MelJet

Boeing 777
Version 1.0

Release 1

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for Flight Simulator 2002

User's Guide

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Introduction

Hi there! Thanks for downloading this aircraft. This rendition of the Boeing 777 is the latest in the line of high quality MelJet aircraft for Microsoft Flight Simulator 2002 and has been the product of three months of work. It is totally scratch built in Discreet GMax.

The Boeing 777 first took to the skies in the mid 1990s. Designed to fill the gap between the 767 and 747, this twinjet became a huge success soon after its launch. Today, the 777 family includes the 777-200, -200ER, -300, and -300ER. Plans for future members of the 777 family also include the 777-200LR.

The rendition of the 777 marks MelJet's third attempt at modeling a 777, the first being an FSDS version, and the second being an FSDS/GMax conversion, both of which were unreleased.

Version 1.0 marks the first release of this aircraft.

Opening Cockpit Windows

Opening Engine Cases

Ram Air Turbine

Metal Glare Effects

Reflective Surfaces

Dynamic Wingviews

Flexing Wings

Folding Wings

Animated Hydraulic Pistons

Animated Flexible Gear Hoses

Virtual Cabin

Incredible Detail

Installation & Operation

Installation:

Installing this aircraft is pretty simple. Just move (copy & paste, or cut & paste) the folder [Boeing 777-200 MJ (NAME OF AIRCRAFT)] to your FS2002 aircraft folder. That's it! Now fire up FS2002, select the aircraft from the aircraft menu under "MelJet" and start flying this bird!

Operation:

Please read the following carefully to ensure proper usage of the aircraft.

Function	FS2002 Internal Tag	Key assignment
Maintenance Mode	Passenger Doors	Shift + E
Passenger/Cargo Doors	Tailhook	Shift + T
Folding Wings	Folding Wings	Shift + F

Please note that your installation of FS2002 may not already have the above mentioned key assignments programmed. If so, please go to **Options -> Controls -> Assignments** in FS2002 and map the functions. Also note that the above key assignments may be programmed to any key of your choice.

To get to the virtual cabin, go to virtual cockpit view, look behind you, and then "walk" towards the cabin.

Important Notes:

- The model as provided is aliased to read the panel and sounds off the default Boeing 777-300 and Boeing 737 respectively. If you have deleted or renamed the default FS 777 or 737, the MelJet aircraft might not display on the FS2002 aircraft menu.

- Make sure you copy the folder [Boeing 777-200 MJ (NAME OF AIRCRAFT)] to your FS2002 aircraft folder. Do not copy over the folder containing the screenshot, User Guide, and File_ID.diz as it is.

Version History

A completely scratch-built model. This model is designed Discreet's GMax and is a product of three months of work. This new release features many brand new features. Noteworthy features include a brand new "maintenance mode" featuring opening engine cases, deployable Ram Air Turbine, opening gear bay doors on ground, opening Captain's window; virtual cabin (Business Class); Folding Wings (yes, no airline has ordered them yet but then again, this *is a simulator)*; Flexing Wings; dynamic wingviews; animated reversers with animated fan air blocker doors; see through engines; animated landing gear with fully modeled struts and hydraulic pistons, also featuring animated flexible gear hoses; animated flaps, slats, ailerons, elevators, and spoilers with animated hydraulic pistons; advanced logic nosegear and maingear steering; animated primary and secondary rudder; dynamic shine and reflective surfaces; 3D APU; 3D gear, flap, slat bays; seamless wing-root fairing; extremely detailed all round.

Features

Totally scratch built model
Built from the ground up in Discreet GMax, taking full advantage of all that FS2002 has to offer!

Maintenance Mode
For the first time ever, open the engines and look inside, slide open the Captain's window, deploy the Ram Air Turbines, open the gear bay doors while on the ground and pop in!

Virtual Cabin
Bored? Then get up and take a walk around the cabin! Presently, you can walk through the Business Class Cabin.

