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Honeycomb Aeronautical's Alpha Flight Controls XPC is a new and improved version of their inaugural Alpha yoke.



Honeycomb Aeronautical's

Alpha Flight Controls XPC

A game-changing yoke rebooted

Honeycomb Aeronautical entered the flight simulation scene with a bang in 2019 when it launched the highly acclaimed Alpha Flight Controls (see Issue 122). The company broke new ground, paving the way with a yoke that was unrivalled in terms of build quality and realism. Since then, Honeycomb has released the Bravo Throttle Quadrant, with the Charlie Rudder Pedals due to be released later this year. It has now

launched a new and improved version of the inaugural yoke called the Alpha Flight Controls XPC. Like the previous iteration, it is PC- and Mac-compatible but also adds Xbox Series X|S support.

So when Honeycomb's CEO, Nicki Repenning, approached us with the exciting news that the development of the upgraded Alpha XPC yoke was complete, it seemed like the perfect opportunity to find out more.

The Alpha Flight Controls XPC

As well as adding Xbox compatibility, the XPC has undergone various upgrades. It sports a new design with a squared-off grille and a five-position spring-loaded ignition switch, which more closely replicates those found in real aircraft. Internally the 8-bit potentiometers have been replaced with 12-bit Hall Effect sensors, increasing the resolution of the pitch and roll axis by 400%, resulting in crisp and



A built-in switch panel includes controls for the battery master, alternator, avionics and external lighting.

precise control inputs. The sensors are also contactless, so there is no physical wear.

Like the previous iteration of the yoke, the Alpha Flight Control XPC is a hybrid design that replicates the look and feel of a typical aircraft yoke. Although it is based on a General Aviation (GA) design, it is also intended to work with any aircraft equipped with a yoke, including airliners, turboprops and business jets.

The yoke is made with a metal frame and covered in a smooth matte black finish. The build quality is excellent and the yoke has a good solid feel to it. Additionally, the base has mounting points which can be used for attaching future products developed by Honeycomb as well as existing Saitek devices, so it can be easily expanded by adding more controllers or switch panels.

A solid steel shaft connects the handle to the base via two heavy-duty bearings to provide smooth control inputs and prevent the shaft from sticking in flight. Nicki explained that robustness and durability were important parts of the design. Honeycomb partnered with Precision Flight Controls (PFC) to design the internal mechanics. The company has more than 30 years of experience building FAA-approved flight controls and the Alpha yoke is based on the same technology PFC uses in its full-motion cockpits but scaled down to fit into a consumer product. Nicki said that he wanted the best in the industry to work on elements they were good at and PFC was the obvious fit. A self-centring mechanism provides a smooth transition to the centre point for the aileron and elevator movement. Rather than using springs that can result in strong self-centring forces, the XPC uses nylon strings, which have more uniform control forces throughout the range of movement. There is also no wear so the tension will remain consistent during the lifetime of the yoke.

Control layout

The layout of the buttons and switches is designed to replicate those found in real aircraft. The base houses a backlit switch panel with controls for the battery master, alternator, avionics as well as five external light switches. The redesigned ignition switch has five positions for the magnetos: Off, Left, Right,



Above: The left handle features an 8-way HAT switch, dual rocker switches and two push-buttons, which can be assigned to the autopilot disconnect and a push-to-talk function.

Below: A new ignition switch is designed to replicate those found in real aircraft

Below right: The yoke is connected to a computer or Xbox via a USB C cable while a switch on the back toggles between a computer (PC/Mac) and Xbox.



Both and a spring-loaded start position.

The left handle features an 8-way HAT switch along with dual rocker switches for the elevator trim and two push-buttons, which can be configured for the autopilot disconnect and push-to-talk functions. The right handle also features dual rocker switches, which can be used for aileron and rudder trim and two push-buttons. However, all the buttons and switches are fully programmable and can be assigned to different functions. Nicki explained: "Essentially, the aim was to include all the switches and buttons needed for a basic cockpit setup so users don't have to use the keyboard."

The base also houses discreet Xbox buttons: Guide, View, Share and Menu and the trim switches also have Xbox functions: LB/RB, X/Y and A/B. Nicki explained that although the XPC is Xbox-compatible, he wanted the main focus to be on providing an authentic flying experience. Honeycomb also developed an Xbox hub (available separately), which can be used to connect other Honeycomb products such as the Bravo Throttle Quadrant and Charlie Rudder Pedals. The Xbox hub is also compatible with the Logitech Flight USB Throttle and Rudder Pedals. The old Alpha yoke however is not compatible with the Xbox hub.

