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ImpulseRC Apex 5" HD Frame Kit

This is the HD Version of the Apex Frame Kit and is designed specifically to fit the DJI FPV System.



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About this product

With the release of [DJI's new digital HD system](#) and the emergence of real low-latency HD video, there has never been a more exciting time to be flying FPV.

The DJI HD Apex is a variant of the base frame which perfectly houses and protects the DJI Air Unit. By changing only the top and upper main plates of the Apex it becomes the perfect platform for anyone wanting to experience an HD video feed.

Note: Motors/Electronics are **not** included!

Apex Arm Design

The arms of an FPV frame are the key structural component that translates the thrust from the motors to the majority of the mass in the aircraft, which is secured to the body of the frame. The design of the

arms and how they are attached to the body is one of the most vital aspects that influences the performance of an FPV frame.

There are multiple problems that can occur with existing arm designs which can lead to poor performance, difficulty tuning and added cost. The Apex addresses all of these problems with a simple and unique new design that eliminates all arm slop and drastically increases durability.

Perfectly Symmetrical

Symmetrical arms make it possible to pocket one side of the part without introducing the need for distinct left and right arms, making you require more spare parts. We use a pocket instead of a hole under the motor to increase durability and we embed a press nut to simplify attachment and avoid clearance issues under your stack.

Simple Maintenance

Flight electronics are mounted to the upper main plate using countersink bolts. This completely decouples the arm attachment from the electronics mounting. Arms can be replaced using two bolts without any disturbance to your stack.

Shoulder Bolts and Threadlocker

Our custom machined shoulder bolts act as a solid steel pin through the arm which eliminates slop and tolerance issues. The precision shaft passing through the arm removes all side-loading of the carbon laminations on to the chisel-like threads of a regular bolt. Factory added threadlocker and custom aluminum cone washers spread the load of the clamping force and ensure the bolts will not vibrate loose.

Key to the Apex

At the apex of a masonry arch, a keystone locks all the stones into position and allows the arch to bear weight and be self-supporting. A keystone is a hallmark of strength and good design, the Apex FPV frame is no different and the carbon key sits at the heart of the frame to distribute forces applied to the arms.

Accessories

Manufactured by the legendary HQProp and included free with every frame are custom skids, bumper and Crossfire antenna mount, injection-molded in abrasion-resistant glass-filled nylon. At launch, we have available Classic Black, ImpulseRC Red, and Military Coyote Brown, with more colors to follow in the future.

Also in each frame kit are two die-cut lipo pads for you to choose from, both an ultra-durable natural rubber pad as well as a lightweight velcro option for those wanting to shave every last gram.

ESC Options

With its slim 5.5mm carbon arms the Apex is perfect for running both 4in1 ESCs as well as the new generation of thinner high current individual ESCs. Included with every frame kit is a set of nylon ESC wire covers, injection-molded by HQProp, which conform perfectly to the shape of the arm for ultimate protection. Alternatively, we also have custom-fitted race wire PCBs to make motor swaps quick and painless.

Electronics

The Apex frame is a perfect fit for all modern FPV electronics allowing a wide range of choices for your build, however, if you prefer to fly KISS and FETtec the experience is second to none.

We have created a fully graphical OSD with a unique mounting position, along with a high powered regulator board, designed specifically for the cleanest possible video feed. Slimline LED strips at only 5.5mm wide can be mounted along the edges of the arms. A custom wiring harness completes the package and provides a super simple build and quick maintenance with minimal soldering.

The new graphical OSD is based on ImpulseOSD which was introduced with the WolfPDB - so all the popular features such as VTX and camera control and GPS/Mag support are of course included.

Wiring Harness

The custom wiring harness supplied with the electronics makes your build pleasure and any maintenance quick and simple. All components are linked together and power is cleanly distributed throughout the system. The bare minimum of soldering is required to complete a build at the very highest end of FPV freestyle performance.

OSD Location

By placing the graphical OSD behind the camera it is removed from all sources of electrical noise. The video pathway is kept as short as possible with the sensitive analog signal being fed directly from the camera into the OSD then traveling to the VTX immediately above. All high current ESC and Lipo power, as well as EMI producing switching regulators, are well removed in the rear of the frame.

Ultra-Clean Video

Sensitive analog video components are on the front of the OSD facing the camera. The internal ground planes within the PCB act as a shield to block electrical noise from the ESCs for the cleanest video possible on a mini quad. The only regulator on the OSD is of the smooth and clean linear variety, with the two aluminum standoffs behind the PCB acting as heatsinks to ensure the OSD can handle the load of your high powered VTX.

Led Strips

The 6S capable switching regulator board in the rear provides power to the entire video system, as well as a completely independent auxiliary 5V 2A regulator for your own use. LED strips can be attached to the regulator board and the signal is conveniently routed through the harness to the OSD which can provide all the lighting effects you will ever need.

Note: LEDs not included.

Specification

Plate Thickness

- Arms: 5.5mm
- Key: 5mm
- Lower Main: 2.5mm
- Upper Main: 2mm
- Top: 2mm
- Camera Sides: 2mm

Standoff Height

- Front: 28mm
- Rear: 20mm

Dry Weight

- Alu hardware: approx. 115g
- Steel hardware: approx. 125g

Motor to Motor

- 225mm - Fits 5.2" Props

Arm Geometry

- Compressed X using
- Pythagorean triple 3:4:5

[Assembly Instructions](#)

Includes

Carbon

- (1x) Apex Arm Key CF 5mm
- (1x) Apex HD Top Plate CF 2mm ***
- (1x) Apex Main Lower CF 2.5mm
- (1x) Apex HD Main Upper CF 2mm ***
- (1x) Apex HD Cam Side Plate Kit ***
- (4x) Apex 5" Arm CF 5.5mm

Accessories

- (1x) Apex Full Screw Pack - High Tensile Carbon Steel - Gunmetal
- (1x) Apex Hook LIPO pad - BLACK
- (1x) Apex LIPO pad - 3mm BLACK
- (1x) Diamond File - Flat (Mini)
- (1x) Diamond File - Round (Mini)
- (1x) Lipo Strap - Medium - ImpulseRC
- (4x) M3 28mm Standoff - Aluminium - Black
- (4x) M3 20mm Standoff - Aluminium - Black
- (1x) Apex Plastics Kit - BLACK
- (1x) Apex Arm Covers - BLACK - (4 Pack)

Difference in parts over the base model Apex frame kit listed below

- (1x) Apex HD Top Plate CF 2mm
- (1x) Apex HD Main Upper CF 2mm
- (2x) Apex HD Cam Side Plates CF 2mm
- (4x) M2x5 Cap Screw - Aluminium
- (2x) TPU M2 Camera Spacers 1mm - Black

More Information

SKU	11146
UPC (GTIN)	032733834782
Manufacturer	ImpulseRC
Item Returns	This item can be returned

Products Related To This Item



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\$165.99