



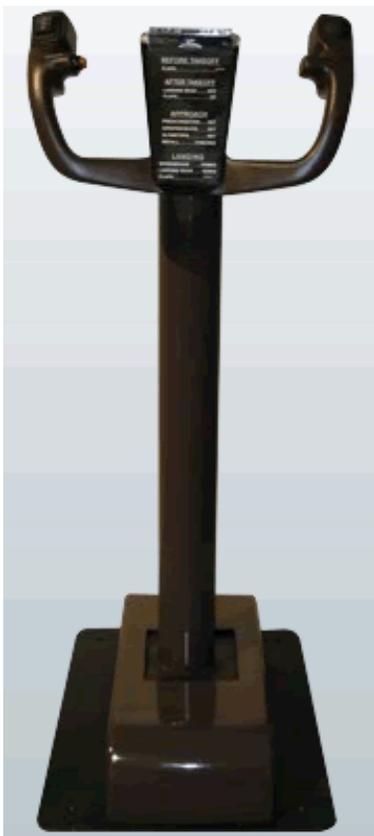
**MyCockpit
Reports**

Product Review *BY Trevor A. Hale*



Product type: Hardware
Vendor/Manufacturer: ACE/Aircraft Controls Engineering
Product/Model Number: ACE 747 Control Yoke

The ACE 747 Yoke (<http://www.737yoke.com>) is a product manufactured and distributed by Aircraft Controls Engineering located in Brampton, Ontario Canada. ACE's offices which are housed slightly north west of Toronto, makes them one of the few Simulator part suppliers residing in Canada. The Canadian market for simulator enthusiasts is very small, yet manufacturing costs are much lower. This allows companies to manufacture the components and resell them overseas and throughout North America at very reasonable rates.



When I interviewed the owner of Aircraft Controls Engineering Ali Anwar, I asked him what he and his business strive for in this market. Ali responded by saying "At ACE, we aim to provide the most cost-effective products with the best service and support in the industry". This is a pretty tall order for a new company in this market place. Ali and the ACE Team effectively compete with companies who have grown in this industry for many years. The main questions this review addresses are "Does ACE have what it takes to successfully create a product to survive in this hobby? If so, what does ACE offer that other suppliers do not."

It is and will always be the *MyCockpit*® philosophy to do these reviews in comparison to their real world counterparts. This review will be no different then that, although one question arises in every customers train of thought when making a purchase of this magnitude, "How does this product compare to others on the market?" I personally used many of these kinds of products currently on the market. While working on this review I used my past experiences as a benchmark for the tests that I performed on this product.

In writing this review I will compare the ACE 747 Yoke to real world counterparts, and will state my experiences and personal feelings in comparison to other products on the market today.



Trevor A. Hale

MyCockpit Reports **Hardware Reviewer**

Trevor has been interested in aviation since he was 12 when he joined the Royal Canadian Air Cadets (RCACC). Having owned all versions of MSFS since the beginning. Aviation and simulation always provided him a method to escape the troubles of life and relax. Aviation has always been a part of his heritage. Trevor's family has been involved in aviation for years. His Father had his Private Pilot's license and his brother received his glider pilot's license at 16 and PPL at 17, Trevor watched closely as his brother created a career in aviation. Now a Corporate Chief Pilot and flying the finest jets in the industry his brother truly lives the aviation dream Trevor sought. Trevor's love of flight combined with childhood dreams began to come true when his family purchased a Piper Cherokee 180 in his late teens and he began flight training on that aircraft. Finances dwindled and Trevor never received his PPL. After College Trevor's life changed drastically and the only option to rekindle the dream of flight was to get back to flight simulation. Starting again with FS2000, Trevor was an active part in the Flightsim. aircraft building community. His first project (AG WAGON) Still available on Flightsim.com as a downloadable aircraft, he progressed to a Sikorsky S76. During the Sikorsky Project Trevor was contacted by Abacus Publishing www.abacuspub.com and began creating many aircraft for Abacus. Including (S76, UH-60, DH1, F16, and a CRJ) plus assorted other projects on the side. Moving forward from the aircraft building market, Trevor began reading about the projects of Ocan Sacli, and Matt Olieman, and decided to build his first fixed base simulator. The Airbus A330 was pieced together with plywood, and plexi glass, and really turned out to be more of a model then a realization. The creation of IFSBi now www.Mycockpit.org brought forth a new horizon in cockpit building. A community of fellow builders helping each other with their projects was a vision from the god's. Trevor and Matt Olieman, now Business Partners, are working together to bring the MyCockpit Brand into the lives of Aviation Enthusiasts around the world.

REMINDER: The purpose of the product review is to describe the features, functions, ease of use, and quality of this hardware component as an independent entity.



