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Air Car : A Review on the Invention of Flying Automobile

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***Abstract*: This paper is basically concerned with the design of a flying car and issue of traffic management within the world nowadays. A conceivable arrangement to this issue would be to design a flying or hovering car which can take the problem away from the overcrowded streets. Given innovative advances in flying machine development, route and operation; flying cars are not as it were a possibility but a need for the close future. The possibility and practicality of such a concept was explored in terms of creating a conceptual plan for a two-person carrying flying vehicle, fabricating model, ground and in-flight testing. A Flying Car could be a car which is imagined to be a roadable aircraft which can be used as a double reason for both travelling on street as well as within the air. Flying car is an updation of a car fair to overcome issues confronted by individuals in high traffic areas.**

Much just like the cars of nowadays, flying cars will require similar rules as used by automobiles at present, and this is where the advancement of virtual "highways within the sky" display themselves. These skyways would be a network of predetermined routes controlled by the flying cars air activity control and administration. The computer system will too keep up the flying cars movement in terms of speed and course so that they all stay suitably spaced within the air. The systems could be made up of an arrangement of computer systems which can control all of the flying cars within the area it covers.

Keywords: Automobile aerodynamics, aircraft mechanism, aviation, roadable aircraft

I. INTRODUCTION

Since the beginning of flight in 1903, there have been numerous attempts to successfully create flying cars. Within the field of the Invention, the present innovation relates to an air car capable of flying over the surface of the ground and, more particularly, to an air car capable of flying over the ground at a stature more prominent than the ground-effect distance. Flying car is envisioned to be an aircraft that can be used as a dual purpose for travelling on road as well as in air. A flying car would look like a car and not a helicopter, in spite of the fact that primary rotor and tail rotor concept is taken from helicopter but it doesn't needs any runway to fly. Flying car would be lightweight in order to move efficiently through the air, car's outer body would be strong and thick to outlive impacts. The design would be small to minimize air resistance. The flying car typically resembles a conventional car with no visible means of propulsion. It features a unique concept by using two guarded propellers for lifting car in vertical direction. Protected propellers are different from ordinary propellers as propellers are secured by empty steel plates.

Today's scenario:

Today's cars have the following cons which affect our expectation. These are the a few of cons, the first and foremost figure is Traffic Jams, which is very genuine factor , that waste our time, fuel additionally giving inconvenience to crisis administrations like fire services, Ambulance , Police vehicles etc. Accidents happen due to unskilled drives, over speed, drink and drive etc. It moreover cannot be used in Floods region, Natural disaster zone, for crossing a stream in non-bridge constructed range. To overcome this cons and provide all cons into pros, this concept is the stepping innovation.

Since both car and flying machine plans are as of now well built up, the primary step in characterizing flying vehicle is to analyze critical characteristics and major Components commonplace for these two plans.

II. METHODOLOGY

A. Proposed System

Flying car encompasses the following modules:

1. **Actuator**: Actuator is a gadget which is operated by either hydraulic or pneumatic fluids. It can do heavy work with a little applied constrain. Here the actuator is utilized to pullout the wing like shaft to begin with and another actuator turn the engine set to 90 degree upward.
2. **Composite Material**: It is the combination of two or more material which allow the comparative property of the

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material to be replaced. It is utilized in car to reduce the weight with more strength.

3 **Electric Motor**: It is small in estimate but capable of do a heavy work with exceptionally great precision. It is utilized to lift the car vertically and move it on a level plane with lifted height.

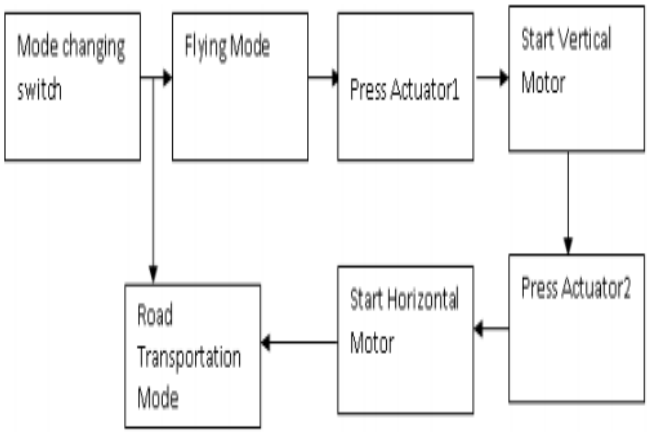
4. **Microprocessor**: It is programmed to control the speed of motor by input from the motion sensor to turn the car.

