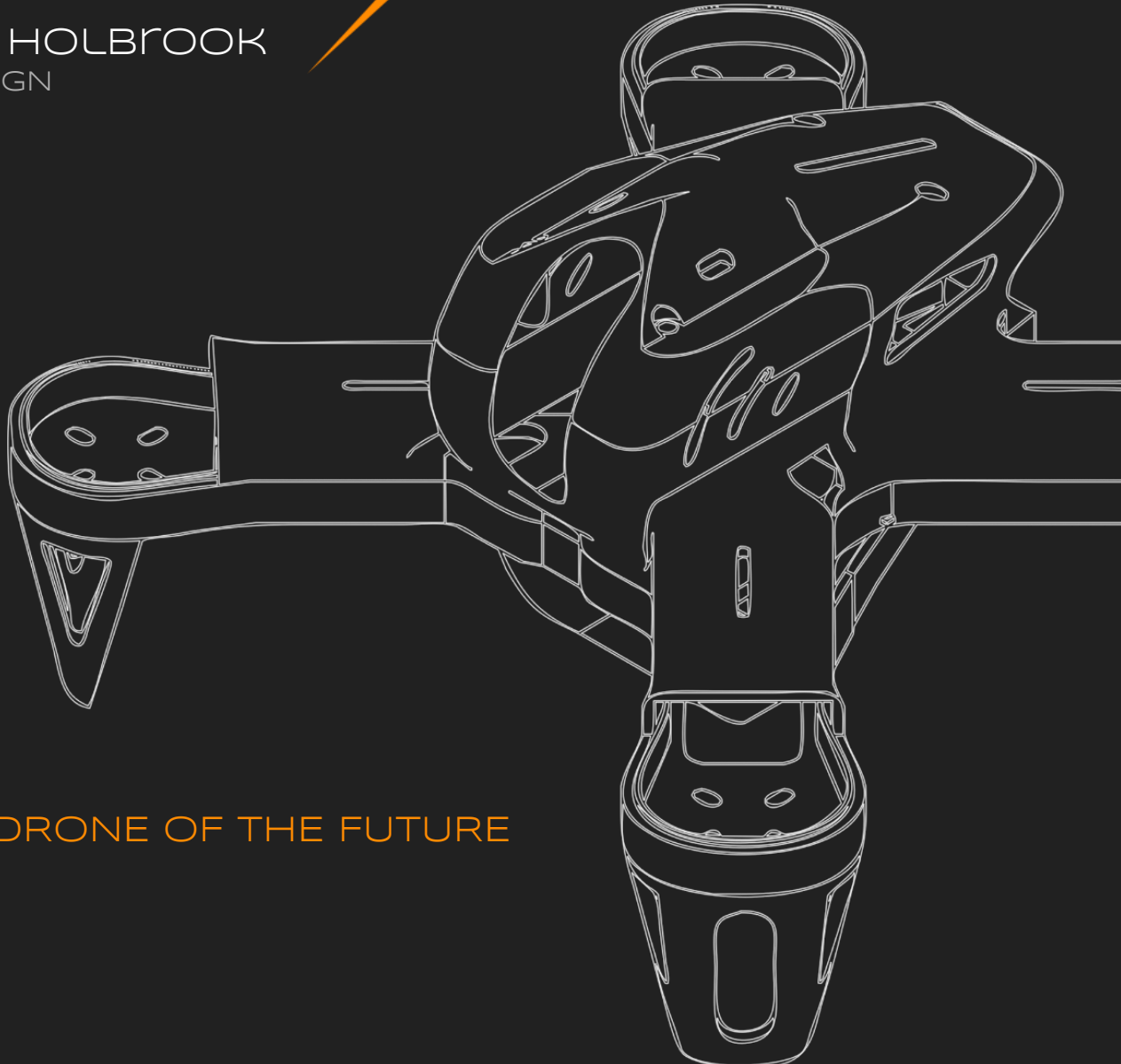


SIREN



VINCENT HOLBROOK
VANGO DESIGN



THE FPV DRONE OF THE FUTURE

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FPV DRONES

The Drone industry has boomed in the last decade and FPV Drone Racing especially has gotten much attention. With an official DRONE RACING LEAGUE and many Freestyle competitions, drone flying continues to grow and gain popularity.



THE HOBBY

Building and customization is what makes the hobby so popular. With so many parts and accessories to buy, the amount of builds are infinite and the challenge of making and designing a drone that is fast and performs great is what gives the hobby a competitiveness.

