

# Flying Cars

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26 September 1995

97-05  
1-172

## Personal Aviation System Specifications

<b>Price</b>	<b>Control</b>
\$40,000	Robotic with display
<b>Liability</b>	<b>Safety</b>
Structured ownership	Equivalent to autos
<b>Performance</b>	<b>Environment</b>
Comparable to airplanes	Equivalent to autos
<b>Convenience</b>	<b>Implementation</b>
Portal to portal	Continuously profitable

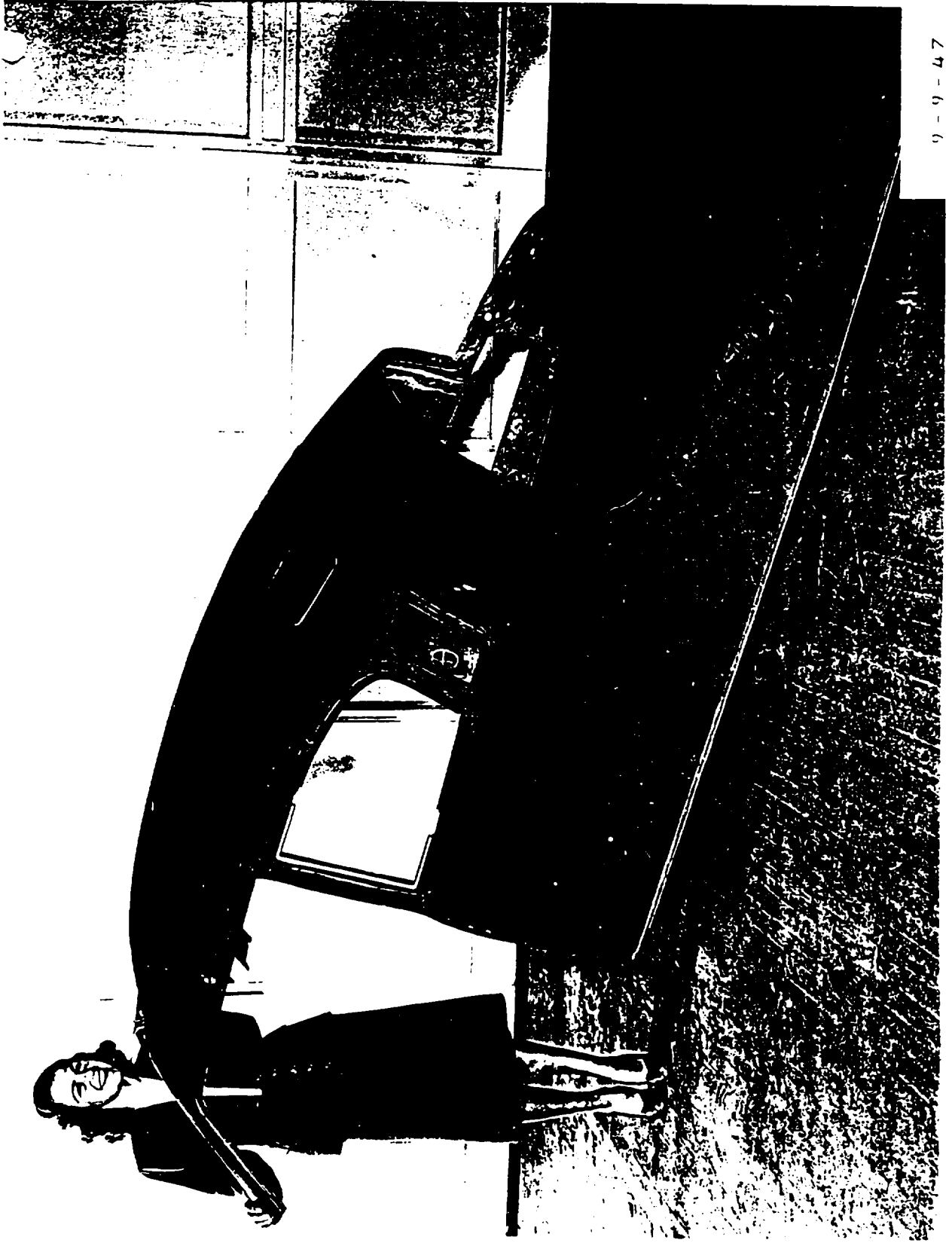
A new approach to the Fiat... the Buick was... which... the Con-Air... which... a... which... design... which... car was sold to... operator... who... kept... a... engine... who... wanted to... take... to... the... at...

He said it was... than... Fiat... Con-Air... Buick... design... which... car... operator... who... kept... a... engine... who... wanted to... take... to... the... at...

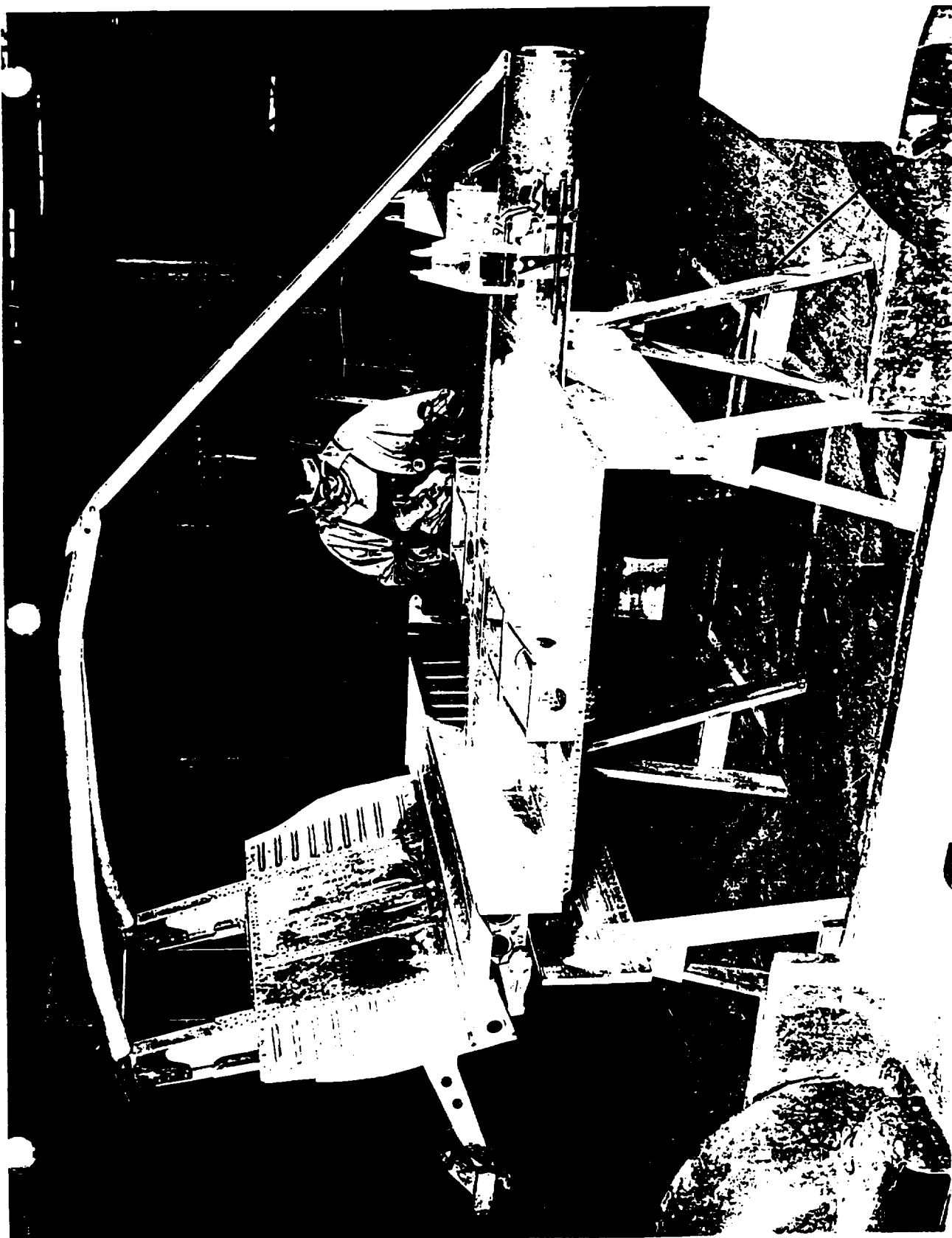
The... Fiat... Con-Air... Buick... design... which... car... operator... who... kept... a... engine... who... wanted to... take... to... the... at...



