

Test of

## Embraer E175/195

Produced by FeelThere

The Embraer E175 and E195 are both part of the Embraer E-Jet series. They are narrow-body, twin engine, medium range jet airliners built by the Brazilian aerospace company Embraer since the start of the 21<sup>st</sup> century. The first flight was February 19<sup>th</sup> 2002 and they hereafter went into production and started service in March 2004 at LOT Polish Airlines.

As per January 2012 there are built in total 802 aircraft of the E-Jet series and they are sold to various airline companies around the world - e.g. KLM, Air Canada and many others. They are also built and sold to the military and also to corporate use as well.

### Specs:

- **Produced by** *Embraer*
- **First Flight** *February 19<sup>th</sup> 2002*
- **Introduction** *March 2004*
- **Role** *Airliner*
- **Status** *In production and active service*
- **Built** *802 aircraft as per Jan 2012*
- **Unit Costs** *E-195 = US\$ 47 million*
- **Primary Users**
  - *Republic Airways*
  - *Air Canada*
  - *JetBlue Airways*
  - *KLM*



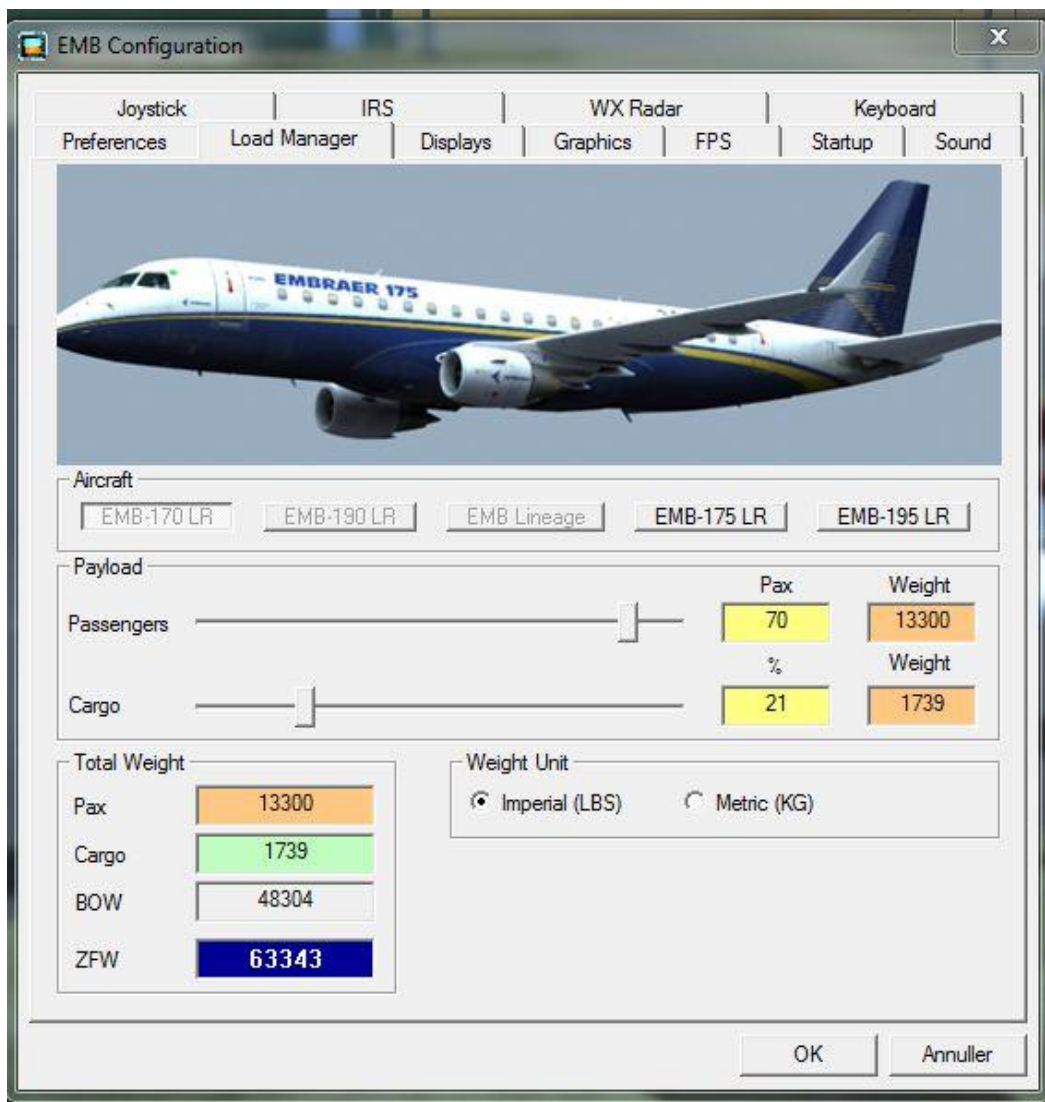
I received this add-on directly from FeelThere, and the download went without any issues. The connection to the FeelThere server was okay, but since the file is rather large it of course to a little while to download.