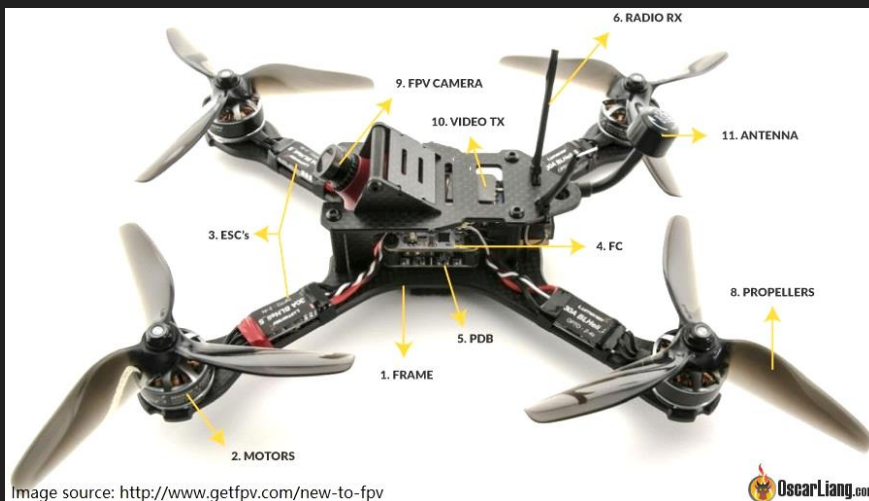
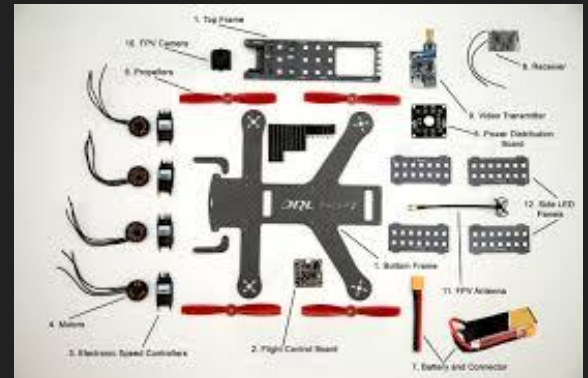
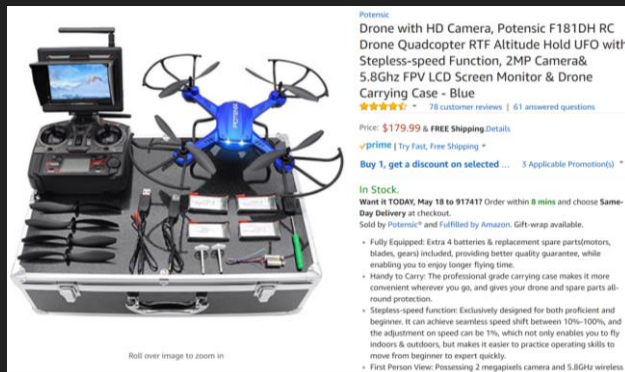


Image source: <http://www.getfpv.com/new-to-fpv>

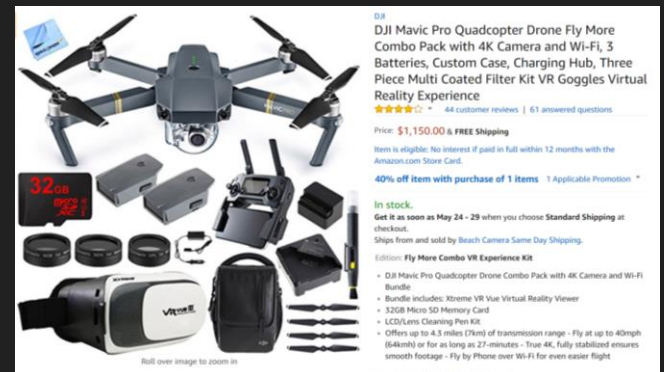


Drone Market (Competitors)

As of today, there are only a handful of FULL fpv drone builds. Most companies only sell parts individually, therefore The SIREN X would be one of the first fully functional high quality drone builds in production.



LOW-END



HIGH-END

THE BUILD

The carbon fiber frame holds all of the internal components together while the outer body provides full protection.



