

# TENKUU DEVELOPERS STUDIO

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## ***BOEING 727-200***

### User Manual v1.0

For use with Microsoft Flight Simulator 2004, FSX, and Lockheed-Martin Prepar3D\*

\*While installation was verified to have worked in P3D, due to licensing agreements and lack of standard airline gauges, we cannot provide official support for it.

This aircraft and manual are not to be substituted for real-world training.

Thank you for downloading the Tenkuu Developers Studio (TDS) Boeing 727. This aircraft is available as freeware – the authors of this aircraft do this as a hobby for the Flight Simulator community. As such, under no circumstances may this package be edited, recompiled, redistributed with the exception necessary for freeware repaints. No goods or services, monetary or otherwise, may be exchanged for this or any included contents of this package.

This manual is to be used as a guide to installation, utilization of features, and avoidance of common errors. This is not a Pilots Operating Handbook and does not include any tools for flight planning.

This aircraft was tested on various computers, running various scenery add-ons, weather and replacement textures, etc. It was not found to have caused damage to any computer. However, Tenkuu Developers Studio is not liable or responsible for any issues caused by downloading, installing, or using this package. The user assumes all risks.

#### Credits:



**Hiroshi Igami** – 3D Modeler, XML Programmer, Utility Panel Creator, Generic Textures



**Kyle Schurb** – Master Texture Artist, Paint Kit Creator, User Manual Author



**Nicholas Wilkinson** – Flight Dynamics Engineer, Test Pilot



**David Biggar** – XML Programmer, Engine Smoke Effects Creator



**Carlos Eduardo Salas** – House Livery Painter, Texture Artist



**Luiz Antonio Perina** – Texture Artist, Test Pilot



**AJ Nikoley** – Texture Artist



**Stian Svensen** – Texture Artist



**Yosuke Ube** – Texture Artist

Thanks to others that helped test, develop liveries, or documentation, including: Joe DeGregorio, Simon O'Smotherly, Christopher Allen, Ben Fluth, Ken Wigginton, Erick Cantu, and others we have likely forgotten.

TDS is a small group created from former Project Opensky (POSKY) and SkySpirit (SSP) members. The word "Tenkuu" is Japanese, meaning "Heaven's Sky."

For support/discussion, please visit our Facebook page at: <https://www.facebook.com/groups/tds727/> or our forum at <http://tdsaircraft.prophpbbs.com>

### **Installation:**

**FS2004** – Place the included “TDS\_B727-200” or “TDS\_B727-200F” folder into your Flight Simulator 9/Aircraft directory. Inside of the TDS\_B727-200 folder will be an Effects folder. Place the contents of the Effects folder (except for the included readme.txt file) into your Flight Simulator 9/Effects folder. The “tds\_smoke” bitmap should now also be in your Flight Simulator 9/Effects/texture folder.

**FSX** - Place the included “TDS\_B727-200” or “TDS\_B727-200F” folder into your Microsoft Flight Simulator X/SimObjects/Airplanes directory. Inside of the TDS\_B727-200 folder will be an Effects folder. Place the contents of the Effects folder (except for the included readme.txt file) into your Microsoft Flight Simulator X/Effects folder. The “tds\_smoke” bitmap should now also be in your Microsoft Flight Simulator X/Effects/texture folder. *Prepar3D installation will be very similar.*

### **Operation:**

The TDS B727 includes an automatic smoke system developed by David Biggar, which will activate at a specific fuel-flow rate. It is not necessary to push “I” to activate. Should you choose not to use the automated smoke, you can remove any of the associated smoke files (“db72smoke.fx” from ‘Effects’ or remove the “TDS\_Smoke” xml gauge from the panel/Tds\_727\_util (or Tds\_727F\_util) folder). Or simply “comment out” (//) the panel.cfg entry for the smoke system.



### *Utility Panel*

As with all TDS aircraft, Hiroshi Igami created a customized “Utility Panel” to allow specific control of the Advanced Lighting System and Ground Equipment/Door operation. The utility panel may be opened by simultaneously-pressing **SHIFT** and **7**.



Due to the complex nature of the custom xml and panel files, should you choose to merge your own 2d panel (or virtual cockpit – FSX) it is important to keep the original TDS utility panel and associated xml files intact within the panel folder and panel.cfg file. Otherwise you will lose the custom xml animations and programming, and the aircraft will revert to “Default Animation Mode” where the light effects get unrealistic, no self-illumination (cabin light effects, beacon and strobe ‘splash’ effects), etc. Visit our Facebook page or forum for more details or help with customizing your own choice of 2D panel/virtual cockpit.