When I placed my order with ACE, I found their customer service staff to be very helpful and diligent. As with most simulator parts on the market today, the majority of companies build to order. I expected a lead time of up to a month, however to my surprise ACE was different. The item was in stock and generally ships out within two days. Shipments for North America or overseas are handled by DHL and UPS. Since I live in Canada, this shipment came to me by way of Canada Post. The product arrived within four days of placing the order.

The yoke arrived in a 1/2" plywood crate measuring 19" X 38" X 16". The crate was held together with 1" coarse thread wood screws and had packaging tape around all the seams. Using a knife, I cut all the tape and unscrewed all the Phillips screws with a power drill. Once the lid was removed, I could see the yoke lying on its side supported by a Styrofoam base. The glossy finish of the metallic parts immediately encouraged me to touch the unit. Sliding my fingers all around it, I could feel this product was smooth as silk. No flaws in the paint or in the assembly were noticeable. It looked like someone just shipped me a brand new control column out of a 747.



The yoke had not moved or shifted in transport, although if the unit were to have been shipped overseas, it may have benefited from some screws through the base securing it to the crate. The Styrofoam support was hot melt glued to the crate so that it could not have come loose, but that would only stop the unit from sliding left or right. Movement up and down could have still occurred. Inside the crate with the control yoke was 3 sheets of paper; a note to the customer thanking them for their business, a detailed list of Frequently Asked Questions, and a Quick Setup guide.

ACE does not include a USB cord with their product, so you must have a cord in your possession to connect the unit.

Once I removed the unit from the crate, I inspected it in detail. The first thing I noticed about the product was how level it sits on the floor. Many products on the market today that stand on the floor have some warping or bending of the base. This unit had none of that, and sat true to the floor. Due to the construction of my 737 MIP (Main instrument panel) the yoke appeared to sit slightly higher than what I would expect the real yoke to sit at. However an easy cutting of the floor of my sim would allow me to sink the yoke down to the correct height. The unit was very heavy. In fact with an all metal construction I was still surprised by how heavy the unit was. I am a firm believer in the age old saying (the heavier an item is, or feels, the better the construction). If this is the case, this unit is put together well. After grabbing hold of the ram horns the left and right aileron movements have an amazing hydraulic feel to them. I would guess by the tension on the unit that it has heavy duty rubber inside that creates this feeling. The forward and backward motion is very stiff, but I can picture it loosening up a bit with added use. For this reason in order to properly use the Yoke, it will require 4 screws through the base of the yoke into the floor. These holes are provided by ACE and will allow you to get full deflection of the Elevators.





Looking at the ram horns explicitly, I do notice the unit compared to its real world counterpart, is a bit different. In fact the shape of the control compared to the real unit is identical; however the switches fitted into the yoke are slightly different, as you can see from the picture, the ACE 747 Yoke has a single rocker switch installed in the left hand thumb position. The real 747 yoke has Dual rocker switches with a guard around them requiring SYSTEM A and B Trims to be pushed at the same time in order to trim the elevator. This is not the case with the ACE yoke; however, from a functional point of view the switch ACE fit is very heavy duty and works effectively. On the yoke, the push-to-talk buttons/triggers are spring loaded high quality switches, and accurately represent the real thing. The Autopilot disconnect switch is red in color and has a push-on push-off latching action. I would prefer this switch changed to a black color with a momentary push to disengage switch. There is a way to alter the switch by programming this yoke in FSUIPC. This modification is not a functional concern, just my personal preference.

The degrees of bank indicator strip is affixed to the top of the column is actually printed on a clear sticker and stuck to the top of the unit (very cleanly). It would have a more professional look if the strip was silk screened onto the metal housing. In an effort to keep costs down, the solution the ACE team used with the sticker is quite effective and adds a sense of realism.



The switches and the base cover are the only two items in the entire yoke module not metal or cast aluminum. Upon a close inspection of all the switches, it is evident the ACE team carefully considered choosing the switches. All the switches are made of high quality plastic. The switches sit slightly proud of the yoke. It is not noticeable unless you are in a bright light environment. The yoke has a professional finish and look to it and not discounting the feel of an all metal control in your hands. It looks and feels like the real thing.



The chart holder on the yoke is sturdily attached with rivets and welds. The clip is of excellent quality and easily holds one or more charts. There is one downfall with this part of the yoke. I found it hard to read the charts when they were clipped to the unit, because the chart holder is mounted flat to the yoke. It would be handy if this chart holder had a bit of an incline to the mount, so the charts would sit on a bit of an angle to make reading them much easier.

Following the setup guide, I loaded Windows and connected the yoke to the computer. Instantly the yoke was recognized by the operating system as a Plasma card (Beta Innovations). I am not sure if this is the type of interface installed in the base of the unit or just the driver that is loaded into the firmware on the card. For those of you who are in this hobby for a while know the Beta Innovations name and the quality that rides along next to it. No point in reinventing the wheel. This unit is a full speed USB 2.0 HID compliant device with 10-bit resolution. (1023 steps) USB Firmware updates, and the card also includes bullet proof digital filtering algorithm support.