Installation was quite simple – just follow the installation wizard that does it all for you. Well I discovered that the installation wizard could not find the right location of my FSX so this I had to help it with, but besides that I had no issues. The installation did not take much more than a couple of minutes, so this was very nice. On my system I run Win7 and I don't know if the wizard is 100%

compatible with Win7, because at the end of the installation process I got an error – this I just ignored and the aircrafts works perfectly, so if it really was an error or not, I can't say.

After installation I opened FSX to check if everything was installed and placed correctly – No problem here - The E175 and E195 was both placed perfectly in the folder of FeelThere add-ons. When you purchase this add-on you get both the E175 and the E195 version, but unfortunately only with the house colors - If you want additional liveries you have to purchase that through FeelThere.

Together with this add-on package you also get a comprehensive manual with a total of 128 pages – this is very nice and I found it very useful. The E-175/195 is modern jet airliners and they have so many functions and systems so it is indeed a good idea to browse through it before start. You also get a program for selecting your preferred starting cycle – here I mean that you can choose to e.g. cold/dark where you have to make the complete start-up of the aircraft before you can get flying, or you can choose engines running ready for taxi etc. This feature is very nice indeed because now the aircraft applies to a larger segment of simmers – both professionals and regular simmers. Also included was a loading manager.



I started with an external view around and what I saw was a really beautiful aircraft. High texture quality, many details, clean lines, lots of animations and as far as I could see, everything was modeled and placed perfectly. I used pictures from the internet to verify the model against the real aircraft and the resemblance was remarkable. FeelThere has really created a superb model of both the E175 and the E195. You get animations as control surfaces, doors, flaps, gear + suspension, reverse thrusters and much more and all at a level of extremely high quality.



Going from the outside to the inside I quickly discovered that both models contained more than just an ordinary cockpit. You get a 2D cockpit, a virtual cockpit and also a virtual cabin – very nice. The 2D cockpit is a photo-real cockpit with all systems working. Together with that you also get a lot of animated switches etc so all in all the 2D cockpit is really good. After checking out the 2D cockpit I went into the virtual cockpit which is my preferred cockpit. Here you defiantly get a superb cockpit again with a high level of quality. You have a great depth, high quality textures, a huge number of animations, fully working systems and a great finish. The instruments are very nicely modeled and animated and it is a delight to use this glass cockpit. This is indeed a superb virtual cockpit and compared to pictures of the real thing, then this was really well made, and the accuracy of everything was perfect.

When I was finished enjoying the beautiful virtual cockpit I went into the cabin area. Here you get a full modeled virtual cabin which is quite good. Textures are okay but I have to say that it was unfortunately not the best virtual cockpit that I have seen, but still okay.