We recommend 2D panels from Historic Jetliners Group (HJG) or Thomas Ruth. Edit your aircraft config to match the radios used by your panel. Tom Ruth's 727 panels use radios with standby radios. Accordingly, for use with his panel, your aircraft configuration file must have this entry (also for use with the default panel):

[Radios]

//RUTH TYPE PANELS//

Audio.1 = 1

Com.1 = 1, 1

Com.2 = 1, 1

Nav.1 = 1, 1, 1

Nav.2 = 1, 1, 0

Adf.1 = 1

Transponder.1 = 1

Marker.1 = 1

HJG's panels do not have standby radios. For use with these panels, your aircraft config must have this entry:

```
[Radios]
//HJG TYPE PANELS//
Audio.1=1
Com.1=1, 0
Com.2=0, 1
Nav.1=1, 0, 1
Nav.2=1, 0, 0
Adf.1=1
Adf.2=1
Transponder.1=1
Marker.1=1
```

... of course, you are certainly free to use any panel you choose.

### **Missing/Broken Wings:**

The TDS B727, like all of our aircraft, include a theft-prevention code that will “break” the wings of the external model. If your aircraft is missing or has broken wings or other missing critical components after installing a repaint or modifying the aircraft.cfg, it is because the “title=” content is missing information. "FREEWARE\_(C)\_TDS\_01AUG2014" must ALWAYS be included to prevent this from happening. Any characters after that, are your choice. FSX has a limitation of 127 total characters.

### **How can I change the antennas, show the gravel kit, etc.?**

The base package includes a “TDS\_727\_Option” PDF that was written by Hiroshi Igami to address these.

### **What do all of the different model codes mean?**

We’ve recreated virtually every version of the 727 that was ever produced or modified. See the images below. Additionally, see the following letters and their meanings...