COST LIST

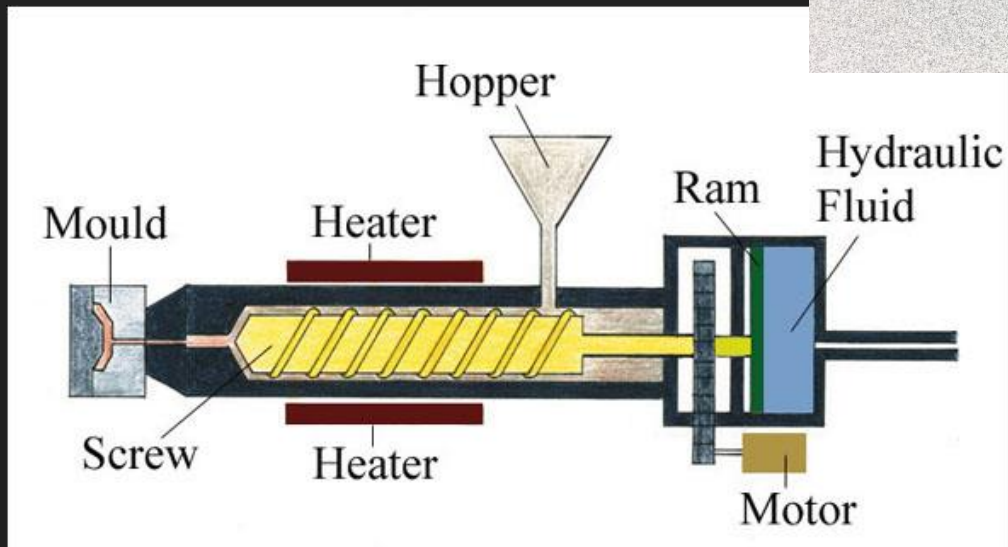
INTERNALS	COST
Lumenier QAV X Frame	\$90
(4) Xnova Hyper 2207 2300kv Motors	\$80
(4) Kiss 24 amp esc's	\$40
Betaflight flight controller	\$40
Runcan (roto riot edition) camera	\$46
TBS Unify HV	\$50
Lumenier Axii Antenna	\$40
Spektrum fpv reciever	\$25
(4) HQ Propellers	\$9
G+PLUS 1300mAh 14.8V 4S 70C Li-Po Battery	\$18
EXTERNALS	
Body (Nylon)	\$200
(20) Hex screws	\$3
Paint and Finish	\$30
TOTAL COST	\$671
RETAIL PRICE	\$800

This is a high performance drone so the retail price will be high due to the material, component, and production quality

MANUFACTURING

High quality ABS
plastic parts with
detailed cutouts

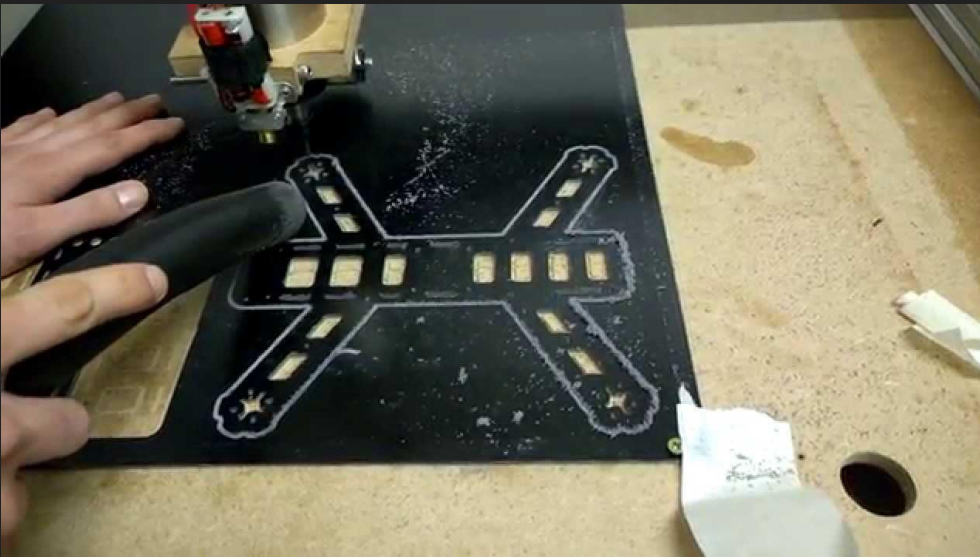
INJECTION MOULDING



MANUFACTURING

Carbon Fiber Frames
would be machine cut
to optimize efficiency

CNC CUTTING

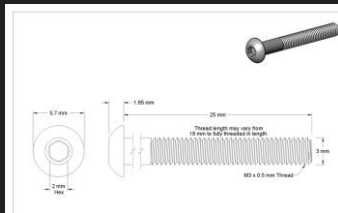


SECONDARY OPERATIONS

ASSEMBLY: Done by hand due to a "perfect fit" standard.

