

“Air Scheffel” Boeing 737-800 for FS2004



www.airscheffel.com

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Please have a look at the credits at the end of this manual, because I don't want to claim any credit for things I didn't make.

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A WORD FROM THE PROGRAMMER

Although I checked this package over and over again, it is always possible you encounter a bug. You can report bugs by sending an email to arjanscheffel@hotmail.com

I chose to make this aircraft available without costs, because this is my hobby and not my work. It was much fun making it and it is still very much fun flying with it. Not to forget how nice it is to get 'fan mail' from all over the world from people just saying 'thanx' and how much they like my work. I can't answer them all, but of course I appreciate those messages and like to thank everybody expressing their appreciation.

Enjoy!

HARDWARE REQUIREMENTS

I made this 'Air Scheffel' Boeing 737-800 panel for own use, which also means it runs OK with my preferred settings on my hardware, which is (at this moment):

- Intel DualCore E8500 processor
- 2 Gb of memory
- 2 very fast S-ATA hard disks (WD Velociraptors) in RAID0 configuration
- 2 ASUS EN8800GT PCI-e videocards (not in SLI configuration)
- 4 TFT monitors (3x 17" and 1x 15")

True, I'm spoiled... But it can be fairly said it's preferred to have multiple monitors. And of course: the faster your computer the better...

SOFTWARE REQUIREMENTS

You need to have MS Flight Simulator 2004 "A Century Of Flight" and also FSUIPC.dll in your 'modules' folder of Flight Simulator. Click [here](#) to download FSUIPC.zip from www.avsim.com (indeed, old version 3.48 because I encountered problems with version 3.7 in relation to the engines/fuel management of my aircraft)

INSTALLATION

Run the included Setup.exe or if you don't trust my installer you can manually copy the 'Flight Simulator 9'-folder from the zip-file to the location where FS2004 is installed on your harddisk.

EFFECTS

This aircraft has many built-in visual effects:



Contrail if outside temperature drops below -20°C



If the runway is wet and thrust is at 35% or above, water will spray up behind the engines



... and in forward direction when reversers are active



Strobe light reflection on the ground



Heatblur behind the engines (hard to see on a screenshot)



...and of course all lights

Important – please read !

In Flight Simulator ALL effects are triggered by light switches. To toggle a light on or off it's recommended to use the light switches on the overhead panel. Pressing 'L' on the keyboard will toggle ALL light switches, resulting in unwanted effects like dumping fuel... So, just **DON'T** use pressing 'L'

Also, if your 'default flight' was saved with all lights switched on already, creating a new flight with this aircraft will have the same result. In that case load a default aircraft first, press the 'L'-key until you are sure all lights are switched off and then you can safely load this aircraft. You can also reset my aircraft (see Overhead, button 15) and then save the flight.

COCKPIT VIEWS



CABIN VIEWS



In-flight Entertainment:

- Below 5,000 ft the "Air Scheffel" logo will be showed on the TFT's in the passengers cabin.
- After you start taxiing a short safety video will be presented.
- Between 5,000 and 15,000 ft the monitors will show a moving map showing current location (like the GPS-gauge)
- Above 15,000 ft the main movie will be shown, which is (a looped clip of) "Gone In 60 Seconds".

In-flight music:

After installing this package, no songs will be assigned to the buttons yet. To assign a song right-click on the button; a window will open and you can select any *.mid, *.mp3, *.wav or *.wma file on your haddisk and also set the volume.

I sent Robert Clark an e-mail to ask if he could remove the click sound and change the 'no file assigned' tooltip, but unfortunately he never responded. I changed the tooltip myself with a hex-editor, but therefore I had to use the same length of text.

The best I could think of was 'R-Click 2 select'.