**W** – Winglets installed

**E** – Eyebrow windows removed (Above the cockpit)

**C** – Standard JT8D engines with clamshell thrust reversers

**HF** – FedEx Hushkit – typically how you would have seen a B727 towards the end of their lifecycles

**HR** – Raisbeck-equipped engines - <http://www.raisbeck.com/products/commercial/boeing727>

**F** – Freighter/Cargo



model.W - Standard JT8D with winglets



model.C - Standard JT8D with clamshell reversers



model.HF - FedEx Hushkit



model - Standard JT8D



model.217 - JT8D-217 Engines

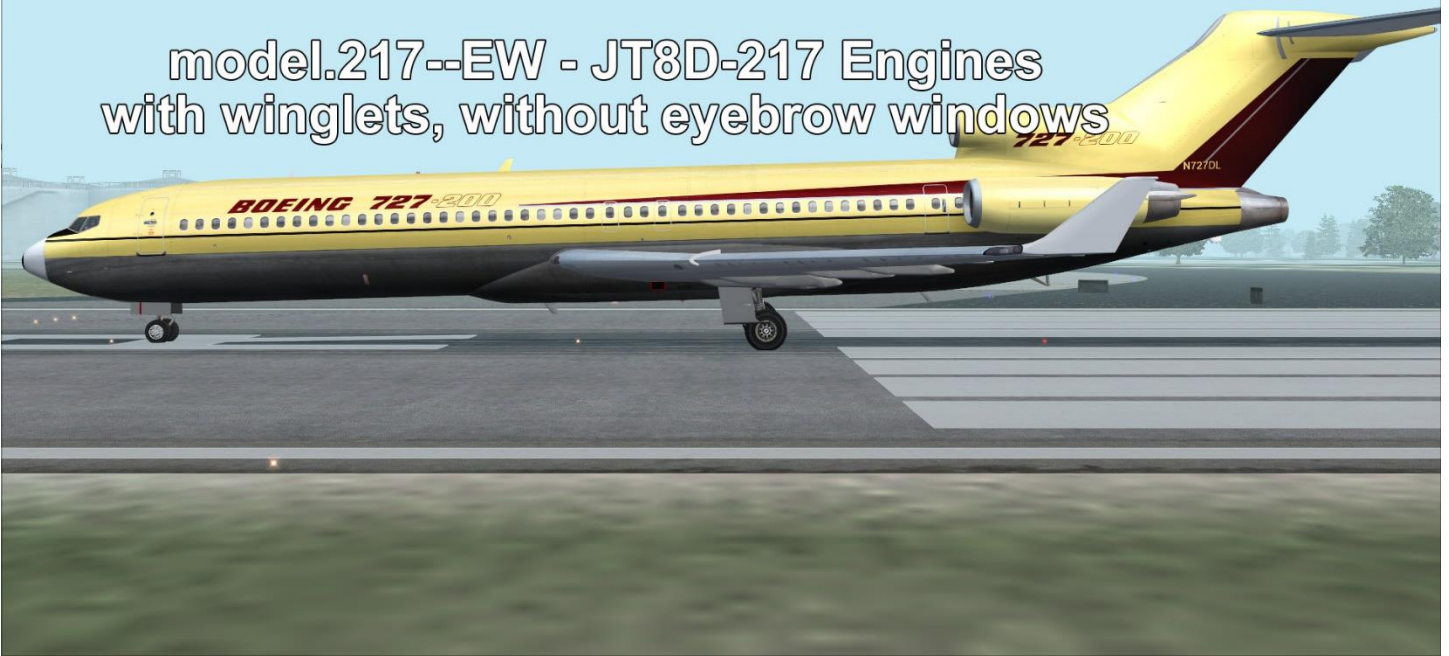


model.217--W - JT8D-217 Engines  
with winglets



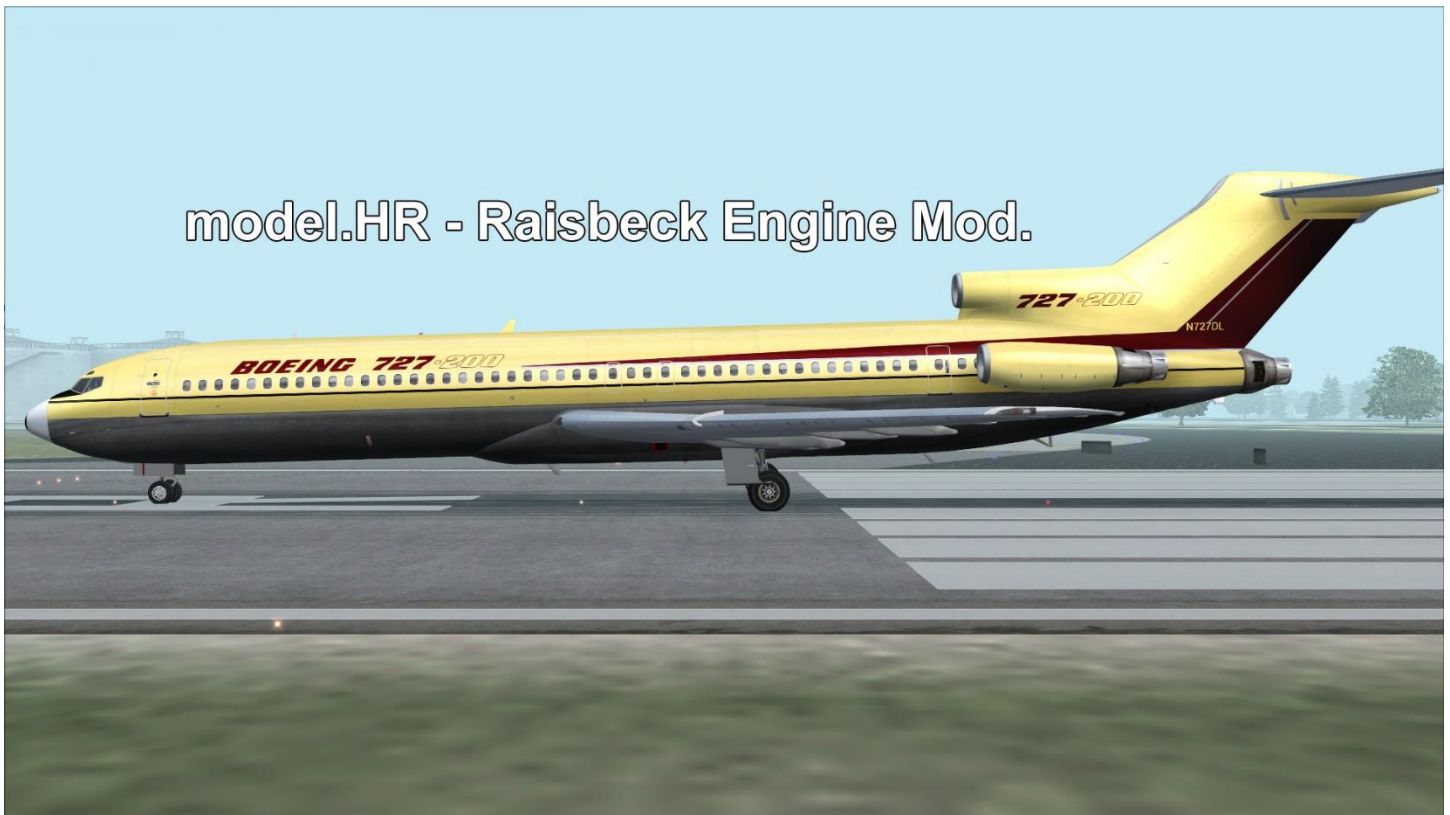


model.217--EW - JT8D-217 Engines  
with winglets, without eyebrow windows



model.9SER--W - “SER” version  
center reverser, with winglets





Additionally, a “Flight Dynamics” folder is included in the base package with different flight characteristics for a few of the variants. Should you find yourself flying a particular model often, feel free to replace your main 727’s aircraft.cfg and “.air” file with one of the alternates.

Any questions, please visit our Facebook visit our Facebook page at: <https://www.facebook.com/groups/tds727/> or our forum at <http://tdsaircraft.prophpb.com>

Thank you very much,  
Kyle Schurb, and the rest of the TDS Team!