Metal glare effects
Otherwise referred to as "dynamic shine" or "sun reflecting off the metal". See the Sun reflecting off the fuselage!

Reflective surfaces
Almost all surfaces have reflective textures. See the metal!

Animated Folding Wings
Although this option has never been purchased by any airline, this feature is modeled in the model. See the outboard section of the wings smoothly fold upwards!

Animated Flexing Wings
See the wing, engine and associated control surfaces smoothly flex upwards! No more popping from position to position.

Animated Hydraulic Pistons
As you extend the spoilers, watch the hydraulic pistons push the spoilers up. As the maingear retracts, watch the pistons in action!

Steerable Nose and Main Gear
When the aircraft taxies on the ground, watch the nosegear steer. Just like the real 777, the aft axle of the main gear also starts steering once the nosegear steers above a certain degree.

Fully animated engines
When the engines are spooling up or shutting down, watch the 3D fan blades spin. When the engines are running, watch the motion blur. When landing, watch the reverse thrust cascades open and close smoothly

Animated reversers with fan air blocker doors
See the reversers slide open, and now, watch the fan air blocker doors close to deflect the air forwards. Views from the back of the engine recommended!

Tilting and compressed/uncompressed landing gear
As you smoothly rotate at Vr speed, see the nosegear smoothly "extend" downwards as the gears become uncompressed. Then, see the huge main gear trucks smoothly tilt back and "hang" down as the giant leaves the ground.

Dynamic Wing views
Look out the window and see the engines spinning, reverse thrusters deploying, slats and flaps extending, all fully animated!

Animated landing gear
Smooth extension and retraction of landing gear. Complex struts and hydraulic pistons modeled as well.

Incredible Detail! **Gear hoses are all modeled and animated!** See the flexible gear hoses move about as the gear extends or retracts.

Animated control surfaces
See the control surfaces move!
Incredible Detail! Watch the hydraulic pistons push the spoilers, or the flap track mechanisms, the secondary rudder in addition to the primary rudder, and much more.

Specific engine types modeled
The three engines - Pratt & Whitney 4000 (112-inch fan) series, Rolls Royce Trent 800, and General Electric GE90 - are all modeled, complete with their specific type of engine strut. What's more, each engine variant has been modeled with its specific type of fan blade. The detail goes right down to the number of blades each type of engine has and the direction they spin.

3D Exterior Cockpit
See the "office" and the pilots inside. Note the 3D window struts!

3D pitot tubes, windshield wipers, slat, flap, spoiler, and gear bays
Modeled after the real 777. When the flaps are extended and the spoilers are up, see right through the wing. See the gears retract into their housing.

Accurate Flight Dynamics
The flight dynamics behave very realistically. Smooth turns, accurate altitude, airspeed, VS, ILS capture; accurate fuel consumption and range; individual flight dynamics for the 777-200 and 777-200ER.

Dimensioned to accuracy
Major and most minor dimensions are modeled to real dimensions, including but not limited to gear and wheel sizes, engine ground clearances, fan diameters, fuselage width, wing span, wing-tip height, horizontal and vertical stabilizer dimensions, and a lot more!

Much more stuff...
You just have to see it for yourself!

Troubleshooting

If you have problems using the MelJet 777 model, please read the following section as the answer to your problem might lie here.

The aircraft doesn't display on the FS2002 aircraft menu! Help!
Did you install the aircraft correctly? Please read the subsection entitled "Important Notes" under "Installation".

I can load the aircraft in FS2002 but the textures don't show!
Please check to see if you have the latest drivers for your graphic card. Also, ensure that your system has enough free resources to display the MelJet aircraft. Given that the MJ 777 model is very complex, it will require a moderate to powerful system to properly run the aircraft in FS2002.

The textures are blurry when running your aircraft. What should I do?
Try zooming all the way in and then out again. That usually fixes the problem.