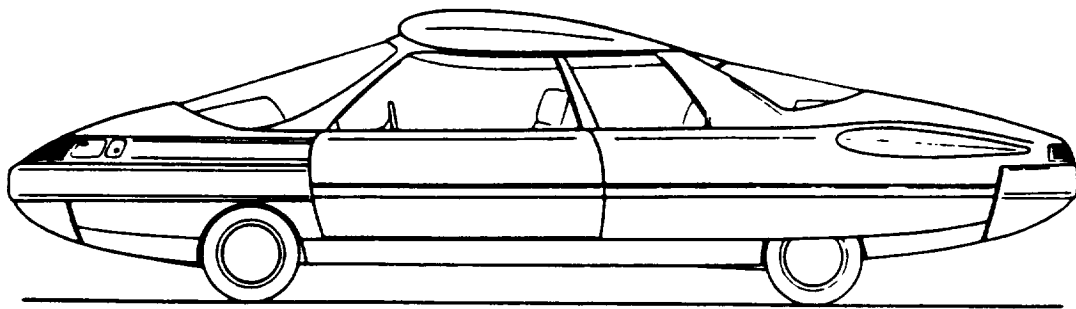




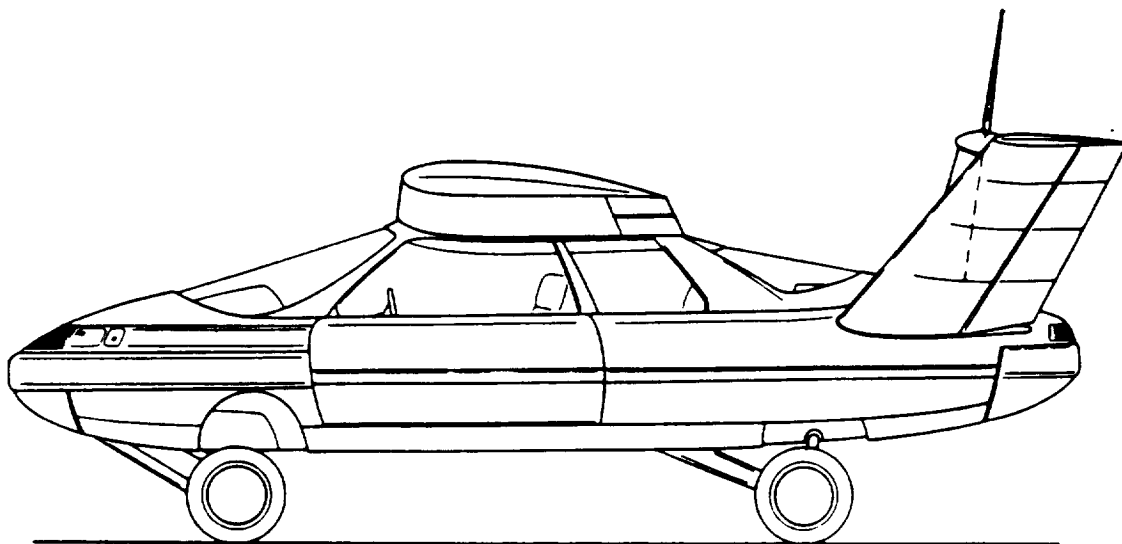
9 - 9 - 47



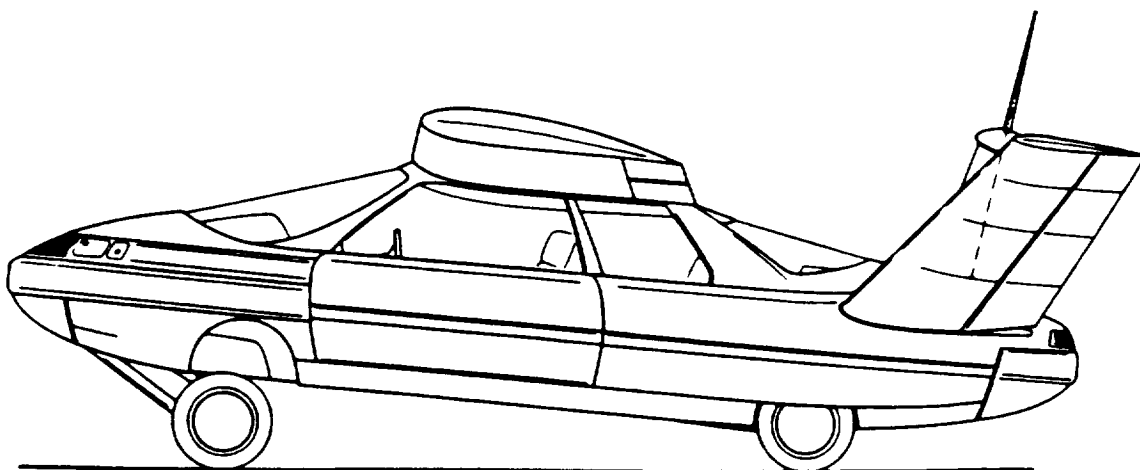




a) AUTOMOTIVE CONFIGURATION



b) AIRPLANE CONFIGURATION



c) TAKE-OFF PHASE

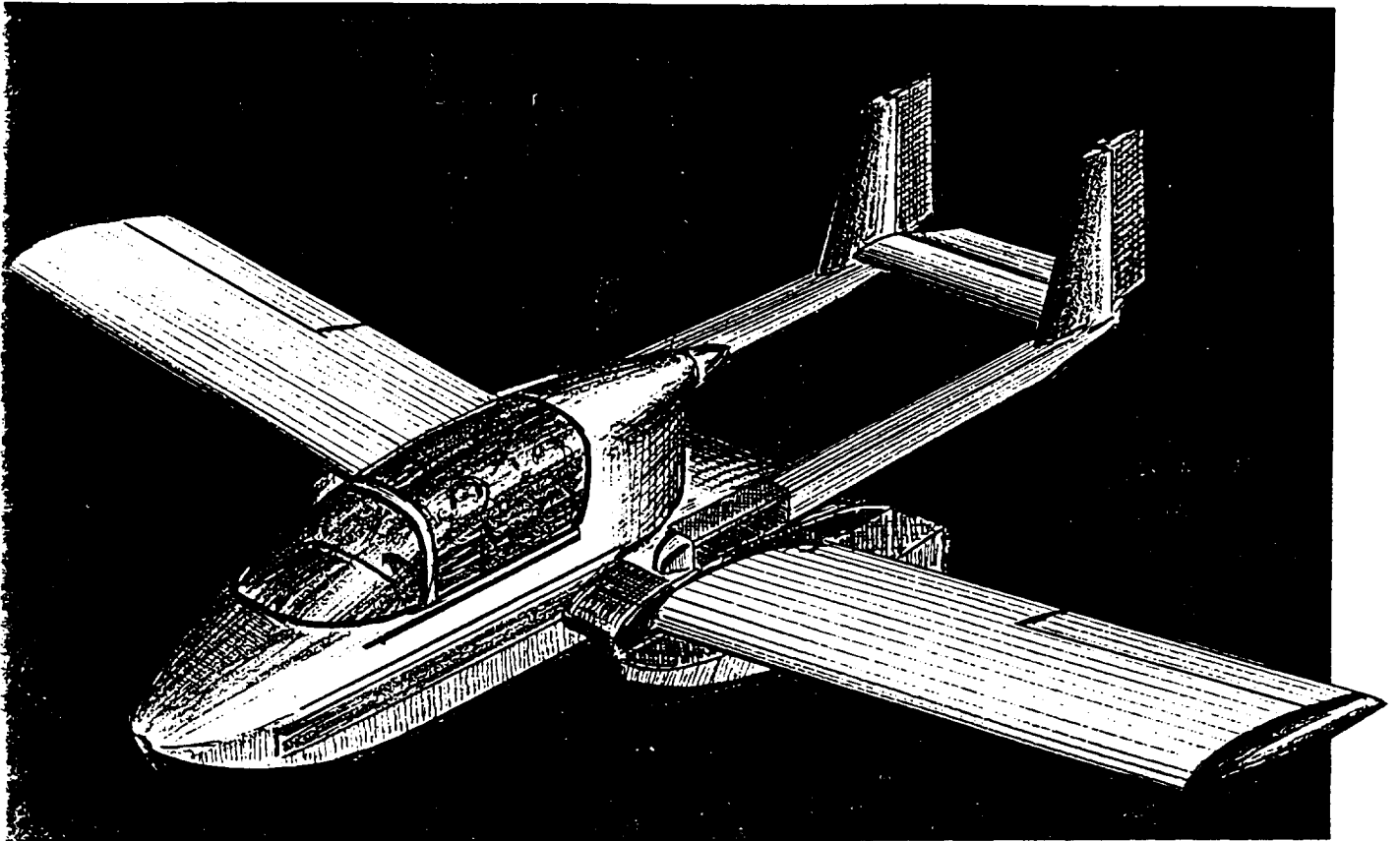
**FIGURE 7: ADVANCED FLYING AUTOMOBILE IN AUTOMOTIVE AND AIRPLANE CONFIGURATION**