The sound set of this aircraft is in my opinion outstanding. You have a superb engine sound where you can really hear the special sound that the E175/195 has. The reverse thrust sounds are also great and together with this you also get a comprehensive environmental sound set where e.g. you can also hear the draft that the spoilers make when applying them in flight. Superb detail!

I tested the sound sets both external and internal but also from tower view and found that it was great no matter where I tested it. Normally I only test the sound set in stereo, but since I got the 7.1 surround sound headset, I also test that. There are no issues at all in using 7.1 surround with this add-on, so this was an extra plus. I discovered that this model also contains a huge number of different call outs – this is really excellent and contributes to an added realism. You have standard call-outs regarding warning or altitude at final, but I also noticed that you have the cabin crew informing the passengers that we have now arrived at our destination and so on. This was something that I didn't expect and really a superb detail.

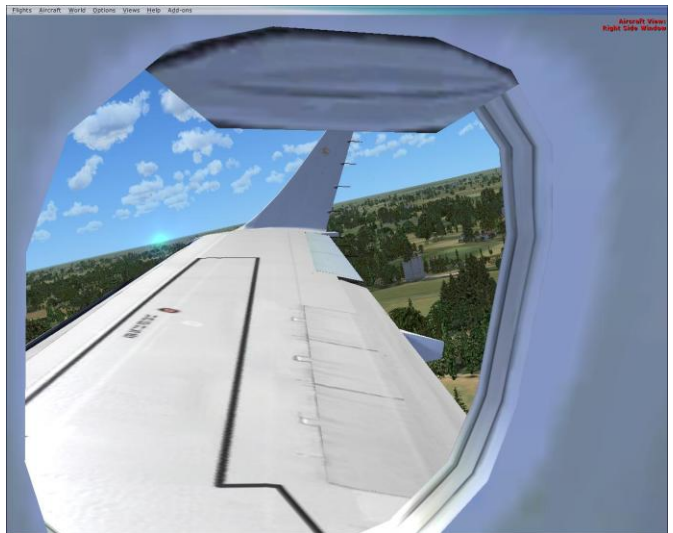


Overall you here get an add-on of high quality in regards to textures, accuracy, details and animations for both the model and both cockpits. The sound is great and is filled with additional environmental sounds that I think are perfect. This level of quality did have an impact on my frames but not heavily, so I would say no problem. I just tuned my other settings a bit down, and then I had absolutely no issues left.

My first test flight was a flight from Schiphol International (EHAM) Amsterdam, the Netherlands to Billund International (EKBI), Denmark. On this flight I wanted to test taxi, take-off, general flight dynamics and landing. This setup was actually a flight that I as a passenger have flown, so for me it was a lot of fun to fly the trip now in the cockpit.

I got the taxi clearance from the tower and started my push-back while setting the autopilot and getting the engines up and running. After push-back I started my taxi to the active runway. To taxi the E-175/195 is absolutely no problem. If you are familiar with twin jets, then you will not have any problem with the E-175/195. I would say that it resembles something in between the B737 and the Learjet.

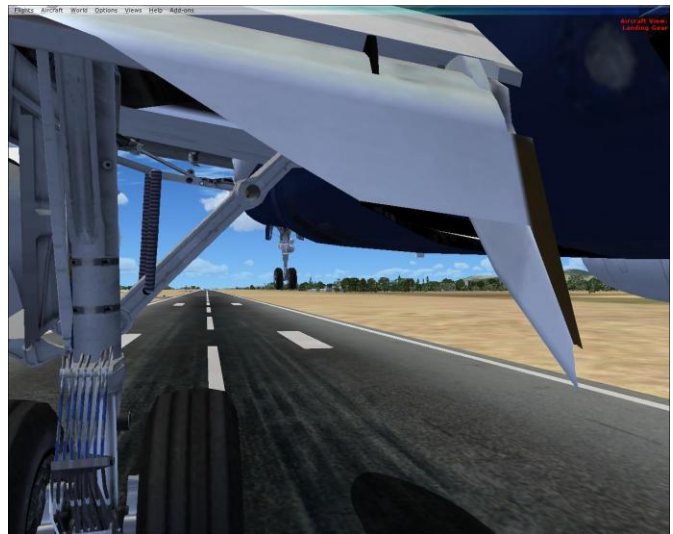
When I reached the active runway I got take-off clearance from the tower and taxied out on the runway. I had set the flaps and trimmed the aircraft to take-off positions and slowly applied full throttle. The E-175/195 is quite easy to control on the take-off roll because it reacts very quickly on my control inputs. The engines are very efficient and it didn't take much time to reach the V2 speed. I rotated to +10 degrees, got airborne and raised the gears. This was indeed a superb feeling to get this bird off the ground and into its right element.



