.

This enables the use of the existing library of textures for the HJG DC-8-61 to be used with this model.

There are three base models:-

The DC-8-61 PAX version and the DC-8-61F freighter version, and also a door less model.

The main difference is that the dedicated freighter does not have an opening main entry door, but an opening main deck cargo door, and the door less model, as the name says, has no opening fuselage doors.



DC-8-61F showing opening main cargo deck door and service door

The doors are controlled by XML, which also controllers the flaps for takeoff and landing.  
 The thrust reversers are fully modelled with sliding cowls and working louvre doors.  
 The fuselage , engines and some other areas have the shine built into the model material, so as to avoid those over bright colours and totally over the top shiny engines that some people seem to produce.  
 The picture above is in full sun, and you can see the shine on the top of the fuselage and engine nacelles.

There are many more small details like pitot tubes, engine fans, compressing gear etc.

The fuselage and vertical tail use standard HJG textures, which have been converted to DXT1 with a white alpha and no Mip Maps. This gives smaller texture sizes and reduces the chance of having blurred textures, but still gives good resolution on the fuselage compared to most AI aircraft.

The takeoff run is longer than most AI big jets, and the landing run is about the right distance.  
 This can cause go a rounds at busy times.

A smoke effect is available which will cause the DC-8 to leave smoke from takeoff to landing

The XML control of the main deck freight door and rear service door is set to open and close when the navigation lights are turned on and off. This is normally about fifteen minutes before pushback, and fifteen minutes after she has parked on stand or gate.

The front entry door is shut just as pushback starts, and opens as soon as she stops at the gate.

Because of how the doors are operated, the textures and models fall into two categories.

DC-8-61, passenger model and can be used if you don't want all your freighters to have opening cargo door.  
 All combi and convertibles are included in this section. IE CF. F Has opening entry and service doors.  
 The door less model has no open doors and will use both texture sets.

Model:- HJG\_AI\_Douglas\_DC-8-61\_vx.x

Texture set :- dc-8-61x.xxxxxxxxxxxxxx

DC-8-61F, freight only version with opening main deck cargo door.  
All F,CF models in pure freight layout. Has opening main deck cargo door and service door.

Model:- HJG\_AI\_Douglas\_DC-8-61F\_vx.x  
Texture set :- dc-8-61fx.xxxxxxxxxxxxxx

Be careful not to install PAX textures into the freight version. Ladders are not supplied for passenger disembarking!

### **Model statistics**

Each model has ten levels of detail models (LODS).  
Here is the polygon count for each model and LOD as measured in ACM V2.5.

DC-8-61		DC-8-61F		DC-8-61 No Door	
LOD1	12859	LOD1	12767	LOD1	12454
LOD2	11559	LOD2	11467	LOD2	11154
LOD3	8261	LOD3	8240	LOD3	7854
LOD4	6687	LOD4	6900	LOD4	6499
LOD5	4511	LOD5	4724	LOD5	4276
LOD6	3313	LOD6	3470	LOD6	3217
LOD7	2784	LOD7	2862	LOD7	2784
LOD8	1566	LOD8	1644	LOD8	1566
LOD9	910	LOD9	1040	LOD9	910
LOD10	218	LOD10	218	LOD10	218

There are two aircraft.cfg files supplied.

One for use with Shockwave Lights, and one using the standard Flight Simulator lights.  
Shockwave lights are used as standard

Shockwave Lights dramatically improve the light effect in FS2004 and FSX.

For FS2004 users, she has also been aliased to use the touchdown and reverser sound effect from Tom Gibson's AI sound package ([http://www.calclassic.com/files/AI\\_Sound\\_Effects.zip](http://www.calclassic.com/files/AI_Sound_Effects.zip)).

This also includes files which improve the taxi, roll and flyby sounds made by FS2004 AI aircraft.  
Thanks Tom.





DC-8-61, showing the open louvres on the nacelles

## Installation

### Base packs

To install the DC-8-61 base pack, just unzip into your Aircraft folder for FS2004.  
For FSX, unzip the base pack into your SimObjects\AI Aircraft folder.

One texture pack for each model is included, so she is ready to fly immediately.

### Texture packs.

- (1) Unzip the repaint to a temporary folder
- (2) Copy the texture folder to the HJG\_AI\_Douglas\_DC-8-61\_vx.x or HJG\_AI\_Douglas\_DC-8-61f\_vx.x folder.
- (3) Open the aircraft.cfg and add the [fltsim.xx] section that was in the add to aircraft.txt file that came with the repaint, making sure to edit the "xx" to the next number in sequence.

For use in AI flight plans, it is important that the aircraft name matches that used in the flight plan.

EG, example used from the American Flyers 1970 flight plans available from Retro Ai ( [retroai.webatu.com](http://retroai.webatu.com) ).  
This example uses a DC-8-63 model.

The contents of the aircraft text file.  
AC#1,459,"FF LOE"

AC#2,459,"FF 727"

AC#3,459,"FF D8S"

AC#3 is the DC-8-63, so the aircraft.cfg file must be changed to match this.

Portion of the existing configuration file.

```
[fltsim.0]
title=HJG AI Douglas DC-8-63CF American Flyers Airline 1970
sim=HJG AI DC-8 63
model=
```

The title must be changed to match the name in the flight plan.

```
[fltsim.0]
title= FF D8S
sim=HJG AI DC-8 63
model=
```

This is the biggest cause of AI aircraft not showing up in the sim.

To use the door less model, add ND to the model line, IE

```
[fltsim.0]
title= FF D8S
sim=HJG AI DC-8 63
model=ND
```

For any questions regarding HJG aircraft or installation problems, visit the HJG website at:

<http://www.simviation.com/hjg/>

My thanks to Tom Gibson who supplied the XML code that operates the front entry door. Thanks again for your help Tom.

Dee Waldron who supplied me with the HJG V5 source file enabling me to improve the model considerably.

Christian Gold who helped beta test the model, and all those who also added there input..

I hope you enjoy using this AI model.

Paul

Version History.

V1.00 Initial release

V1.10 Updated the following:-

Contact points lowered so that the nose wheel has weight on it and no longer seems to hover over the ground.

Fuselage remapped. Now exactly the same as the UI DC-8.

Fuselage length errors on fuselage 3 and 4 on the 61F corrected.

Redundant internal parts removed from the door less model.



Loftleider Icelandic DC-8-61CF

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