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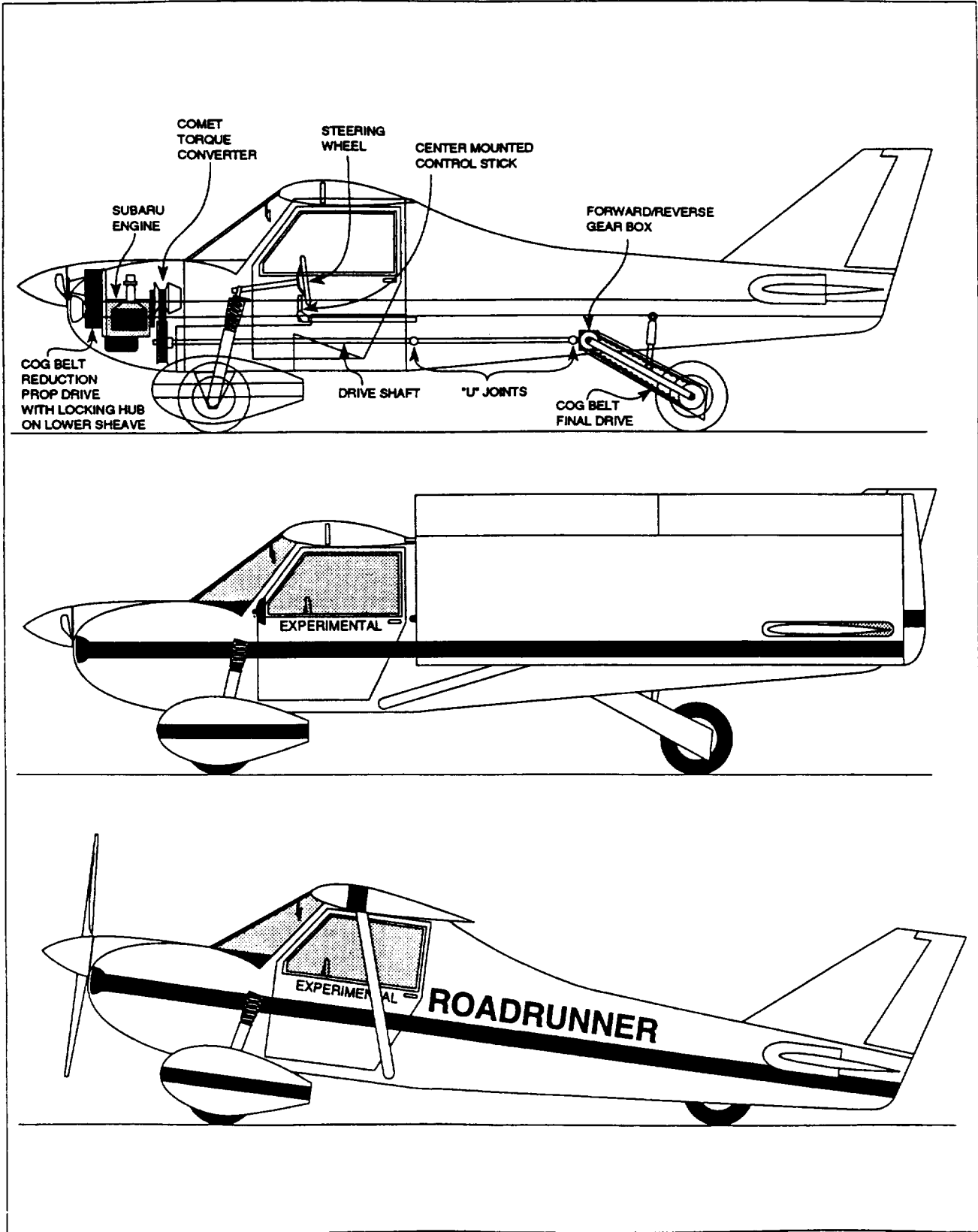
# Roadable Aircraft

The Search for Utility



Schugt AIRCAR - 7 roadable amphibian concept

- |           |   |           |                         |
|-----------|---|-----------|-------------------------|
| <b>4</b>  | <b>Roadable Amphibian and Other Aircars</b><br>More Schugt designs            | <b>2</b>  | <b>From the Editor</b>  |
| <b>17</b> | <b>Light Plane and Light Trailer</b><br>Towing an airplane on the highway     | <b>3</b>  | <b>Oshkosh 94 Forum</b> |
| <b>20</b> | <b>Flying Motorcycle</b><br>A complete flying and driving machine             | <b>3</b>  | <b>Letters</b>          |
| <b>22</b> | <b>The Mainair Skybike</b><br>More on the original flex-wing trike/motorcycle | <b>19</b> | <b>Networking</b>       |
| <b>24</b> | <b>New Joe Yasecko Design</b><br>Light single place roadable concept          | <b>27</b> | <b>Classified Ads</b>   |
|           |   | <b>27</b> | <b>Back Issues</b>      |



Inboard profile and side views for the High Wing ROADRUNNER.

# Joe Yasecko

Joe does think the nose is too long and would need to be shortened. The tail booms are designed for construction of telescoping aluminum tubes.

The fuselage is based on a mold which he has already. Joe does think the nose is too long and would need to be shortened. The tail booms are designed for construction of telescoping aluminum tubes.