The E175/195 is very fast and firm on the control surfaces – hereby making it quite easy to fly on manual. The climb went well, the aircraft lies very steady in the air and you very quickly get a feeling of the aircraft which is good. I switched on the autopilot and made the rest of the climb and cruise flying on autopilot. The autopilot is fairly simple to use, but you do need to take a moment to get to learn it. It does not function completely like the Boeing styles as e.g. the B737, but still it's very user friendly and easy to use.

About 150 nmi from EKBI I started my decent – here I flew the first part on autopilot, but switched over to manual flight when reaching the altitude of 15000'. I wanted to test the effect of the spoilers so I decided to apply them and make a steep descent from 15000' to 10000'. The spoilers are okay efficient, but what I noticed more was the included sound set of the drag that the spoilers made. This was excellent – not many add-ons have this sound feature, and that was really something that I had missed.

I went directly on a long final when reaching EKBI, set the flaps and lowered the gear. Now I could suddenly feel the enormous drag that the gear and full flaps make, and I really have to increase throttle to keep the airspeed up. This is of course something you will get used to, but it varies from aircraft to aircraft. I touched down smoothly on the runway 09 in Billund and taxied to gate.



After this very interesting flight I wanted to test it again, but now under stressed conditions. I set up various weather conditions as fog, rain, thunderstorm etc and spiced it all up with winds coming from various directions and with severe gusting. To land the E175/195 in conditions as the fog or rain, was absolutely not a problem – you have a lot of modern instruments which are easy to use, and I had no issues at all with these settings.

Then I tried the thunderstorm with wind coming at +90 degrees = direct crosswind from the right and with severe gusts. This was a bit of a challenge, and I admit that I actually had to make 2 “Go-Arounds”. To be fair I will say that to make a “Go-Around” is far better than making a landing with a potential danger of crashing, so it didn’t hurt me that much.

I flew these settings for about an hour, and after this I was 110% familiar with the aircraft. This is an aircraft that can be flown by simmers on all levels, but FeelThere has made the add-on so well that they have expanded the segment of flightsimmers to include professional also. This e.g. due to that you can chose a complete start up if selecting the aircraft to start as cold and dark etc.

My conclusion to this add-on is that I here experienced an add-on of very high quality. You have a superb model with a very realistic virtual cockpit. A lot of details, animations, effect and additional systems/programs + a very advanced sound set with environmental sound details which are not seen in many add-ons. I rate this E175/195 with a rating of 4.5/5 stars which equals to advance Payware which I believe that it is and thanks FeelThere for creating this exceptionally beautiful and perfect aircraft that I think we have missed for flight simulator.



