



FPV DRONES

**FROM ASSEMBLY TO AUTONOMY –
LEARN THE FUTURE OF FLIGHT**



COMPLETE FPV LEARNING

*Built for Beginners,
Designed for Professionals*



**BUILD. FLY.
MASTER,
THE SKY.**

APPROVED. ACCREDITED. AHEAD OF THE CURVE

DRONUM - Rajasthan's first and only DGCA-approved Remote Pilot Training Organization (RPTO), authorized for Small and Medium-class drone training and Remote Pilot Certification (RPC), Train-the-Trainer (TTT) approval and two DGCA-approved flying bases, Now in collaboration with AEROPHANTOM, pioneers in FPV & RC Plane, proudly brings India's first structured FPV Drone Build & Fly Programs.

Together, we merge DGCA-approved excellence with hands-on FPV innovation, building the future of drone pilots in India and ensure unmatched quality and scale in drone education.

Why Choose Our FPV Training?

- Structured FPV & RC Plane programs - bridging the gap between hobbyist flying and professional-grade drone training
- Beginner to Pro learning pathways
- Hands-on workshops with expert mentors
- From drone assembly to autonomous missions
- Practical skills for careers in defense, agriculture, content creation & more

DRONUM AEROPHANTOM



EXPLORE OUR PROGRAMS - FROM BEGINNER TO PRO

At **Dronum x Aerophantom**, our courses are designed to give learners both technical knowledge and real flying experience.

- **FPV BUILT (Beginner)** – Learn drone frames, electronics, and assembly to build your own FPV drone.
- **FPV FLY (Beginner)** – Master FPV flying through simulators, transmitter setup, and supervised field practice.
- **FPV BUILT PRO (Autonomous)** – A complete program where you build, configure, and fly your own drone with tuning & optimization.
- **FPV FLY PRO (Autonomous)** – Explore advanced flight controllers, sensors, mission planning, and autonomous drone systems.

Training Program	Type	Duration
FPV BUILT (Beginner)	Manual	7 days (build journey)
FPV FLY (Beginner)	Manual	5 days (flight mastery)
FPV BUILT PRO (Autonomous)	Autonomous	10 days (advanced build)
FPV FLY PRO (Autonomous)	Autonomous	5 days (autonomy & long-range)

With hands-on training and guided flying sessions, our programs transform enthusiasts into skilled drone pilots and innovators.

FPV DRONE (BUILD-ONLY PROGRAM) - 7 DAYS

“Build your own FPV drone from scratch.”

Objective

Learn the foundations of drone engineering, covering frames, motors, ESCs, flight controllers, batteries, and wiring. By the end, you'll have a fully built FPV drone.

Key Modules:

- Multirotor Flight Basics
- Frames & Material Selection
- Motors, Propellers & ESCs
- Flight Controllers (F4/F7)
- LiPo Battery Selection
- FPV Camera & Video Systems
- Assembly & Safe Power-up



Modules

1. Overview of Multirotor Flight Fundamentals

- Balance of thrust, lift, drag, and torque.
- Importance of propeller direction and four-motor configuration.

2. Frames: Size, Material & Selection

- Frame sizes: 5", 7", 10" and their use cases.
- Carbon fiber vs plastic frames.
- Matching frames with flying styles (long-range, cinematic, freestyle, racing).

3. Motors & Propellers

- Understanding motor KV rating.
- Choosing motor sizes for different frames.
- Propeller diameter and pitch selection.

4. Electronic Speed Controllers (ESCs)

- Function and role of ESCs.
- 4-in-1 ESCs vs individual ESCs.
- Amp rating (20A, 35A, 45A, etc.) and voltage compatibility.
- Matching ESC with motor current draw.
- Firmware options (BLHeli_S, BLHeli_32).

5. Flight Controller (FC) – The Drone's Brain

- Key specifications: gyro type, UART ports, processor (F4, F7).
- Stacks: 4-in-1 ESC + FC combos.
- FC orientation and proper mounting.

6. Battery Selection

- LiPo basics: discharge rate (C-rating), capacity (mAh), cell count (3S, 4S, 6S).
- Selecting the right battery for frame + motor + ESC combo.

7. FPV Camera & Video System

- FPV cameras: CCD vs CMOS.
- Video transmitters (VTx): 25mW to 800mW power output.
- Antenna types and importance.

8. Airframe Assembly

- Step-by-step: Frame → Motors → ESCs → FC → Camera/VTx → Receiver → Battery.
- Best practices for wiring (power, signal, ground).
- Use of smoke stoppers for safe first power-up.

Outcome: A complete, ready-to-fly FPV drone.

FPV FLY (BEGINNER) -

FPV DRONE FLYING & SIMULATOR TRAINING (FLIGHT-ONLY PROGRAM) - 5 DAYS

“Master FPV flying through simulators & real-world practice.”

Objective

Learn safe FPV flying, transmitter setup, FPV goggles, and supervised flying sessions.



Modules

- **Safety & Flight Theory**
- **Simulator Practice – DRL Sim, Liftoff, Velocidrone.**
- **Transmitter Setup & Flight Modes**
- **Using FPV Goggles**
- **ESC/FC Arming Safety & Pre-Flight Checks**
 - Recognizing ESC beeps & understanding FC arming / disarming procedures.
- **Supervised Field Flying Sessions**
- **Crash Recovery & Emergency Procedures**

Outcome: Confident FPV pilot, ready for safe flights.