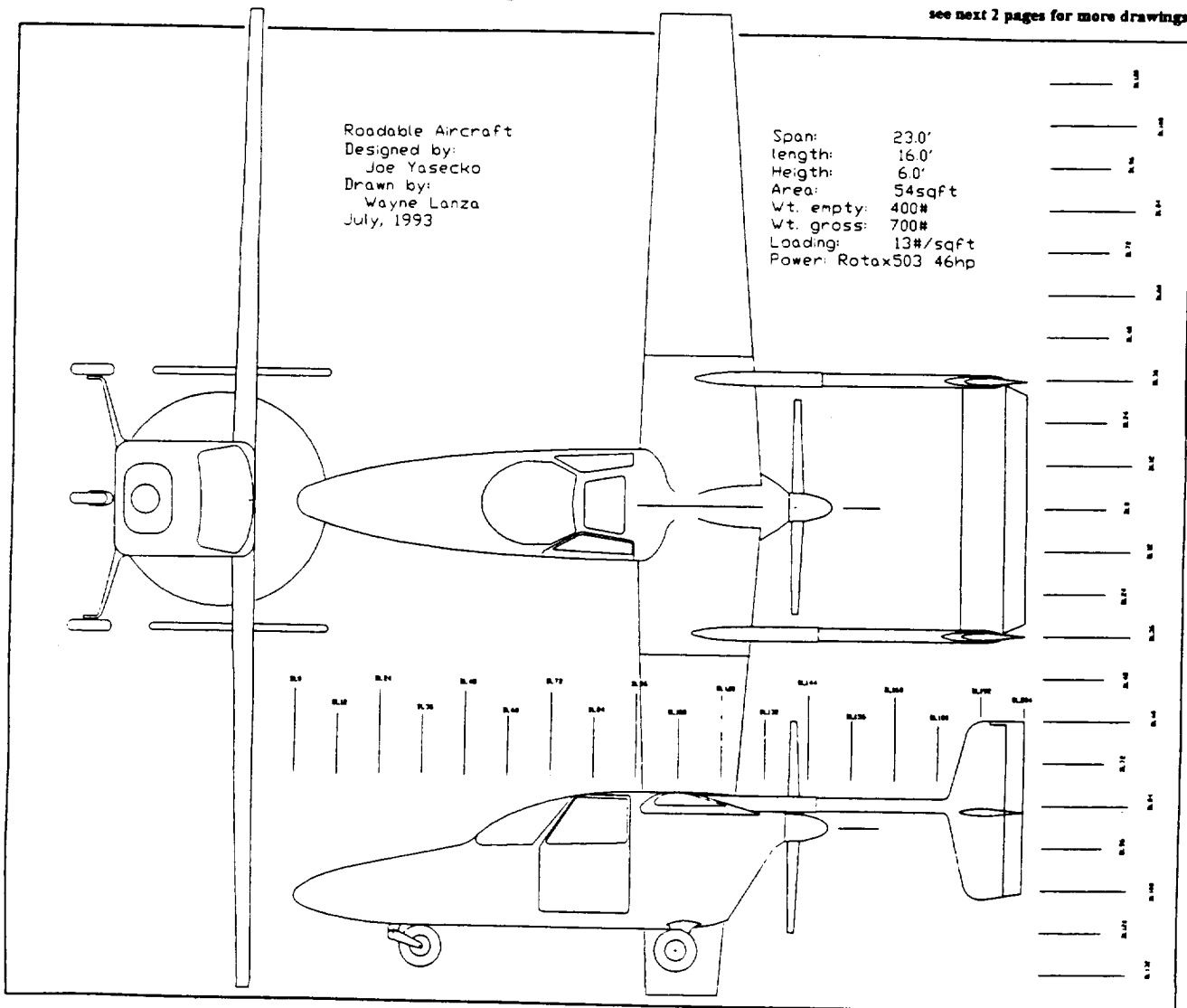
As the plans are currently drawn the airborne length is 17

feet. The tailbooms would retract about 3 feet for road use. Joe is concerned about the weight distribution of the of the vehicle in the ground mode. Because the majority of a tapered cantilever wing panel's weight is concentrated at the root, the folded wing does not move the CG forward very much.

The power plant will be a Rotax 503 of 46 to 52 horsepower.

end of text

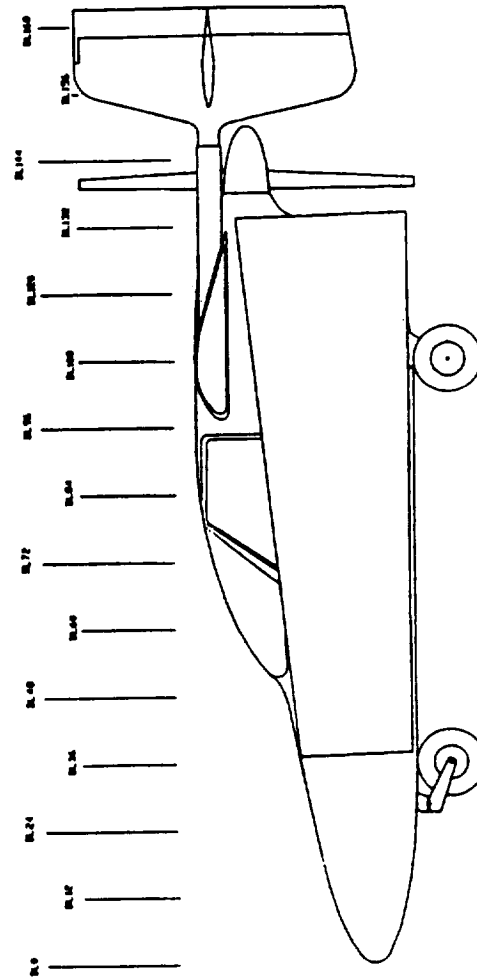
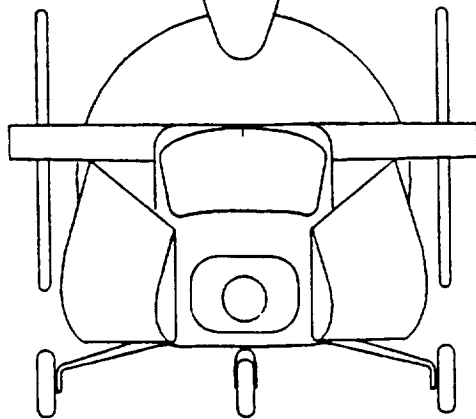
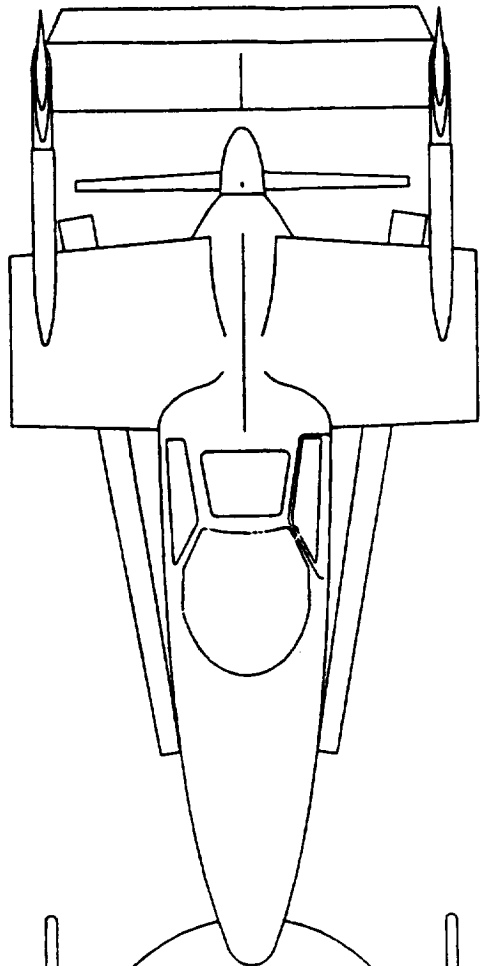
see next 2 pages for more drawings



Joe Yasecko's new roadable aircraft design in flight configuration.