CHECKLISTS

Because so many switches really have a function I decided to make a semi-automatic checklist feature:

The screenshot shows the 'Air Scheffel' checklist interface. At the top, there is a logo and a close button (X). Below the logo is a table with flight phases and checklist items. The 'Approach' phase is currently selected. The checklist items include: LANDING WEIGHT AND DATA (CHRD), DECISION HEIGHT (SET), AUTOBRAKE (SET), AIRSPEED (190 KIAS), RUNWAY TURNOFF LIGHTS (ON), TAXI LIGHTS (ON), WING & WHEEL WELL LIGHTS (ON), FLAPS (5), AP HEADING (when VOR/LOC engages) (SET TO RWAY), AIRSPEED (170 KIAS), FLAPS (15), AIRSPEED (when glideslope active) (150 KIAS), FLAPS (25), and CABIN CREW (NOTIFIED). Annotations with green lines point to various elements: the close button, the logo, a specific checklist item, the manual check button (a small square icon), and the main panel icon at the bottom-left.

Cockpit Preparation	IFR & Taxi Clearance	Before Start	After Start	Before Takeoff	After Takeoff
Climb Checks	Descent Checks	Approach	Before Landing	After Landing	Parking

LANDING WEIGHT AND DATA..... CHRD
DECISION HEIGHT SET
AUTOBRAKE..... SET
AIRSPEED 190 KIAS
RUNWAY TURNOFF LIGHTS ON
TAXI LIGHTS ON
WING & WHEEL WELL LIGHTS..... ON
FLAPS..... 5
AP HEADING (when VOR/LOC engages) ... SET TO RWAY
AIRSPEED 170 KIAS
FLAPS..... 15
AIRSPEED (when glideslope active)..... 150 KIAS
FLAPS..... 25
CABIN CREW..... NOTIFIED

Click here to close the checklist

To set the 'auto-mode', click on the 'Air Scheffel'-logo. It's very useful to prevent maddening switching between panels if you just have one monitor, or when you feel just too lazy today to work through the checks yourself...

You can select a specific checklist by clicking on it's description.

Clicking anywhere else will check current item manually

Clicking on this icon on the bottom-left of the main panel will open the checklist

Note: A part of this checklist feature is not anticipating on visual landings because some items are triggered by IFR autopilot events. These items have to be checked manually.

MAIN PANEL



1. Open overhead panel
2. Reset Master warning lights
3. Panel buttons

THR = Throttle Quadrant
 RAD = Radio panel
 OHD = Overhead
 RWI = Runway Info
 GPS = Self Explanatory
 MAP = Self Explanatory

4. NAV/GPS switch
5. Taxi-Control:

Set the knob to the preferred groundspeed. If taxi-control and 'Autoview' (See #6) are both active, the view direction is tilted slightly downwards to make it easier to see the taxiway. By manual braking (more than 50% which means braking long enough or set parking brakes) the taxi-control is switched off, throttle set to idle and the view direction reset.

6. Taxicontrol active indicator
7. Autoview active indicator
8. Decision Height
9. Look Up/Down

(You need to click on the lower half of the button, because the wiper gauge is partially overlapping this button)

10. Autoview on/off

Autoview is a feature that automatically changes the viewpoint when Taxicontrol is active or during approach.

On approach the aircraft's nose points up (about 3-5 degrees) which makes it very hard - if not impossible - to see the runway. In real life the pilot would just stretch his back a little, but that wouldn't do much good in FS... When Autoview is active the viewpoint shifts during approach. After touchdown the view is reset to normal.

11. Autopilot panel
12. Clock / Chronograph
13. PFD modes
14. Warning lights test
15. EICAS modes
16. Autobrake
17. Gear
18. Show/hide checklist
19. Pitch trim indicator
20. Barometer
21. Fuel dump (FSUIPC.dll required)

To dump fuel: first click this little 'button'. A pointer will appear on the fuel quantity gauge in the EICAS screen. Clicking in the area left/right of the little button will move the pointer. After setting the amount of fuel you want to remain you click the little button again to start dumping fuel. Fuel dump stops automatically when the level reaches the pointer or when the button is clicked again.