Once I calibrated the unit through the Windows Vista calibration screen, I launched FSX and couldn't wait to see what was in store for me. A double check of the FSX configuration screen under Joystick assignments, Microsoft assigned a bunch of useless functions to the buttons on the yoke. The trim switch became assigned to views, while the Microphone switches were assigned to brakes, and so forth. I recommend the best way to approach this problem, as with any control device, is remove all the joystick button and axis assignments from Flight Simulator to program and calibrate the unit through FSUIPC (Peter Dowson).

I assigned the switches and their functions through FSUIPC and was surprised at the accurate resolution on the aileron and elevator movement. Very smooth operation. In fact, I actually tightened up the response curve of the axis movements, because they were almost too smooth.

Saving my settings and returning to the cockpit, I launched my favorite aircraft and took off down the runway. Gently pulling back on the control column the aircraft smoothly lifted off the ground. I found the column very heavy to hold on to, and simple adjustments of the trim with my left thumb allowed me to return the column to the center detent and continue my climb. The feel of the cast aluminum at your fingertips adds to the realism of this product immensely. Depending on the type of aircraft you fly most of the time, you may or may not want this kind of feel in your hands; but if you fly an airliner, it is the sensation you must feel.

Continuing with the main purpose of this review, and answering the common question if this unit is an accurate representation of the real thing, I can safely say "yes," indeed this unit accurately represents the real 747 yoke in 85% of its details. As for the \$1150 USD price tag on this unit at the time of this report, it is well worth every penny.

I personally feel that for the price you are receiving a very accurate representation of the real item. It is such a good representation that most average people would not be able to tell the difference between this unit and its real life counterpart.



Based on my personal experience, many uninformed people are going to feel \$1150 is way too much money to spend on a joystick. I would agree if when, you look at this product all you see is a joystick. Then this is not the product for you. On the other hand, if you are striving for a high quality real life replica for your simulation experience, this is the product for your setup. Please keep in mind; the people who never held the real thing in their hands do not appreciate what a difference an accurate mostly metal construction makes in this type of product. Anyone who is use to \$15 joysticks or \$170 off-the-shelf yokes may consider this product price out of their range. Until these people experience what a product like this has to offer in realism and reliability, they don't know what they are missing. The yoke is cast aluminum and about 90% metal and will withstand years of real-life use. Low cost mass manufactured joysticks and yokes do not sustain use over time. The ACE 747 Yoke more accurately compares to a professional replication product than a game toy accessory.

Ali Anwar maintains ACE will provide the support and warranty services for any of their products for a period of one year from purchase. Although there should be no reason to ever need this warranty service, it is a good feeling knowing you have their full support if you need it. After the first year, ACE will repair their products with a negotiated price in advance. Customers are comforted in knowing they are dealing directly with the manufacturer.

LIKES: I absolutely love the robustness of this unit. It is built like a single solid component. The feel and handling of this unit is second to none in my experience. I believe ACE has developed a reliable and let's face it, incredible unit. It appears to have been designed to withstand years of use and enjoyment. Once installed, no maintenance should ever be required. I like this product because it will continue to work as good as the day it was originally purchased, for many years to come. I personally am completely satisfied and cannot imagine any avid simulator enthusiast being anything but ecstatic over this product. If you fly the Big Tin, this is the control yoke for you!

DISLIKES: I humbly offer two recommendations for user ease: (1) The autopilot disconnect switch exchanged from a push on – push off switch to a momentary switch and replace the red cap on this switch with a black cap; and (2) The angle of the chart holder inclined on the mount to facilitate reading the charts during operation.

CONCLUSION: The ACE 747 Yoke is a must for any airliner enthusiast. This unit blew me away with its quality and construction. In essence you are truly flying the "BIG TIN" with this yoke at your fingertips. I understand that the price tag may be high for some of you, but I assure you that you are getting what you pay for when it comes to quality, and realism. Based on similar products in the marketplace, this unit wins hands down, and at a lower cost then its comparables.

ACE has the drive and the conviction to ensure every customer is satisfied with their products. They have the experience of industry experts, and the willingness to succeed. ACE has a successful product line that speaks for itself, and the customer service to allow them to remain in business for years to come. Please understand when you are contacting ACE, give them ample time to return your emails, as they are quite busy. But I personally found the communication with them similar to all other companies in this industry. What are you waiting for.....? Order your ACE 747 Yoke today!



Supplemental

After writing this review, I have been informed by ACE / Aircraft Controls Engineering that they have reduced the height of the Yoke by 2.5 inches, now making it 100% Accurate to the "Real Yoke".

Additionally, Ali Anwar sent me pictures of their remodeled 737 Yoke with the new chart holder. Have a look for yourself, and see the difference. I wouldn't think you would be able to make a yoke this real, even more realistic. Aircraft Controls Engineering has found yet another way, and it looks amazing.