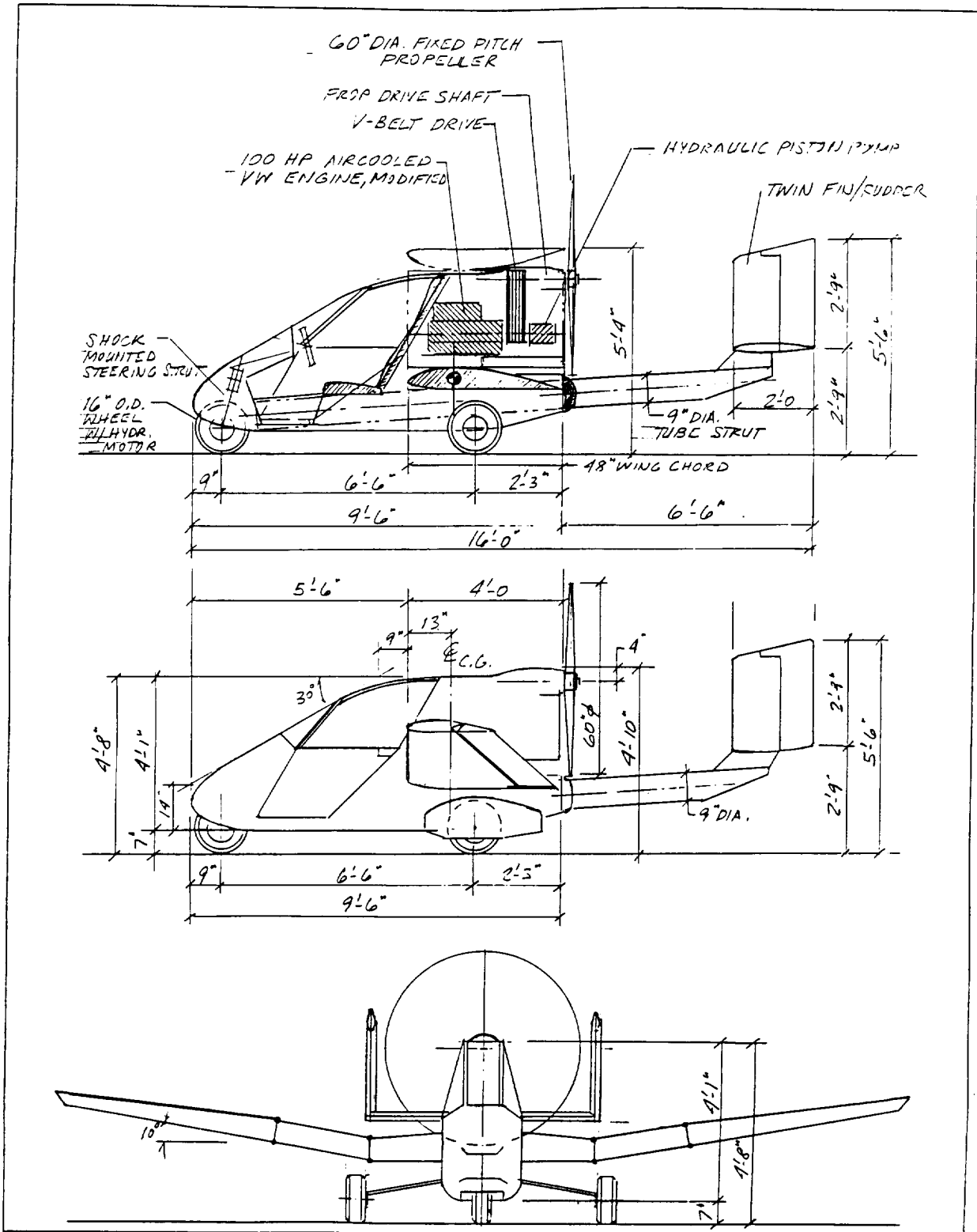
Joe Yasecko

continued



Roadable Aircraft  
Designed by:  
Joe Yasecko  
Drawn by:  
Wayne Lanza  
July, 1993

Road configuration. CAD dimension marks on drawing are at one foot intervals.



Fourth in the series, the Aircar - 11. Also known as the Mini-Aircar 11.

## **New Technologies**

### **Information**

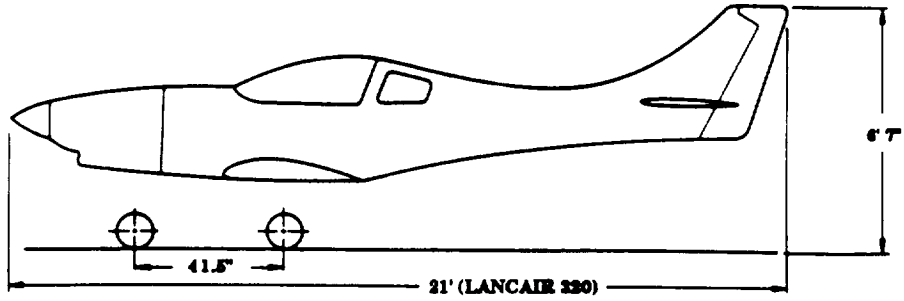
- GPS and enhancements
- Radio modem communications
- Kalman filters

### **Structures**

- Advanced composite structures

### **Propulsion**

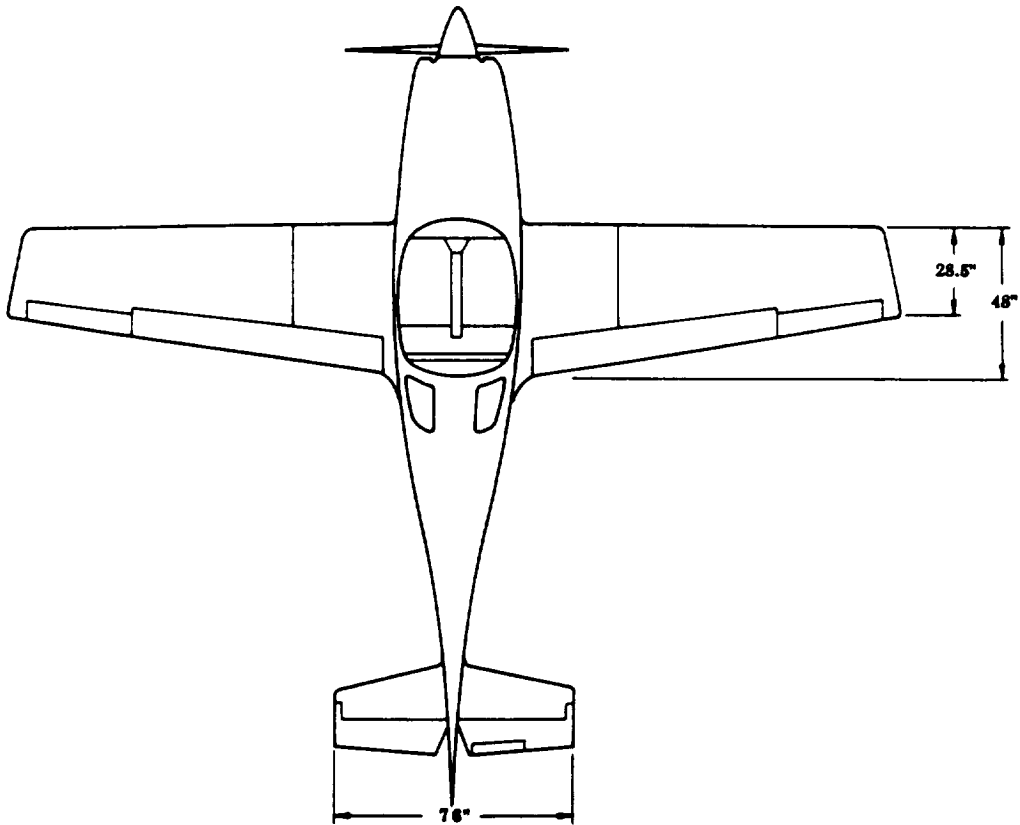
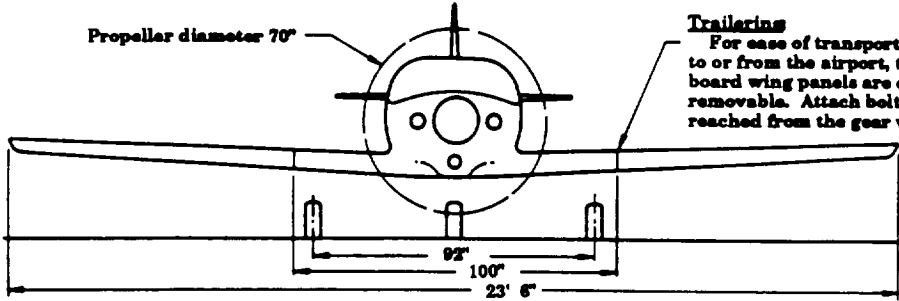
- Electronic fuel and spark controls