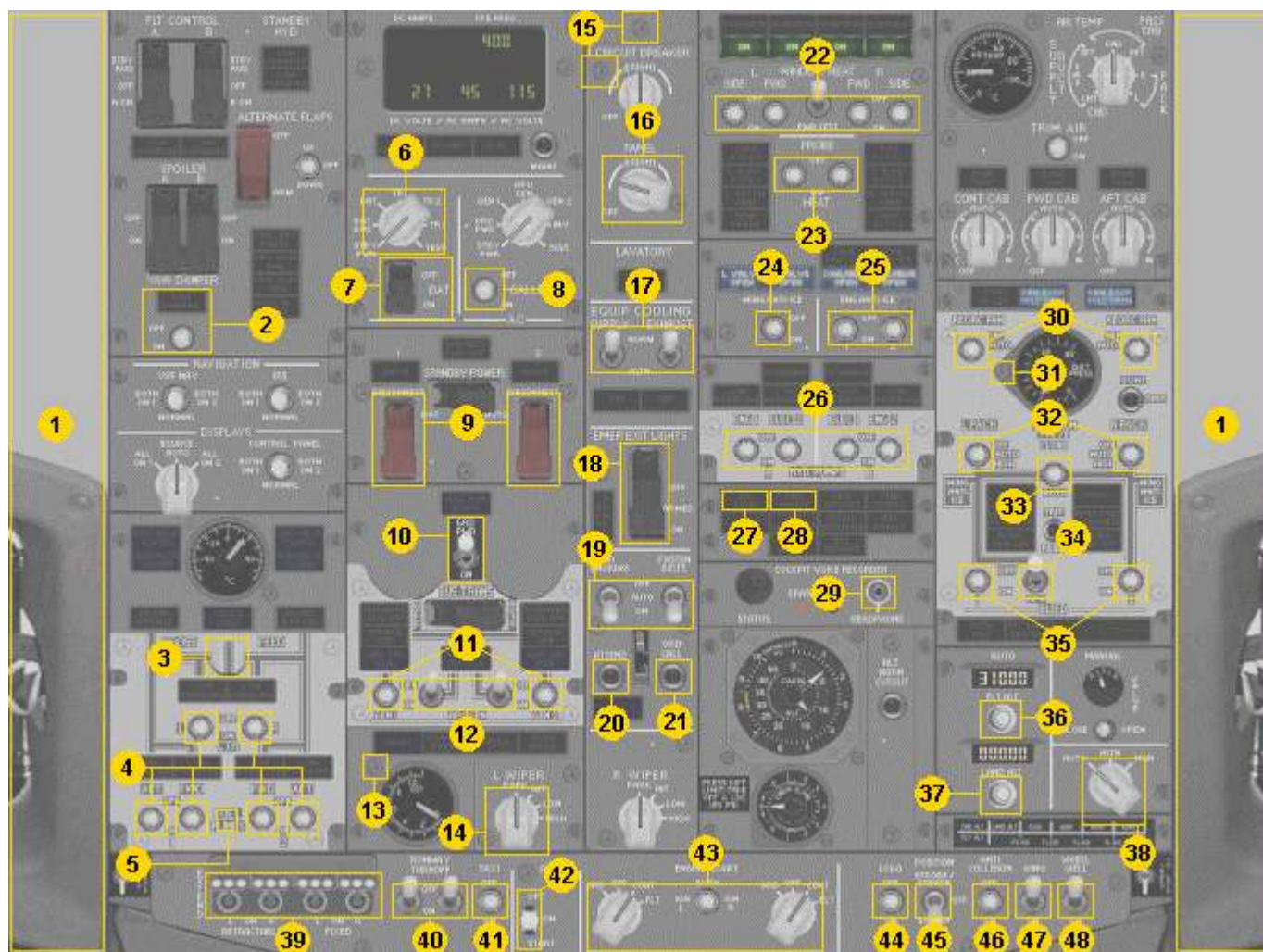
Note:

Changing the autopilot airspeed setting 'the Microsoft way' was driving me nuts, because the interval kept changing. So I made a workaround for it to keep the response steady.

I also made an extra gauge: clicking left / right of the speed setting display will decrease / increase the speed setting by 10.