SCREWS: Outsourced

Button Head Hex Drive Screws, Black-Oxide Alloy Steel, M3 x 0.5mm Thread, 25mm Long, (20pcs)



PAINT & FINISH: Done by machine, in order to ensure a consistent finish with every product.

BASE COAT



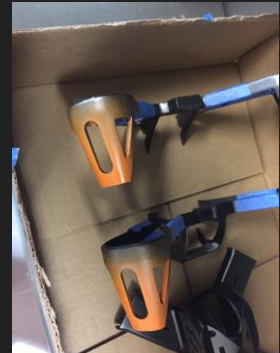
METALLIZER



DECALS



CLEAR COAT



INTERNAL PARTS

ALL internal electronics would be outsourced from various different drone companies to maximize the performance quality of the drone.



SPEKTRUM
FPV
RECEIVER



LUMENER
AXII
ANTENNA

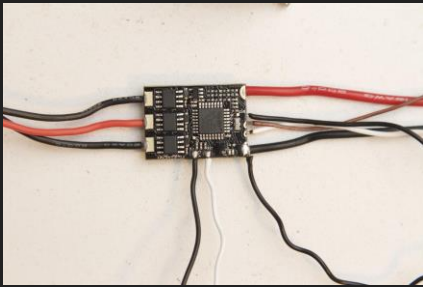


TBS
UNIFY HV
(antenna that
connects to radio
receiver)



RUNCAM
ROTO RIOT
EDITION

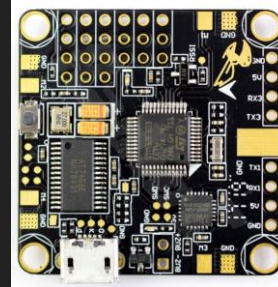
INTERNAL PARTS



KISS 24 AMP
ESC'S



G+PLUS
14.8V 4S
LIPO
BATTERY



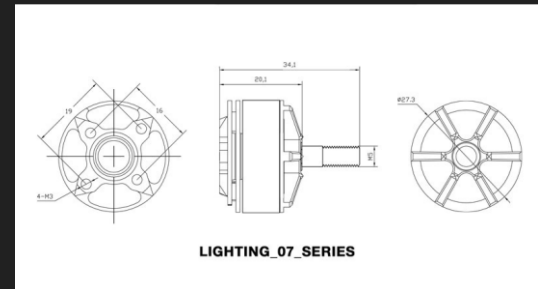
BETAFLIG
HT
FLIGHT
CONTROL
LER



XNOVA
HYPER
2207
2300KV
MOTORS

XNOVA HYPER MOTORS

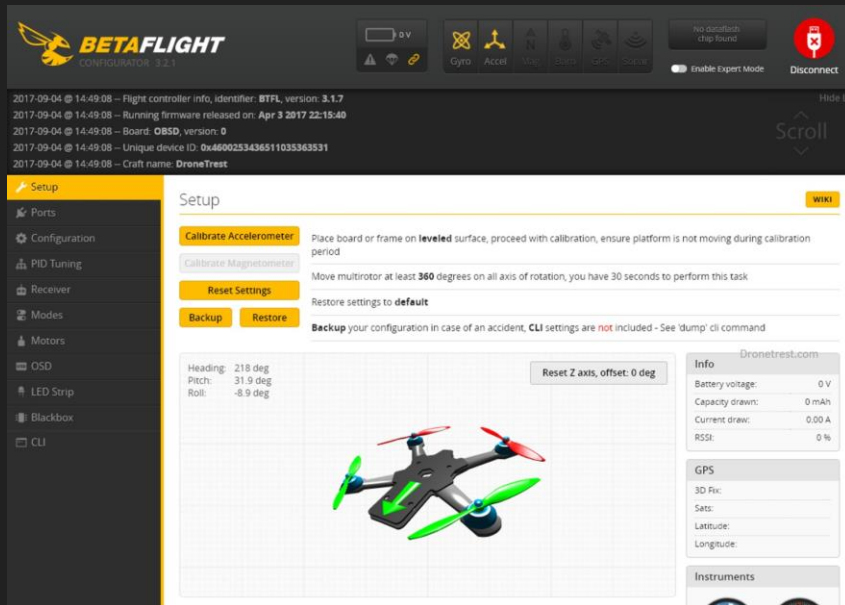
What gives the SIREN X its speed and lift are the upgraded XNOVA MOTORS