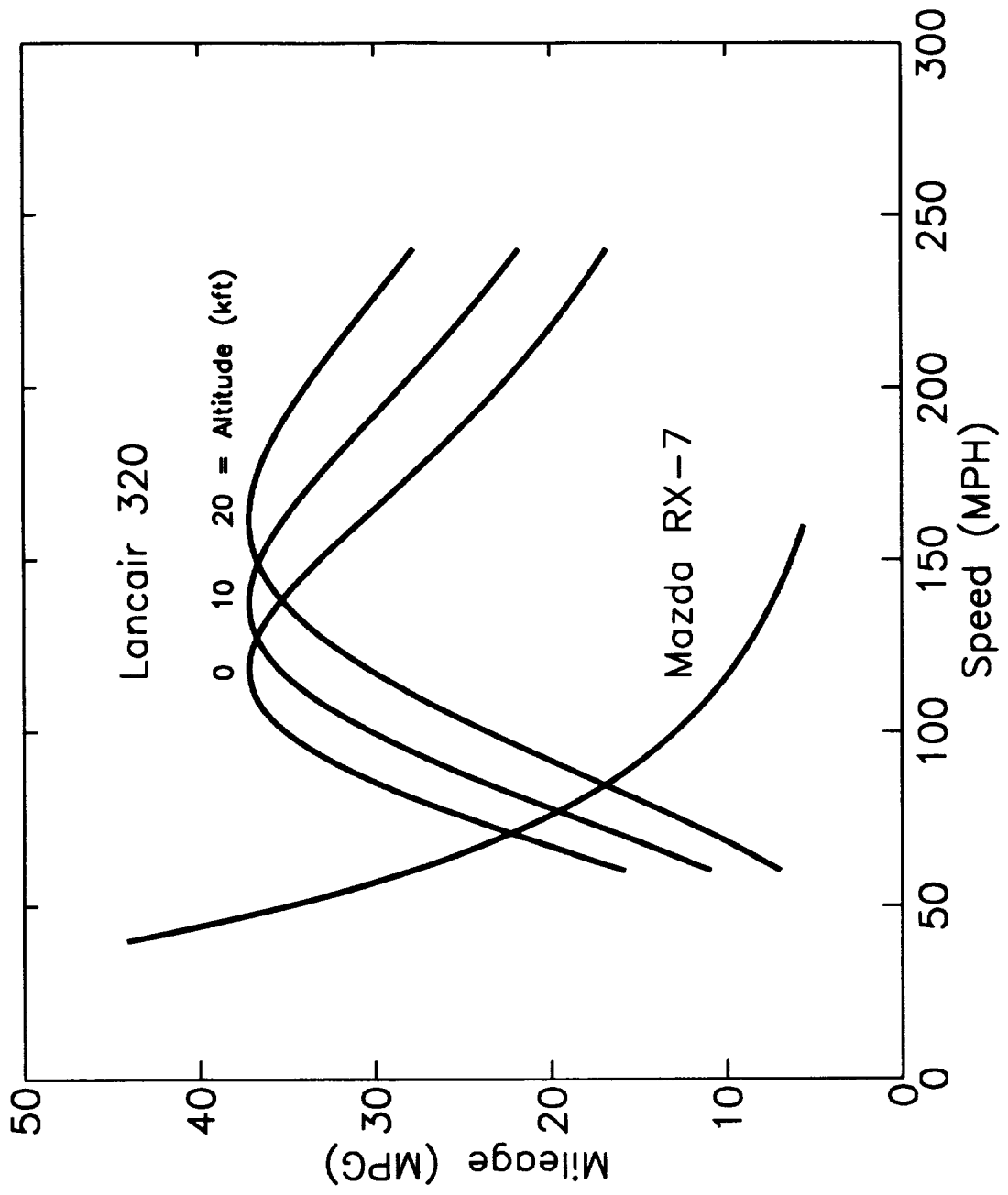


Propeller diameter 70"

### Trailering

For ease of transportation to or from the airport, the outboard wing panels are easily removable. Attach bolts are reached from the gear wells.

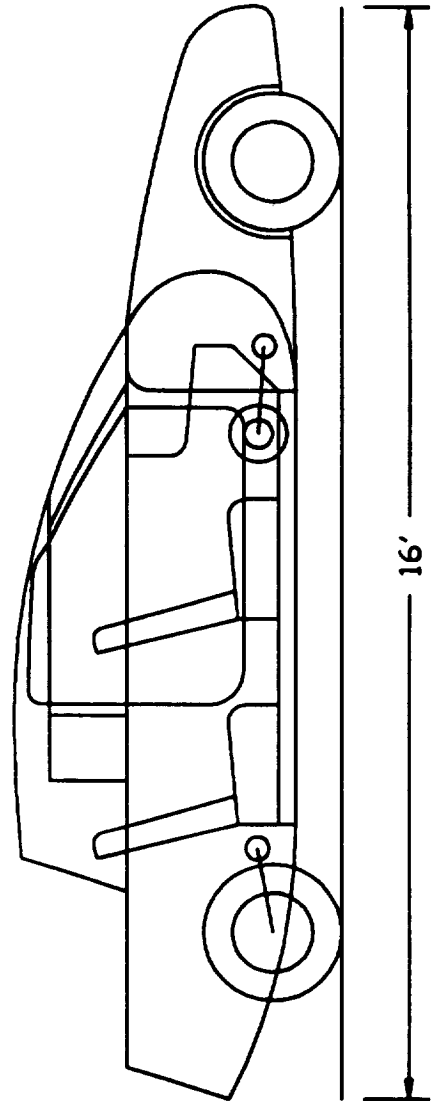
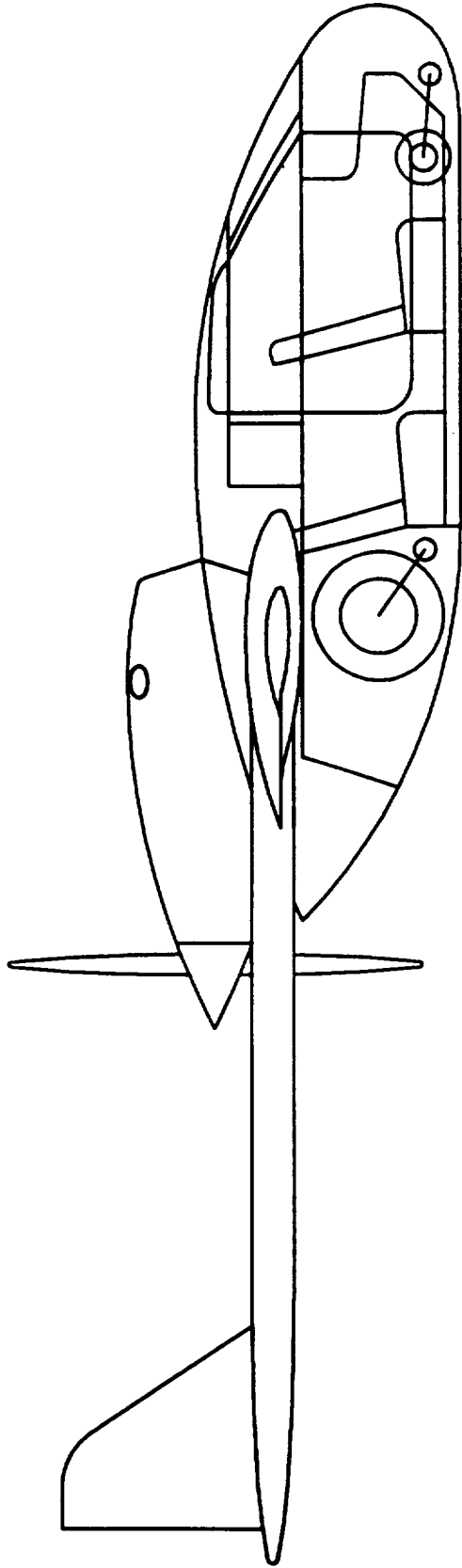






PERFORMANCE ADVANTAGES OF AN AIRPLANE OVER AN AUTOMOBILE

<b>Parameter</b>	<b>Mazda RX-7</b>	<b>Lancair 320</b>	<b>Airplane Advantage</b>
$\rho$ (slug/ft <sup>3</sup> )	0.002378	0.001756	1.35
$c$ (lb/hr/hp)	0.62	0.45	1.38
$\eta$	0.90	0.85	0.94
$S_d$ (ft <sup>2</sup> )	7.20	1.60	4.50
Rolling friction			1.18
Net airplane advantage			9.30



## **Starcar 3**

### **Goals**

Precision control with differential GPS, including automatic landings.