OVERHEAD PANEL

OK... take a deep breath and relax, it ain't as bad as it looks... (And if this is too much for you there's always the checklist Auto-mode)



1. Close Overhead panel

2. Yaw Damper

It takes a little time before the warning light turns off after switching the yaw damper on

3. Fuel Cross-feed switch

A 'cosmetic' switch: turning the knob doesn't have any effect on fuel distribution

4. Fuel Pump switches (separate)

5. Fuel Pump switches (all)

When you click on the label 'fuel pumps' all fuel pump switches will be toggled simultaneously

6. Power Display mode switch

7. Battery switch

Usually turning on the battery switch will start the electronics sound too. But loading a saved flight doesn't... To correct this you can click on the label 'BAT' to toggle that sound manually. (To close the cover, click on the switch in current position again)

8. Galley Power switch

9. Generator Disconnect switches

In case of failure like overheating the generator can be disconnected. It can only be reconnected by ground personnel, so after landing

10. Ground Power switch

11. Engine Generator switches

12. APU Generator switches

13. Toggle APU sound

Usually the APU sound will be on when the APU is running. In some cases it's on when it shouldn't (or the other way around). Clicking this screw will toggle the APU sound manually

14. Wiper switch

15. Reset/Set

Clicking on the top screw will reset the aircraft and sets the parking brakes. Don't try while flying...

Before a quickstart with Ctrl-E Clicking on the other screw will turn most items on (It's necessary to make Ctrl-E work)

16. Panel/Instrument light switch

Some gauges tend to (partially) disappear when turning on the instrument lights. It usually works better when the knob is turned to the far right first (panel lights on) and then back to the centre position.

17. Equipment Cooling switches

18. Emergency Exit Lights switch

19. No Smoking / Fasten Seat Belts

Push this button if you want coffee!

21. Call Ground crew

This opens the Pushback panel

22. Window Heat switches

23. Pitot Heat

24. Wing Anti-Ice

25. Engines Anti-Ice

26. Hydraulics

27. Air stairs

28. Doors open/close

29. In-flight Music gauge

30. Recirculation Fan switches

31. Toggle Air-conditioning sound

Usually the sound of the recirculation fans is on when the switch is on (#30) but sometimes it's contra. Click this screw to toggle the sound manually

32. Air-conditioning Pack switches

33. Isolation valve

34. APU Bleed

35. Engine Bleed

36. Flight Altitude

If set below 10,000 ft the climb- and descent checks are skipped. Cruise altitude briefing starts at 92% of the value (if set higher than 2000 ft). Clicking on the button will copy current autopilot height setting. Clicking left or right of the button will decrease or increase the value by 100 ft (close to the button) or 1000 ft (further away).