Backward Compatibility

The 777 model is made solely for Flight Simulator 2002. It utilizes the new MDL structure and is thus not compatible with Flight Simulator 2000 or previous versions.

Aircraft Repaints

Are you interested in repainting the MelJet Boeing 777 model? Yes? Then you may do so without writing for permission **provided that** you adhere to the following conditions...

- Your repaints, should you choose to distribute them, must be freeware and no charge should be placed on them.
- You clearly indicate that the original model was designed by MelJet (Melvin Rafi), and place the URL" www.meljet.com" somewhere in your documentation.

If you **do not** adhere to the above and still want to repaint/distribute, you must request for permission via email.

I agree to these terms - now where do I start?

Well, start by downloading the Paint Kits if you haven't already done so. Open the PSD files in your favorite graphics program (such as JASC Paint Shop Pro) and start painting!

Once you're done with the PSDs, open the PSDs in "ImageTool" (found under C:\...\Flight Simulator 2002\gmax\Flightsim\gamepacks\FlightSim\imagetool.exe), convert the textures to the DXT3 format, click on "Save as", and save it over the respective BMP textures in aircraft's texture folder. That's it. Note that just painting the PSDs alone is not enough. You must convert the textures to DXT3 bitmaps.

Why can't you bypass the PSDs and just paint the BMPs directly? You could. But I've chosen to keep the master textures in PSD format to make the alpha channel modifications easy. In case you didn't know, the alpha channels in the files that end with _T control the reflectivity of the aircraft in FS2002.

Please do not contact me if you don't know how to do repaints. The above is just a rough guideline. Search the web or the various flightsim sites on the net for tutorials on how to repaint FS2002 aircraft.

I'm an advanced painter...

Then you'll be glad to know that the model comes fully equipped with very high resolution textures so you can now cram in as much detail as you possibly can.

I hope you'll find stuff like separate textures for the nosegear and maingear, individual textures for each of the two engines, super hi-res textures for the tail, and much more useful.

Most textures are _T BMPs and can have reflectivity. The PSDs themselves already have the alpha channels stored in them. So you don't need to bother about alpha channels if you're happy with the preset level of reflectivity. But I have included the original alpha channels for both the _T and _L files in case you need them anyway.

Do let me know your opinions on the texture system of the model.

Credits

Firstly, I would like to give thanks to the Good Lord for making all of this possible. Without His guidance and help through those difficult times I would never have been able to overcome each and every one of the numerous and seemingly impossible obstacles I faced while modeling this plane.

I would also like to thank the makers of Discreet GMax. Without this modeling program, this aircraft could not have been constructed to what it is at present.

Thanks also to the Flight Simulator team for keeping FS alive for over 20 years.

Not to forget, many thanks go out to the Flight Simulator community for their many contributions to our wonderful hobby.

Others

This aircraft was designed by Melvin Rafi and is **freeware**. It may not be uploaded to any webserver or BBS without the prior permission of the author. Furthermore, it may not be uploaded to any site or BBS that charges a fee. The author will decline permission for such distribution of the file. **Free distribution of this aircraft is encouraged but only permitted after consent from MelJet.** This file may not be transferred in any form and no charge must be applied. If you have paid for this file, you have been ripped off. **You may repaint the MelJet V1.0 Boeing 777 model in accordance with the terms laid out in the section titled "Aircraft Repaints".** The files included in this package should do no harm to your computer. However, if any harm or damage is done whatsoever, the author(s) assumes no responsibility whatsoever. IN SHORT, USE THESE FILES ENTIRELY AT YOUR OWN RISK.

Finally, please enjoy yourself while flying this bird. It was made by a flightsimmer, for flightsimmers. If you have any questions or comments, feel free to email me at **melvin@meljet.com** .

Alternatively, you can visit the MelJet website at **http://www.meljet.com** .
The MelJet forum is also accessible from the website.

Well, that's it! Enjoy your flight!

Best regards
MELVIN RAFI

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