

Test of
Boeing C-17A GlobeMaster III
Produced by Virtavia

C-17A GlobeMaster III is a 4-engined, high winged heavy military cargo aircraft built by Boeing (former McDonnell Douglas). This aircraft is the newest heavy transport aircraft in the US Air Force and has been in active service since 1993. The idea with the C-17 was that it should have a capability to transport large amounts of cargo as e.g. material, personal or other cargo. Furthermore it also had to have the capability of landing on smaller and simple airfields and also be able to drop cargo from the air just as the baby brother the C-130 Hercules.

The crew is a 3 persons crew and the loading capacity is 170,900 lb (app. 75 ton). The cargo could be either material as tanks or other vehicles or troops – e.g. 102 parachuting troops. A very special feature that the C-17 has is the special built engines that are able to open their sides to provide backward thrust. This can help the C-17 to come to a full stop after touchdown in maximum 9 seconds. The pilots can also activate this feature and hereby making the C-17 taxi backwards with up to 20 mph (30 km/t) if necessary.

Specs:

- **Produced by** Boeing (McDonnell Douglas)
- **First Flight** 15th of September 1991
- **Introduction** 14th of July 1993
- **Role** Strategic/Tactic Transport Aircraft
- **Status** In production & active service
- **Built** +232 (June 2011)
- **Unit Cost** US\$ 218 million (2007)
- **Primary Users:**
 - US Air Force
 - Royal Air Force (RAF)
 - Royal Australian Air Force
 - Royal Canadian Air Force



I got this add-on directly from Virtavia. Both download and installation went without any problems. The download was quick and the installation was easy and fast – very user friendly – just follow the installation wizard.

Included in this add-on you also get a manual of 29 pages, where you can get answers for most FAQs. Normally I would suggest viewing a manual if it is included to eliminate possible understanding issues - this however is no issue with this add-on.

After installation I opened FSX to see the results here. Everything looked perfect and the aircraft was nicely found in the selection of Virtavia. I also noticed that with this add-on you get several variants, all from the original grays to the green raw version. This is a huge plus in my book.

Taking a look at the model externally, you will find a superb model with clean lines, high texture quality, a huge number of animations and the eye for the detail, quality which I now have experienced on multiple add-ons from Virtavia. The model externally is indeed the very best C-17 model that I currently have seen for FSX, and I find this model very realistic. The animations you find are e.g. control surfaces, the special reverse thrusts, windscreen wipers, spoilers, entrance for cockpit (latter), cargo door and many others.



Now going inside the C-17 you start in the enormous cargo area which is done quite okay. The finish is not as good as on the external side, but it is okay and you get the feeling of being inside a huge cargo area. Internally you will also find both a 2D and 3D (virtual) cockpit. The 2D cockpit I normally don't use, but the 2D cockpit here is extremely well made with a very nice texture quality and a super finish.

Regarding the virtual cockpit, then this is also a cockpit that Virtavia has put a lot of effort into. You have a good depth, a lot of details, nice finish and a lot of animated buttons, switches and systems. You

can yourself select the views on all the LCD's which I think is a very nice detail and this adds a lot of realism to this virtual cockpit. The textures are okay and the complexity of the virtual cockpit is what could be expected. You quite quickly get the idea of where things are located and how to use them, and the overall for the virtual cockpit is better than average.

An extra feature in the virtual cockpit is also the heads-up display as the real C-17 also has. This feature contributes to gain even more realism and combine that with the fact that a C-17 is controlled by a stick and not a yoke, and that this feature is actually also modeled, adds up to that the virtual cockpit gets a very good grade.



The sound set put into this model is also good. I don't find it with the WOW-effect as in e.g. the B-1B, but the sound fits the model, it is clear and you get a nice roar when applying full throttle.

Taking a look from the tower when the C-17 is taking off, I saw no smoke effect from the engines. This I normally would find missing, but since this aircraft is equipped with very modern engines, the smoke would also be very much reduced, so this is a really good thought from Virtavia.

My first test flight was from Whidbey I NAS (KNUW), Oak Harbor, Washington, USA. Here I wanted to test ground handling, spooling of the engines, take-off and landing and general flight dynamics. The C-17 is a huge and very heavy aircraft, but actually very easy to control on the ground. If you can taxi with a B737, than you will have absolutely no issues by taxiing with the C-17.

Going down the runway with full throttle and keeping the aircraft on the runway was easy – it is a huge and heavy aircraft and lies very steady on the runway even though you have light crosswind. The C-17 has a very large rudder and going down the runway you will very quickly be able to use the rudder instead of wheel brakes. Usage of wheel brakes during take-off is not a good thing.

In flight the aircraft reacts very quickly on all control surfaces. The spoilers do indeed work, but I do think that the effect is set low compared to how big the spoilers are – however this I do not know for a fact because I have never tried to fly a real C-17.