37. Landing Altitude (no function)

38. 'Cosmetic' knob, no function

39. Landing lights

40. Runway Turnoff lights

41. Taxi lights

42. APU start/stop switch

43. Engine Starters / Ignition

44. Logo lights

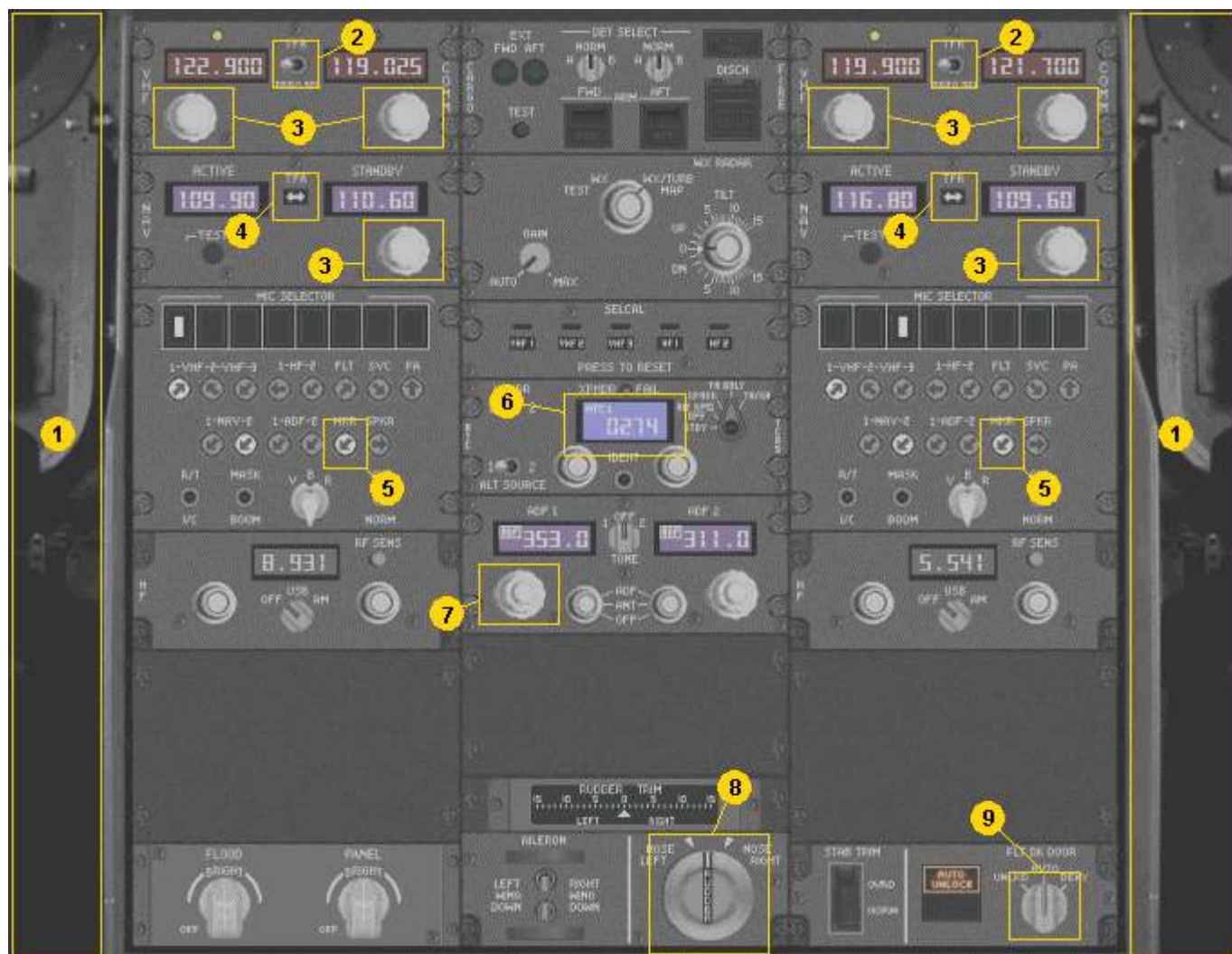
45. Position lights (Nav / Strobes)

46. Anticollision lights (Beacon)

47. Wing lights

48. Wheel well light

RADIO PANEL



1. Close radio panel
2. **COM frequency select switch**
(Or click on the left/right display)
3. **Set frequency**
Divided in 4 areas:



4. **Swap NAV active <> standby frequency**
5. **Toggle Marker sound**
6. **Set transponder**
Click near digits to set

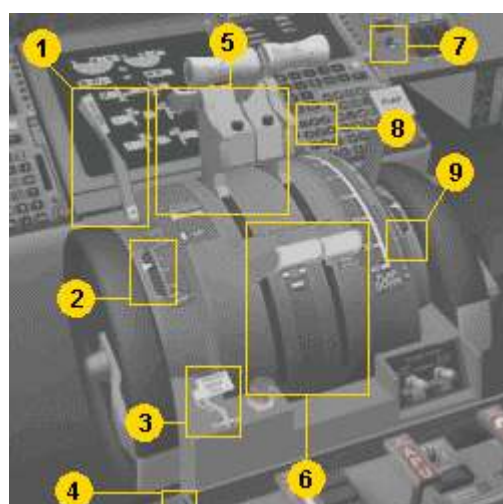


7. **Set ADF1 frequency**
Divided in 6 areas:



8. **Rudder trim**
9. **Flightdeck door lock**

THROTTLE QUADRANT



1. **Speedbrake lever**
2. **Pitch Trim indicator**
3. **Parking brake**
4. **Select both engines** (if pressing E,1,2 doesn't work)
5. **TO/GA**
6. **Fuel levers**
7. **GPWS (test)**
8. **Flaps decrease**
9. **Flaps increase**

A note on fuel consumption:

The centre fuel tank is used first. When it's almost empty, the fuel system will automatically switch to the wing tanks.