Informed use of automobile engine for flight.

Practical transformation between automobile and airplane.

### **Feature**

Two seats with separate automobile and airplane controls.

## **Starcar 3 (Continued)**

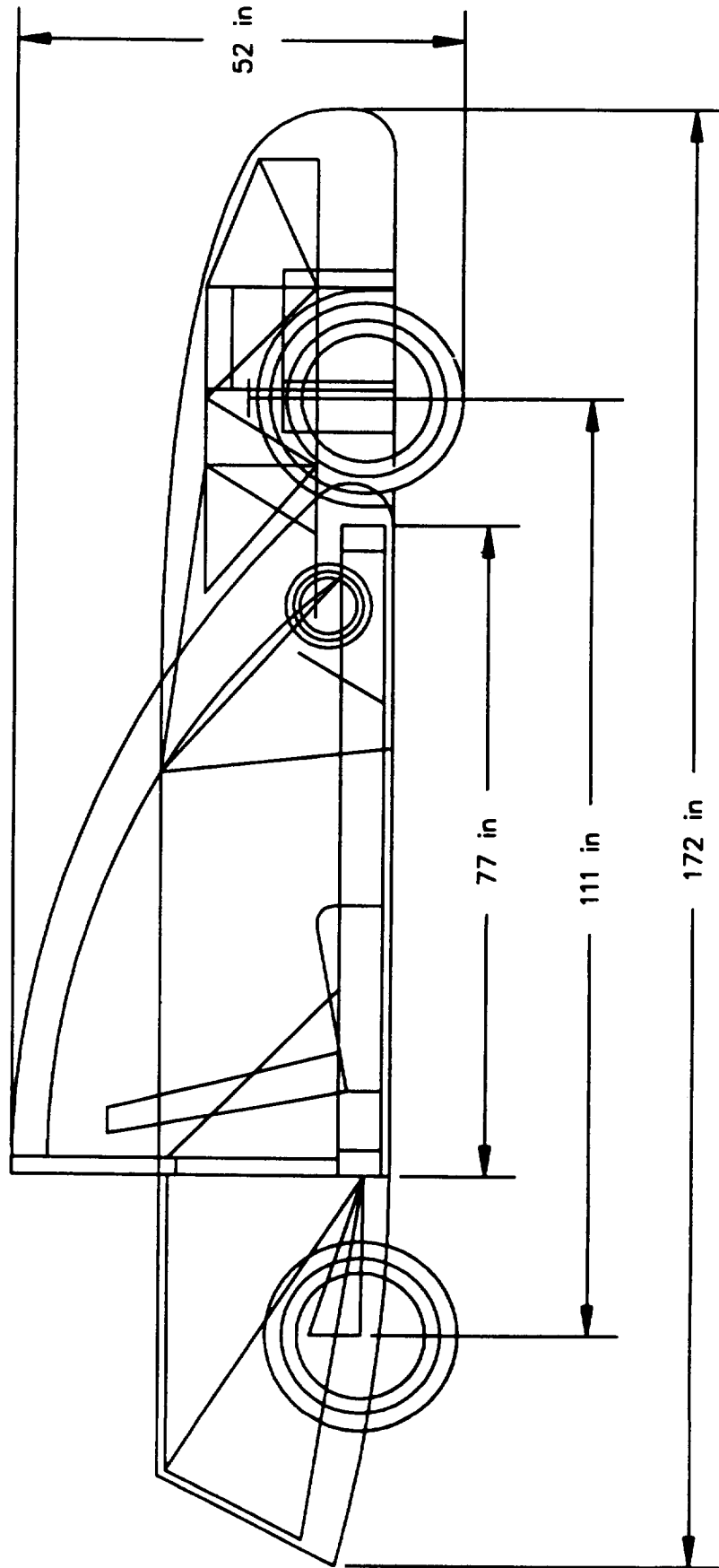
### **Specifications**

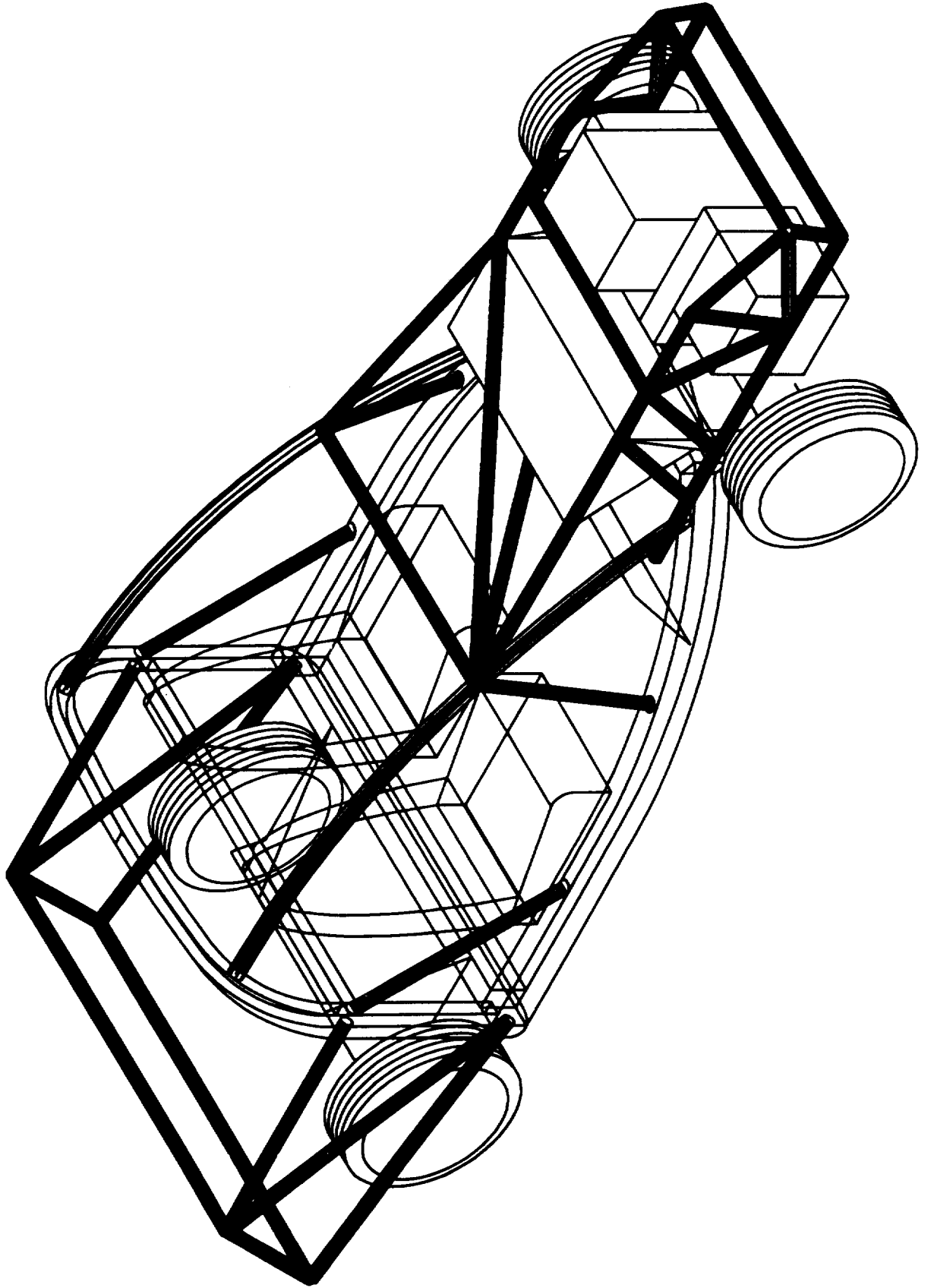
Span of 28 ft.

