

Module 1: Path Distortion (IMU + Magnetometer)							
Module Name	Component	Qty	₹/unit	₹Total	g/unit	gTotal	Notes
Path Distortion	MPU6050 or MPU9250 (IMU)	1	250	250	5	5	6-axis orientation
Path Distortion	HMC5883L Magnetometer	1	150	150	5	5	Direction sensing
Path Distortion	GPS Module (Neo6M or similar)	1	250	250	15	15	Location reference
Path Distortion	ESP32 / STM32 MCU	1	300	300	15	15	Logic & PWM control
Path Distortion	Wiring, headers, misc	1	50	50	5	5	Mounting, soldering
TOTAL	—	—	—	1000	—	45g	—
Module 2: RF Doppler Wing Detection							
Module Name	Component	Qty	₹/unit	₹Total	g/unit	gTotal	Notes
RF Doppler	HB100 Radar Module	1	400	400	40	40	Basic analog radar
RF Doppler	ESP32 / STM32 MCU	1	300	300	15	15	Signal processing
RF Doppler	Passive filters, op-amps	1	100	100	10	10	FFT input conditioning
RF Doppler	Mounting wires/misc	1	50	50	5	5	Sockets, mount
TOTAL	—	—	—	850	—	70g	—
Module 3: Polarization Flicker Panel							
Module Name	Component	Qty	₹/unit	₹Total	g/unit	gTotal	Notes
Polar Flicker	LC Polarization Sheet	1	700	700	30	30	5x5 cm flexible film
Polar Flicker	MOSFET driver switch	1	100	100	5	5	Light control logic
Polar Flicker	Light sensor (LDR)	1	20	20	2	2	Day detection
Polar Flicker	Wires/mounting	1	50	50	5	5	Flexible mounts
TOTAL	—	—	—	870	—	42g	—
Module 4: IR Beacon Pulse							
Module Name	Component	Qty	₹/unit	₹Total	g/unit	gTotal	Notes
IR Beacon	IR LED Array	1	150	150	10	10	850–950 nm range
IR Beacon	Light Sensor (LDR)	1	20	20	2	2	Detects dusk/night
IR Beacon	PWM driver / transistor	1	50	50	5	5	Pulse controller
IR Beacon	Microcontroller (ESP32/Nano)	1	300	300	15	15	Pulse timing control
IR Beacon	Wires/mounting	1	50	50	5	5	—
TOTAL	—	—	—	570	—	37g	—
Module 5: Plasma Arc Flicker							
Module Name	Component	Qty	₹/unit	₹Total	g/unit	gTotal	Notes
Plasma Flicker	Flyback Transformer	1	600	600	80	80	High-voltage source
Plasma Flicker	Capacitor + Diode	1	150	150	20	20	Pulse shaping
Plasma Flicker	Arc gap (electrodes)	1	100	100	10	10	Spark point
Plasma Flicker	Acrylic case + vent	1	200	200	40	40	Safety enclosure
Plasma Flicker	MCU + Trigger Logic	1	300	300	15	15	Activation logic
TOTAL	—	—	—	1350	—	165g	—
Grand Totals Summary:							
Total System	₹ Cost (5 Modules)	Total Weight					
Sum Total	₹4640	~359g					
Extra Budget in case ₹2000		~200g					
Proposed Budget:	₹6640	~559g					