OTHER GAUGES

VSAT (Vertical Speed At Touchdown)



When you land this aircraft, it will measure your descending speed in meters per second just before touchdown.

This is a good indication if the landing was a neat one.

If your descending speed is between -1 and 0 m/s you will hear applause from the passengers cabin and the FO will give you a little compliment

Pitch trim indicator

Pushback gauge:



(To make the gauge visible: See overhead panel item #21)

You can set how far the aircraft has to be pushed straight back (in seconds) by clicking on the left/right side of the number in the upper left corner.

By clicking on one of the nine spots you can set in which direction you want the tail of the plain to be pushed.

To start pushback click on the aircraft.

ABOUT STARTING THE ENGINES

To prepare the aircraft for engine start, make sure you execute all items on the checklist(s), most of them are important.

Check:

- joystick throttle is idle (if you haven't moved any controls on your joystick yet you need to move the throttle up and down again)
- APU is running and APU bleed is on
- Isolation valve is set to auto
- Fuel pumps are on
- EICAS fuel gauges are indicating there is enough fuel in the tanks

Actually starting the engines is just a matter of - like in the default B734 - turning the starter knob on the overhead panel (to 'GRD') and open the fuel valve on the throttle quadrant at 20% N2.

If you want to skip going through the checklists and quick start the engines you can click on the screw on the overhead panel (see Overhead, item #15) and after that press Ctrl+E

FSUIPC.dll

I've read on a forum version 3.70 of FSUIPC.dll has some flaws which apparently have influence on my aircrafts' engines and fuel dump gauge...If you have latest version installed please try to re-install an older version. I'm still using v3.48 and everything works just fine.

ABOUT SAVING FLIGHTS

This panel has many switches. Just a few of them exist by default in Flight Simulator 9. Unfortunately only the state of those default switches will be kept when you save a flight.

This means when you open a flight that was saved with this aircraft, a lot of switches will be off again and warning lights back on. I managed to find a way to save the state of the fuel pump switches though by using the ADF2 radio frequency (which normally isn't used) to store the state of the 6 fuel pump switches. Concerning the other switches, also see Overhead, #15

ABOUT LANDING

If you're having troubles landing my aircraft smoothly, please keep in mind that a landing speed of ~140 kts is meant for an aircraft with not too much fuel left in the tanks. With more fuel (and so more weight) a higher landing speed is required.

SOUNDS

Thanks to the fantastic sound gauge programmed by Douglas Dawson I could use ± 200 different sounds: various switch-clicks, checklists, briefings, announcements, GPWS, wiper sounds, applause after a smooth landing, etc, etc... You can even hear coffee being served, if you want to!

Instead of using the volume sliders in Flight Simulator 9, I chose to make the sounds themselves sound about right. So I never have to reconfigure or remember the sound settings after a re-install of Flight Simulator 9.

All sounds were resampled to 22.500 Hz 16-bit mono. For some reason my old soundcard went nuts when different formats were used.

I also used EditVoicePack to add 'Air Scheffel' along with some other (existing) Dutch airline companies to the soundpack. Because the result is a sound file of over 280 Mb, I just included the AS738.vcpmod-file. With EditVoicePack and this vcpmod-file you can add them to your ATC sound file too.

Adding 'Air Scheffel' to the ATC VoicePack:

If you would like the ATC controllers to pronounce the 'Air Scheffel' callsign, you can add it with the EditVoicePack v3.1 program. It's included in the "extra" folder. Microsoft .NET Framework v1.1 is required. If it is not installed on your system, setup will guide you to a server to download it.