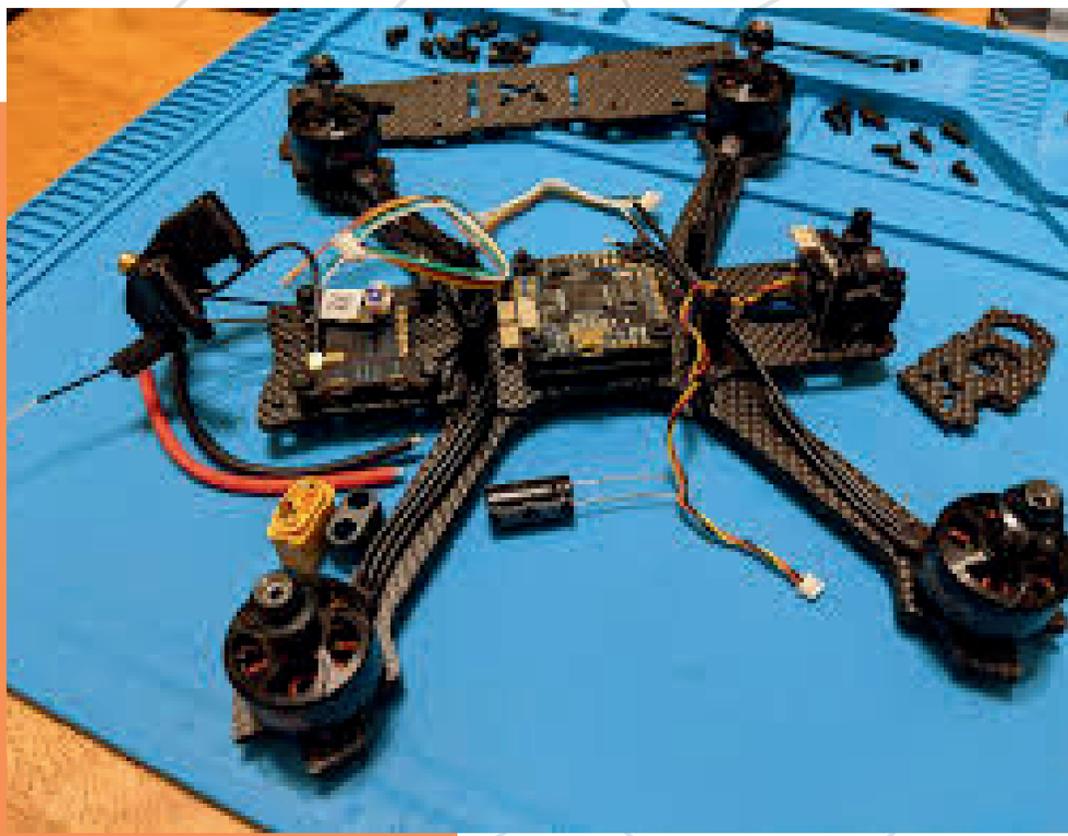
FPV BUILT PRO (AUTONOMOUS)

BUILD & FLY INTEGRATED PROGRAM - 10 DAYS

“Take your drone-building skills to the next level.”

Objective

Deep-dive into advanced drone assembly, firmware setup, and performance optimization.



Modules

- **Drone Theory & Fundamentals {from FPV Built Training – Course 1}**
- **Frame & Electronics Selection – motors, ESCs, FCs, batteries, cameras, VTx, RX.**
- **Practical Build Sessions – including ESC and FC wiring labs.**
- **Flight Controller Firmware Setup – (INAV/Betaflight)**
 - Flashing firmware.
 - Configurator setup.
 - ESC motor direction test.
- **Simulator Training (parallel with build).**
- **Field Flying Sessions.**
- **Tuning & Optimization – PIDs, Rates, Filtering.**

Outcome: performance-grade FPV drone, built & optimized.

FPV FLY PRO (AUTONOMOUS)

LONG RANGE & AUTONOMOUS FPV DRONE SYSTEMS - 5 DAYS

Objective

Students explore advanced drone systems by integrating autonomous flight capabilities. Learn to plan, control, and execute long-range and autonomous FPV flights.



Modules

- **Introduction to UAV Sensors & Autonomy**
- **Autonomous Flight Controllers – Pixhawk, Matek, SpeedyBee F405 Wing.**
 - Autopilot FC vs Betaflight FC.
 - UART mapping & sensor inputs.
- **Power Distribution & ESCs for Autonomous Drones**
 - High-current ESC selection for long-range builds.
 - Pixhawk–ESC connections.
- **Mission Planning Software – QGroundControl / Mission Planner.**
- **Sensor Integration – GPS, IMU, Compass, Barometer, FPV Camera.**
- **Semi & Fully Autonomous Flights.**
- **Ground Control & Telemetry Systems.**

Outcome: Skilled FPV Pilot, capable of autonomous and long-range flight operations.



Who Can Enroll?

- ✓ Students & Engineers
- ✓ Defense & Police Personnel
- ✓ Content Creators & Cinematographers
- ✓ Tech Entrepreneurs
- ✓ FPV Hobbyists & Racers

Future-Ready Training with Real Impact

- Learn future-ready FPV skills.
- Training Certification backed by a DGCA-approved RPTO.
- Career pathways in cinematography, racing, logistics & more
- Be part of a Professionally structured FPV training Program.
- Build industry-grade FPV drones you can fly and test.
- Learn simulators + field flying for safe, progressive skill-building.
- Stay ahead with autonomous and long-range FPV training.
- Network with like-minded pilots, creators, and entrepreneurs.
- Be part of India's growing drone ecosystem with global opportunities.
- Gain hands-on build and flight experience under expert mentorship.



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TAKE OFF WITH US – JOIN NOW

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