Rays Aviation



## Variants

- E-170 Was the first version produced
- E-175 Is a stretched version of the E-170 to increase the capacity
- E-190 Is a larger version of the E-175 fitted with a new larger wing and stabilizer. The E-190 is equipped with two GE CF34-10E power plants
- E-195 Is a stretched version of the E-190 to increase the capacity
- E-198 Version not completely developed yet. This should be a E-190/195 with improved engines to get a better fuel consumption, a taller landing gear and a new aluminum or carbon-fiber based wing
- E-195X Undeveloped version that was a stretched E-195 but was cancelled due to concerns that its range would not be compatible
- E-1000 This is a corporate version of the E-190 with an extended range and luxury seating for up to 19 persons



## Specifications

Variant	E-170 (ERJ170-100)	E-175 (ERJ170-200)	E-190 (ERJ190-100)	E-195 (ERJ190-200)
Flight Deck Crew	Two			
Passenger Capacity	80 (1-class, 29"/30") 78 (1-class, 30"/31") 70 (1-class, 32") 70 (2-class, 36"/32")	88 (1-class, 30") 86 (1-class, 31") 78 (1-class, 32") 78 (2-class, standard)	114 (1-class, 29"/30") 106 (1-class, 31") 98 (1-class, 32") 94 (2-class, standard)	122 (1-class, 30"/31") 118 (1-class, 31") 108 (1-class, 32") 106 (2-class, standard)
Length	29.90 m (98 ft 1 in)	31.68 m (103 ft 11 in)	36.24 m (118 ft 11 in)	38.65 m (126 ft 10 in)
Wingspan	26.00 m (85 ft 4 in)		28.72 m (94 ft 3 in)	
Height	9.67 m (32 ft 4 in)		10.28 m (34 ft 7 in)	
Empty Weight	21,140 kg (46,600 lb)	21,810 kg (48,100 lb)	28,080 kg (61,900 lb)	28,970 kg (63,900 lb)
Maximum takeoff weight	35,990 kg (79,300 lb) (STD) 37,200 kg (82,000 lb) (LR) 38,600 kg (85,000 lb) (AR)	37,500 kg (83,000 lb) (STD) 38,790 kg (85,500 lb) (LR) 40,370 kg (89,000 lb) (AR)	47,790 kg (105,400 lb) (STD) 50,300 kg (111,000 lb) (LR) 51,800 kg (114,000 lb) (AR)	48,790 kg (107,600 lb) (STD) 50,790 kg (112,000 lb) (LR) 52,290 kg (115,300 lb) (AR)
Max payload weight	9,100 kg (20,000 lb) (STD&LR) 9,840 kg (21,700 lb) (AR)	10,080 kg (22,200 lb) (STD&LR) 10,360 kg (22,800 lb) (AR)	13,080 kg (28,800 lb)	13,650 kg (30,100 lb)
Takeoff Run at MTOW	1,644 m (5,394 ft)	2,244 m (7,362 ft)	2,056 m (6,745 ft)	2,179 m (7,149 ft)
Powerplants	2× GE CF34-8E turbofans 62.3 kN (13,800 lb) thrust each 63.2 kN (14,200 lbf) APR thrust each		2× GE CF34-10E turbofans 82.3 kN (18,500 lb) thrust each 89 kN (20,000 lbf) APR thrust each	
Maximum speed	890 km/h (481 kn / Mach 0.82)			
Range	STD: 3,334 km (1,800 nmi) LR: 3,889 km (2,100 nmi)	STD: 3,334 km (1,800 nmi) LR: 3,889 km (2,100 nmi)	STD: 3,334 km (1,800 nmi) LR: 4,260 km (2,300 nmi)	STD: 2,593 km (1,400 nmi) LR: 3,334 km (1,800 nmi)

	AR: 3,892 km (2,102 nmi)	AR: 3,706 km (2,001 nmi)	AR: 4,448 km (2,402 nmi)	AR: 4,077 km (2,201 nmi)
Maximum fuel load	9,335 kg (20,580 lb)		12,971 kg (28,600 lb)	
Service ceiling	41,000 ft (12,500 m)			
Thrust-to-weight	0.42:1	0.39:1	0.41:1	0.39:1
<b>Fuselage and cabin cross-section</b>				
Outer width	3.01 m (9 ft 11 in)			
Inside width	2.74 m (9 ft 0 in)			
Outer height	3.35 m (11 ft 0 in)			
Inside height	2.00 m (6 ft 7 in)			