Xnova Lightning	L2207-1650	L2207-1800	L2207-2300	L2207-2450	L2207-2600
RPM/Volt	1650	1800	2300	2450	2600
No-load Current(@10v)	1.2A	1.3A	1.7	2.0	2.3
Weight(g) w.s.w	33.5g	33.5g	32	32	32
Battery	5-6S	5-6S	4-5S	3-4S	3-4S
Resistance	0.075 Ω	0.060 Ω	0.045 Ω	0.040 Ω	0.036 Ω

SOFTWARE

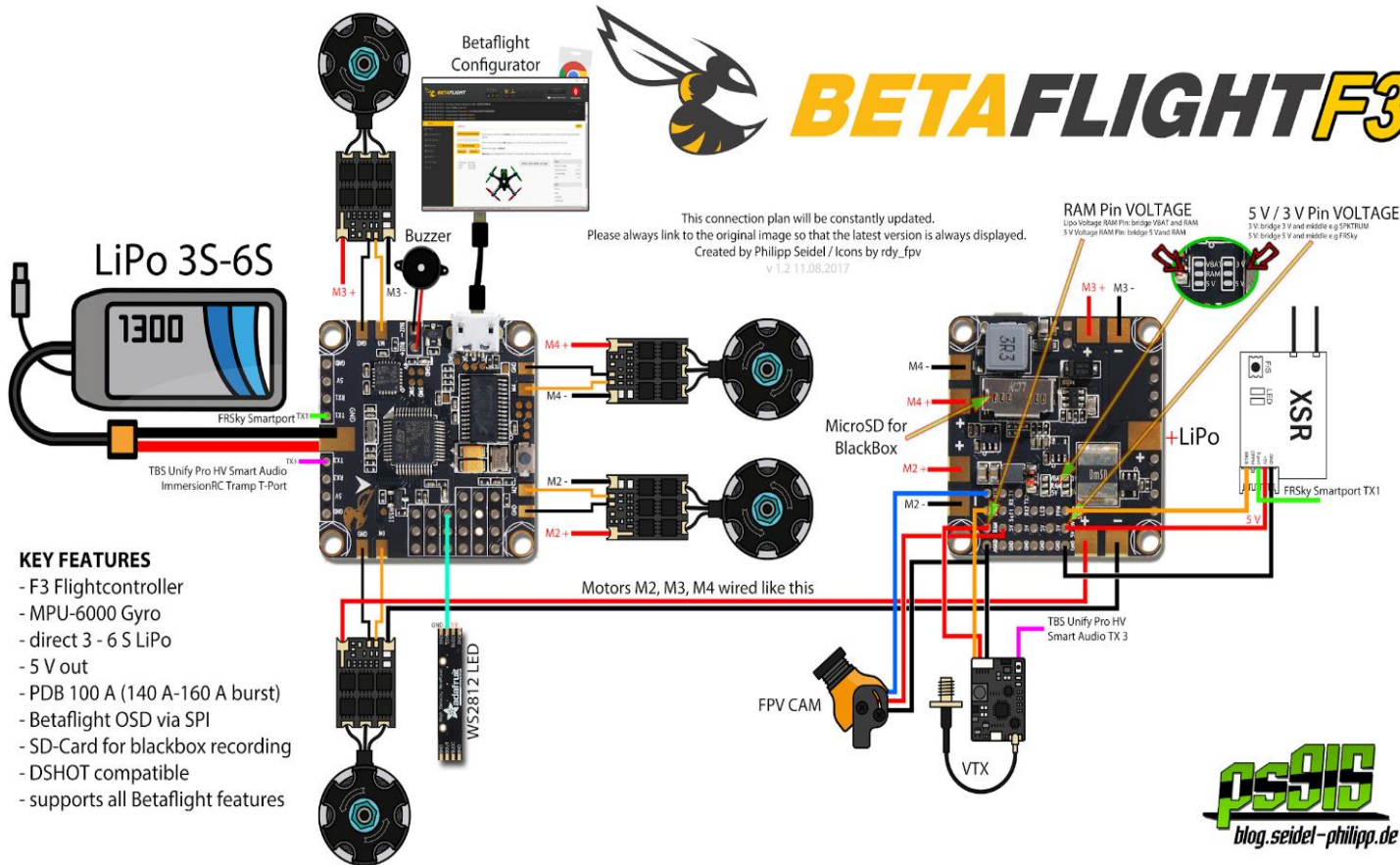
Each Siren X drone comes pre-loaded with the latest version of Betaflight where pilots can customize their radio's, flight modes, and calibrate their drones.