5. **Sensors**: A motion sensor is utilized within the steering. On the basics of little directing the sensor provide the input to the microprocessor.

6. **Mode Changing Switches**: It is utilized to alter the mode either flying or street transportation modes.

7. **Blades**: It is made up of carbon fiber. Since it features a higher quality than steel with low weight.

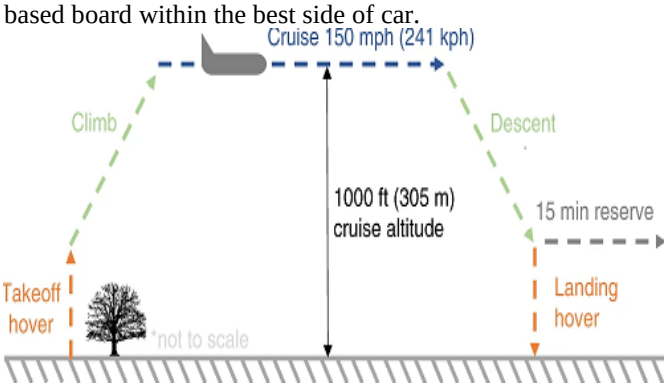
ARCHITECTURAL DIAGRAM OF FLYING CAR:



B. ***Establishing Connection***:

We use three motors. Two for lift the car vertically and another one engine for level movement of car. To begin with, when the flying mode is on and the actuator switch 1 is pressed. At that point the actuator drag the wing like shaft and after that another actuator interior that turn the engine set to 90 degree upward. After that Engine start switch is pressed. It achieve the sufficient RPM to lift the vehicle it lift it to 1-2km from ground surface. And then Actuator2 switch is pressed, it drag the flat engine set from the front side of car. At that point press the Motor2 switch ON to move the vehicle for front and turning. For turning the vehicle, fair direct it to side to turn. The sensor allow the input to Chip it control speed of the engine on that side for turning or alter the polarization of the engine for turn the vehicle in that side. For landing the vehicle first Off the Motor2 switch and then press the actuator2 switch for withdrawal of the actuator with the engine set. Then press the Landing switch within the Switch board. It slowdown the speed of the two Engine constantly. So, it come to landing moderate as helicopter. After landing press the Motor1 switch OFF and after that Press the actuator1 for withdrawal. Presently, it can alter the mode to the Transportation by street for Roadways.

Battery: It is the power source for the Engine. It can supply the power to the engine for least three hour. There's a caution which alert you when the battery backup is half an hour only. You'll charge the battery by the utilize of sun based board within the best side of car.



III. APPLICATION

It is used in emergency conditions like accident case. It is used in floods area for escape from that area, natural disaster area . It can be used for crossing the river where the bridge is unavailable. It can used to reduce traffic jams. It is used to travel to a place with a short period of time. You can define your own path to reach your planned place.

Advantages:

- Traffic and accidents level would be decreased.
- Time would be saved and spared in productivity
- It doesn't need any runway for takeoff. It can easily fly in vertical direction.
- .It is used in crisis conditions like accident case.
- A flying car is a type of personal air vehicle or roadable aircraft that provides door-to-door transportation by both ground and air.
- It is used in floods area for escape from that area, natural disaster area .
- It can be used for crossing the river where the bridge is unavailable.
- Modernization in automobile industry which has sustainable impact on environment.
- It can used to reduce traffic jams.
- It is used to travel to a place with a short period of time. You can define your own path to reach your planned place

IV. LIMITATION

It can be utilized as it were upon the battery backup period. When for take OFF and landing it require twice the track width of car. The efficiency and for superior speeding the vehicle must be in streamlined structure. In spite of the fact that we are still at the starting of a long travel and there are a huge number of challenges to overcome before ready to finally hail an Air Taxi!

V. CONCLUSION

Flying cars have been around in various shapes since the '30s but have never "taken off". This doesn't mean that the concept was awful, as it were that the mechanization continuously cleared out much to be desired. Other than bringing immediate benefits in simplicity, cost and reliability to today's flyer, it will produce administrative changes that will open solid low cost flight to the next generation of fly/drivers to the point where learning to fly will become a family project just like the rite of passage,

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learning to drive. Simultaneously, an entire new industry will spring up to supply these flying cars and to expand the line into analogues of the whole recreation and commercial vehicle line of nowadays. At last, flying automobile will be exceptionally productive for future development of flying car frameworks. Additionally it would be very accommodating for the individual who will be in the emergence voyaging. It is cheap as compared to other flying system. The battery can charge in flying mode. It provides us for traveling for a long distance as well. The traffic is controlled and a lot of individuals life can be saved.

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