Dual mounting solution

The Alpha yoke features an innovative dual mounting kit consisting of two heavy-duty metal clamps to secure the unit to a desktop. To accommodate tabletops that are too thick for traditional clamps, a large micro-suction cup can be used to fix the base to the desktop via a detachable mounting plate. Both solutions work very well, although with the suction cup the 'stickiness' can be lost due to dust or dirt. It is however possible to separate the base from the yoke and rinse it under water to remove any particles. This effectively regenerates the 'stickiness' of the micro-suction cup. However, as long as you make sure you attach the unit to a clean surface, it will stay firmly in place.





Above: Twin rocker switches and two push-buttons can be configured for functions such as aileron and rudder trim.

Below: The XPC sports a new design with a squared-off grille and mounting points for attaching future products developed by Honeycomb as well as existing Saitek devices.



Setup

The yoke is connected directly to the computer/Xbox via an included USB C cable and a switch on the back of the base toggles between a computer (PC/Mac) and Xbox depending on the platform you are using.

The yoke is fully plug-and-play, so once it is connected, it is automatically detected by the operating system and you are ready to go flying. It is also compatible with all the main flight simulator platforms, including the new Microsoft Flight Simulator (MFS), X-Plane, Prepar3D and FSX. In MFS and X-Plane, the XPC is automatically configured although it is possible to set the controls up using the in-sim configuration utility.

Flight test

Overall, the XPC provided an excellent flying experience. From take-off to landing, the controls had a reassuring weight behind them and you are quickly reminded if you are out of trim. Most flying takes place with the yoke in the centre position and here the controls are fluid and smooth with no self-centring forces, so you have very precise control over the aircraft. Strong centring force is an issue I have always had with many spring-loaded yokes but on the XPC, it is hardly noticeable.

Moreover, I found it did an excellent job in capturing the control inputs of real aircraft, both in normal flight and when pushing the flight envelope such as during steep turns or stalls, which require a lot of back pressure. The metal clamps and suction cup do a great job of securing the unit to the desktop, so you can apply a lot of force to the yoke without fear of it coming loose. Additionally, the built-in switch panel and a well-thought-out switch layout go a long way towards achieving a keyboard-free flying experience with a control layout that closely matches real aircraft.

Conclusion

Honeycomb has taken an already excellent yoke and made it even better, adding Xbox-compatibility along with an updated design, a spring-loaded ignition switch and Hall Effect sensors.

Like the old Alpha, it is designed to be used for both general aviation and airliners (basically any aircraft fitted with a yoke) and combined with solid build quality and realistic control inputs, you are guaranteed an authentic flight experience.

Owners of the Alpha Control System may ask if it is worth upgrading to the XPC. The old yoke is still an excellent product and while the XPC is certainly an improvement, it basically boils down to cost. Personally, I would be quite happy to continue using the old yoke, with a plan to upgrade further down the road as and when funds become available. Of course, if you are specifically after Xbox compatibility, upgrading to the XPC is the obvious choice. However, at the time of writing, Nicki said that while it is still possible to purchase the old Alpha yoke, production has ceased and when existing stock runs out, it will be officially discontinued. But if you are in the market for a new yoke, the Alpha XPC will certainly not disappoint.

By Richard Benedikz



PC Pilot Verdict

At a glance: Yet again, Honeycomb has provided us with a well-designed and innovative yoke at a competitive price that offers an authentic flying experience.

Developer: Honeycomb Aeronautical

Price: \$349.99 (£290 approx)

Website: www.flyhoneycomb.com

PC Pilot Score:



Alpha Flight Control XPC is designed to work with any aircraft equipped with a yoke, including airliners, turboprops and business jets.



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THE ALL NEW ALPHA FLIGHT CONTROLS^{XPC}

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EVOLUTION

At Honeycomb, we never stop development and we constantly research options to make our products better. This includes engaging with our customers and taking their feedback seriously. The changes might be subtle but it makes a huge difference, whether you fly for fun or you're using them as a tool in your flight training. It's evolution, not revolution...

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*Xbox compatibility only when connected to the Alpha Flight Controls XPC via the Xbox Hub

REVOLUTION

Quality, realism and affordability are the core values of all our team members. Every product on our roadmap is chosen because we don't believe that the sim community has to compromise between those three options. Our R&D team is located at Montgomery Gibbs Executive Airport so they can go from prototype to aircraft and do a side by side comparison in realtime, to make sure that every new product lives up to our values. The benchmark for new products should not be to be slightly better than what is already in the market. Evolution doesn't cut it, it should be a revolution!

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