BETAFLIGHT F3

This connection plan will be constantly updated.
Please always link to the original image so that the latest version is always displayed.
Created by Philipp Seidel / Icons by rdy_fpv
v 1.2 11.08.2017



KEY FEATURES

- F3 Flightcontroller
- MPU-6000 Gyro
- direct 3 - 6 S LiPo
- 5 V out
- PDB 100 A (140 A-160 A burst)
- Betaflight OSD via SPI
- SD-Card for blackbox recording
- DSHOT compatible
- supports all Betaflight features

ps916
blog.seidel-philipp.de

ASSEMBLY



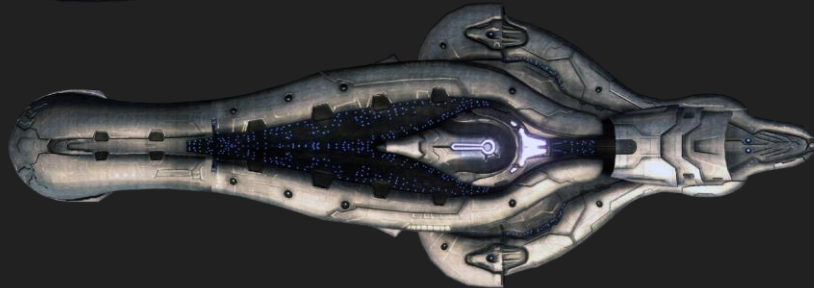
EXTERIOR

The Design of the exterior increases protection while still maintaining aerodynamics and stability. Weighing only 3 lbs, as well as being perfectly balanced the X-type frame gives the pilot the ultimate flying experience.

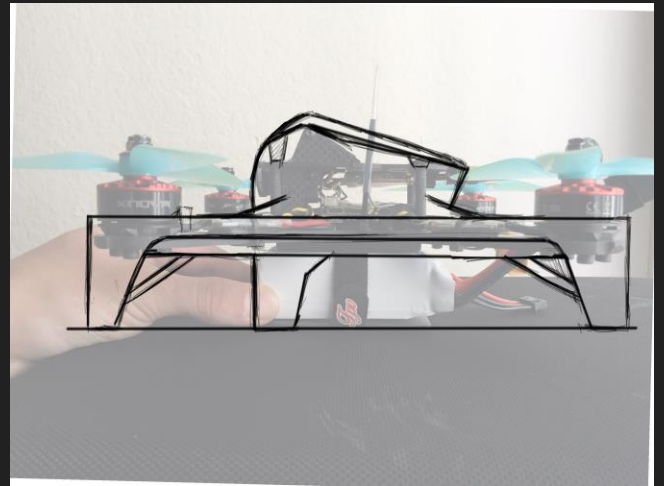


INSPIRATION

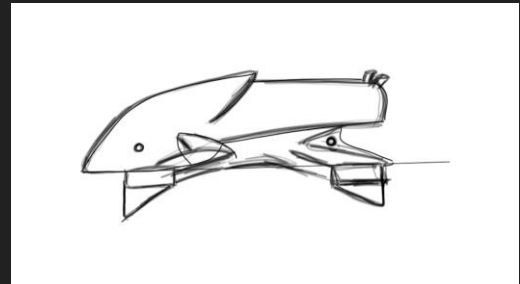
The shape of the outer shell was inspired by the look of **COVENANT SHIPS** from the popular sci-fi game HALO. The Design style looks alien-like and sleek, promoting a aerodynamic and fast body when moving.