Step 1: Make sure the voicepack is NOT accelerated. If the file 'Flight Simulator 9\Sound\Evp_Accelerated.gvp' exists, delete it and rename USEnglishBig.gvp.evpOrg - in that same folder - to USEnglishBig.gvp

If you don't have the USEnglishBig.gvp.evpOrg backup file anymore, you can extract USEnglishBig.gvp from the Msgame5.cab file on CD2 of FS9

Step 2: Install and run the EditVoicePack program, import my AS738.vcpmod file and let the program update your ATC soundfile

Step 3: If you like the accelerated voicepack, you will have to accelerate the altered voicepack again, with the FS2004 SDK version of EditVoicePack (If only MS understood the concept of "downwards compatible"...) You can download the FS2004 SDK version [here](#) from Microsoft, it's 18 Mb.

Interesting downloads:

Popup message killer

FSCamera

Asynchronous strobes

by Julie Rhodes

by Gunnar Dähling

by Scott Gridley

download [here](#) from www.avsim.com

download [here](#) from www.avsim.com

download [here](#) from www.avsim.com



CREDITS

I renamed some gauge- and effect-files to AS738*. * to make it easier to determine which gauges are used by my aircraft and in some cases because I altered the files slightly. Renaming those files prevents overwriting your existing files.

I want to stress the fact I did NOT rename/edit files of others to claim it's my work.

Aircraft:

Aircraft model	Eric Cantu (FFX)
Flight model	Arjan Scheffel
Air Scheffel textures	Arjan Scheffel
Cabin-views	Arjan Scheffel, based on screenshots or photos found on the Internet: Cabin forward: Justin Topliff Cabin right: Alexander Portas

Sounds:

Captains voice	Chip Barber
Flight Officers voice	Frank Clayton
Engine sounds	Christoffer Petersen
Other sounds	A selection of files, mostly downloaded as freeware from the Internet
Mixing / Editing / Resampling	Arjan Scheffel

Effects:

Rainwash/reverser effect	Arjan Scheffel
Heat blur effect	Nick Needham, finetuned by Arjan Scheffel
Navigation lights	Arjan Scheffel
Strobe light reflections	Arjan Scheffel

Gauges:

AS738 XML gauges	Arjan Scheffel
Runway Info	Ernie Alston, made transparent by Arjan Scheffel
XML sound gauge	Douglas Dawson
Fuel dump	Douglas Dawson
In-flight Music	Robert Clark, made transparent / tooltip changed by Arjan Scheffel
GearWind	Andreas Jaros
GearSound	Andreas Jaros

Miscellaneous:

Rotating globe on TFT's in passengers cabin	Grone Meijer
EditVoicePack import file	Arjan Scheffel

I'd like to express my sincere and special thanks to Douglas Dawson, Chip Barber and Frank Clayton, who were willing to help me personally with my project.

Also thanks to the people from www.avsim.com and www.flightsim.com for all they do, Google Image finder for helping me find useful detailed photo's of the B737 flightdeck and of course Microsoft for doing such an awful lousy job on the default aircraft of Flight Simulator 9 (among others), otherwise I would never had started this project in the first place, but it was - and still is - fun!

TO DO LIST

- Better and more detailed aircraft model (but certainly without those horrible built-in GMax lights)

NO FSX COMPATIBLE VERSION

Because Microsoft (usually) doesn't make new versions downwards compatible, they force everybody to re-program and re-buy every add-on again and again and again. I tried FSX and wasn't very thrilled, disappointed even. Almost everything that makes this panel special doesn't work anymore in FSX. As far as I'm concerned... so be it. I won't upgrade to FSX, so I don't think there will be an FSX compatible version of this birdy.

CONTACT

For suggestions, feedback and/or useful information to improve my project, you can contact me by sending an email to:

arjanscheffel@hotmail.com

A FINAL WORD

To make sure rookie pilots won't be loosing any sleep over a horrible crash they've caused in Flight Simulator 2004, the passengers cabin of the 'Air Scheffel' Boeing 737-800 is equipped with laughing gas (nitro) instead of oxygen.

Besides the fact that it's a great anaesthetic, it also turns an unfortunate crash into a hilarious happening for all passengers... ;-)

Cheers and happy landings!

Arjan