When sitting in the captain's seat I normally like to view the wing, but in the C17 this is not possible. The aircraft is a high winged aircraft where the wings are placed a long way back on the fuselage and therefore not possible to see from the captains seat... well I could stretch as much as to see the lights on the wingtip and that's fair.

The C-17 is very easy to fly - just trim the aircraft properly and you can fly it almost without your hands on the controls. The autopilot is a bit different than what I am used to, but not to worry, you will get the hang of it very quickly. Mostly it is the same as in e.g. a B737 but with some small changes. I cheated a little and used GoFlights MCP-PRO which by the way function perfectly with this C-17.

To land this aircraft is not tricky, but if you're not used to heavy jets, then this will be a challenge. A huge plus when coming in for landing is that your indicated airspeed can be kept low due to the large wings and the very effective flaps. This really gives the simmer a fair chance, and therefore I would say that this aircraft could be flown by simmers on all levels.





My second test flight was from Karup AFB (EKKA), Denmark and was a test of stalls both straight out and during turn, aggressive climbs and descents and flying with engine(s) down.

Straight out stall with low pitch angle was a piece of cake and also straight out stall with high pitch angle was no problem. The C-17 just lowered the nose slowly and gained the airspeed needed to continue flying. Then to the test of the stall during turns which can be very critical. Many pilots have over the years crashed because they stalled and went into a spin during a turn either just after take-off or going from base to final – this was the reason for why I wanted to find out how the C-17 reacted when forced into a stall during a turn.

To my surprise the aircraft is a very good natured aircraft when coming to possible spin – no need for a recovery because the aircraft handles this itself. When reaching the stall speed the aircraft simply just lowers the nose to gain airspeed and you can without any problem control the ailerons to level out the wings. I did a little history check and found out that only a few crashes with real C-17's has occurred and none was identified as due to a stall, so this conclusion that the aircraft is a very good natured aircraft regarding stall, I would say is very accurate.

Providing full throttle you can really make a very aggressive climb in this aircraft – more than I normally would think – it actually reminded me a little of my days as a glider pilot during a winch launch. Going from climb to aggressive decent applying full spoilers (are very big) and throttling down to idle, you can also here get a rapidly decent if necessary, and these two characteristics I think are very useful for the military flying on the edge of enemy territory. You can quickly climb or decent just above the airport, and not have to use a lot of space and thereby potentially being exposed to enemy missiles or similar danger.

Third test flight was from Trondheim Vaernes (ENVA), Norway and was just to test the take-off and landings in different weather conditions and with various wind directions and I spiced it all up by the time set on morning, day, dusk and night. An aircraft like this one is very heavy and very steady even though you are on final with wind gusting to over 30 knots. Changing to crosswind, then now you can really use this aircrafts big rudder when flaring the aircraft. You of cause don't use the rudder much on final – here it is more to move the nose into the wind as correction and level the wind side wing a bit down.



This C-17 is the very best C-17 aircraft that I have tried for flight simulator to this date. The model is of a very high quality and accuracy with multiple animations and details. Virtavia has once again provided a superb add-on that I can only advice other simmers to buy. I have tried a lot of C-17's as freeware versions, and trust me – they are nothing compared to this one.

Overall this is an aircraft with a high level of modeling and I will rate this C-17 with 4 out of 5-stars which equals to *Advanced Payware Level* – I thank Virtavia for this really superb C-17 - very well done – this is most certainly an aircraft I will use many times in the future and it has a special place in my virtual hangar.

Rays Aviation



Variants

C-17A was the original military cargo version.

C17A"ER" is the unofficial name for the C-17A with extended Range. This was gained by adding quantity to the center wing tank. This upgrade was not in production until 2001 with Block 13.

C-17B is only on the drawing board. The new design contains e.g. double-slotted flaps, an addition to the main wheels, more powerful engines and additional systems to support take-off and landing on shorter airfields.

Specifications

In General:

Crew	3 persons (2 pilots and 1 load master)
Capacity	134 troops on palletized seats or 102 troops on standard center line seats or App. 75 ton of cargo
Payload	170,900 lb (77.519kg)
Length	174 ft (53m)
Wingspan	169,8 ft (51,75m)
Height	55,1 ft (16,8m)
Wing Area	3,800 ft ² (353m ²)
Empty Weight	282,500 lb (128.100kg)
Max Weight	585,000 lb (265.350kg)
Power Plants	4 x Pratt & Whitney F117-PW-100 Turbofans with 40,440 lbf (180kN) each
Fuel Capacity	35,546 US gal (134.556L)

Performance

Cruise Speed	Mach 0,76 (450 knots, 515 mph, 830 km/t)
Range	2.420 nmi (2,785 mi, 4.482 km)
Service Ceiling	45,000 ft (13.716m)
Max Wing Load	150 lb/ft ² (750kg/m ²)
Minimum Thrust	0,277
Take-off at MTOW	7,600 ft (2.316 m)
Landing Distance	3,500 ft (1.060 m)