IDEATION

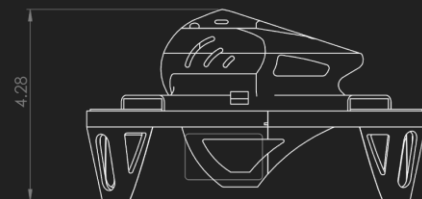
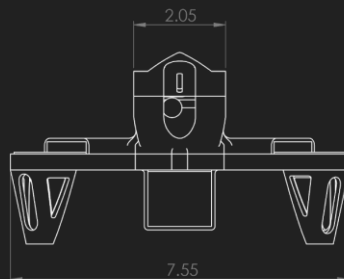
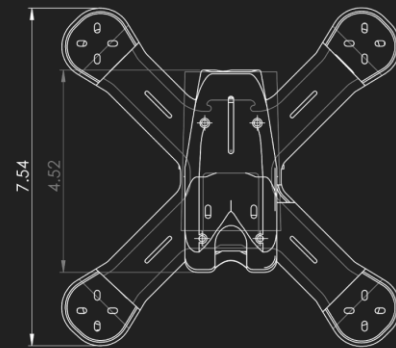
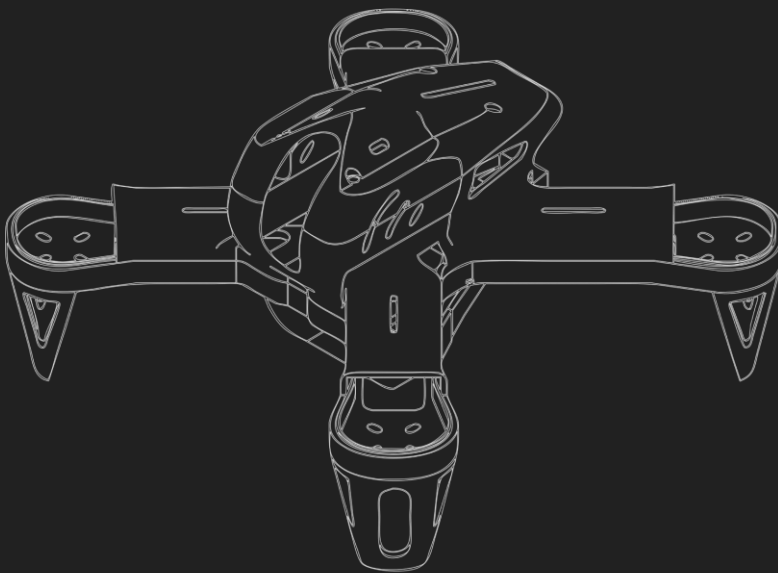


Originally I was going for a bug/alien looking, combining smooth curves with sharp points.



DESIGN

The X FRAME gives the quad a perfect center of gravity while the body's curves remain asymmetrically balanced.



COLOR STUDY

* Black chrome *
Finish w/bright
* orange trim *

Matte warm-
white finish
w/dark white trim

Metallic orange
Finish w/dark
matte black trim



FINAL FINISH

The Original
SIREN X comes in
Dark Metallic
with **Bright**
Orange accent,
inspired by the
HALO 4 enemies:
PROMETHEANS



PAINT AND GRAPHIC

In order to reflect the Promethean style, I used a Black Base coat with a Metallic Grey overcoat to give the drone a "space steel" finish.

To simulate rocket thrusters, I decided to speckle the 4 legs with bright orange, and add a faded coat on top.

The Graphic shown on the top represents the **X** in the name SIREN **X**.



TARGET

THIS PRODUCT IS INTENDED FOR AGES **13 YEARS AND UP.**

SKILL LEVEL: MODERATE-EXPERT

OFFICIAL FAA PART-107 UAS LICENSE IS RECOMMENDED WHEN PILOTING THIS AIRCRAFT. VISIT [HTTPS://.WWW.FAA.GOV/UAS/](https://www.faa.gov/uas/) TO GET LICENSED TODAY.

SELLING PRICE

The full package comes with:

THE SIREN X with all internals connected and ready to fly,

BETAFLIGHT pre-installed,

(1) SPEKTRUM DX6i RADIO

(1) 4S LIPO BATTERY

TOTAL: \$800

VANGO DESIGN

The **SIREN X**
reflects the
VANGO DESIGN
brand throughout.

The smooth
organic curves,
futuristic look, and
bright color
palette my style
and design
language is shown
proudly



VANGO DESIGN



END



VANGO DESIGN