Gross weight of 2190 lbs as airplane.

Fuel economy of 21.6 mpg at 200 mph.

Top speed of 235 mph.



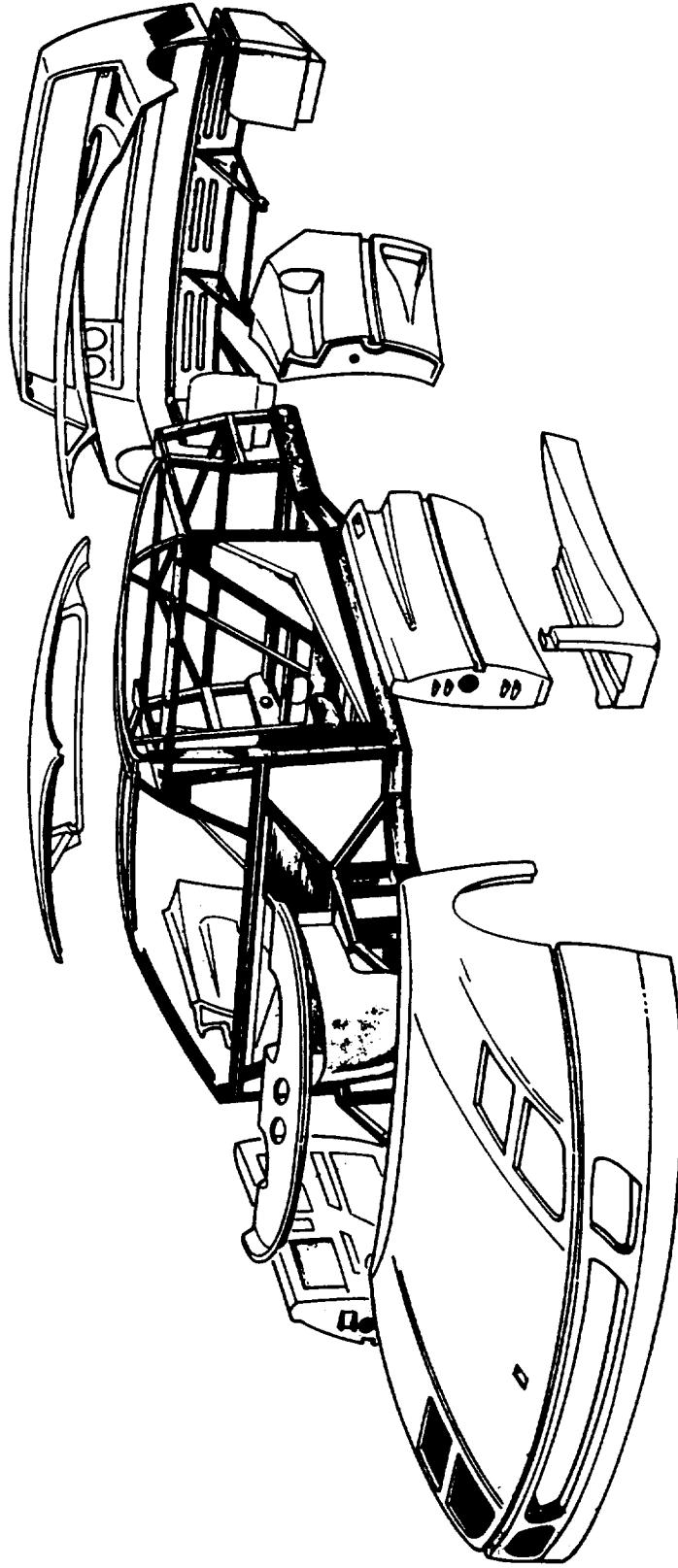


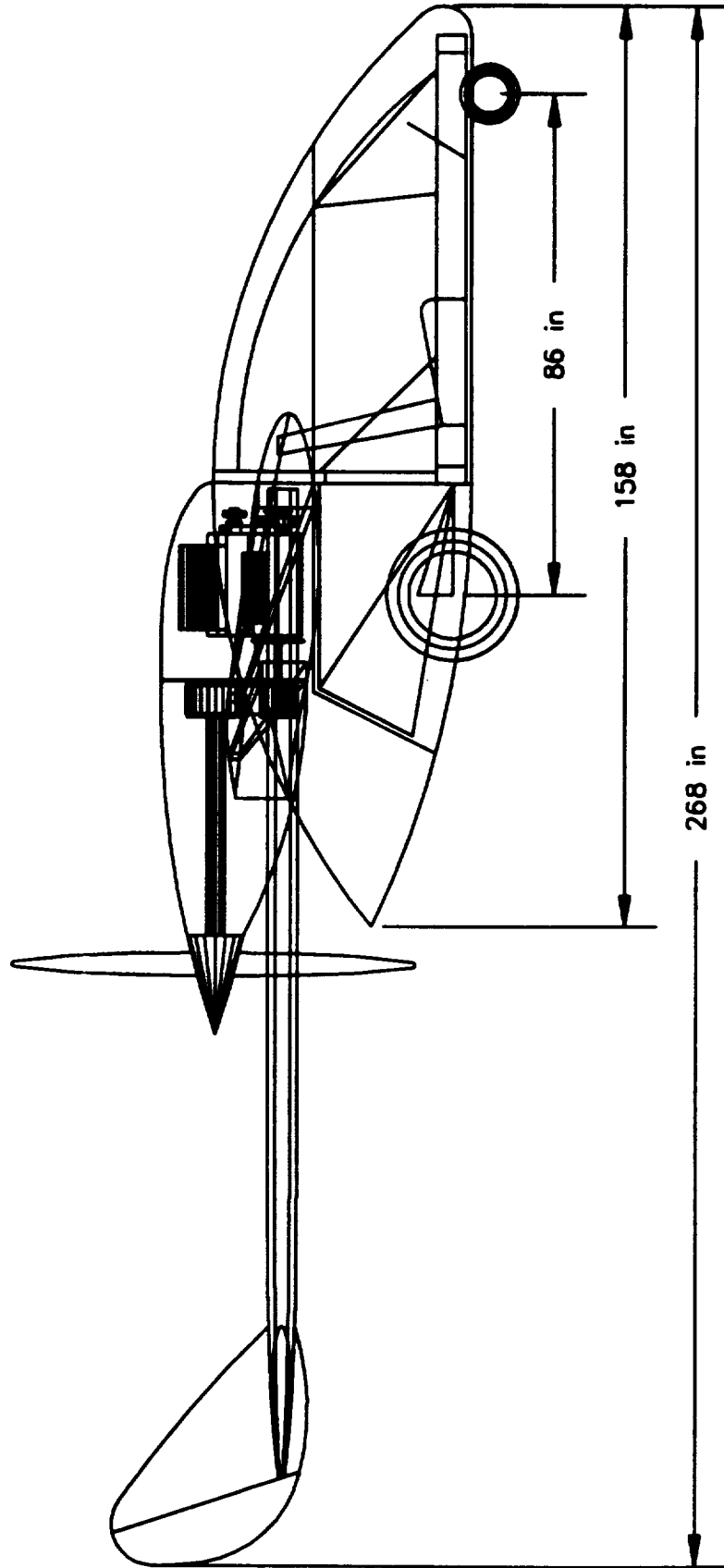
# F40

□ Materiale composito / Composition material / Materiau composite

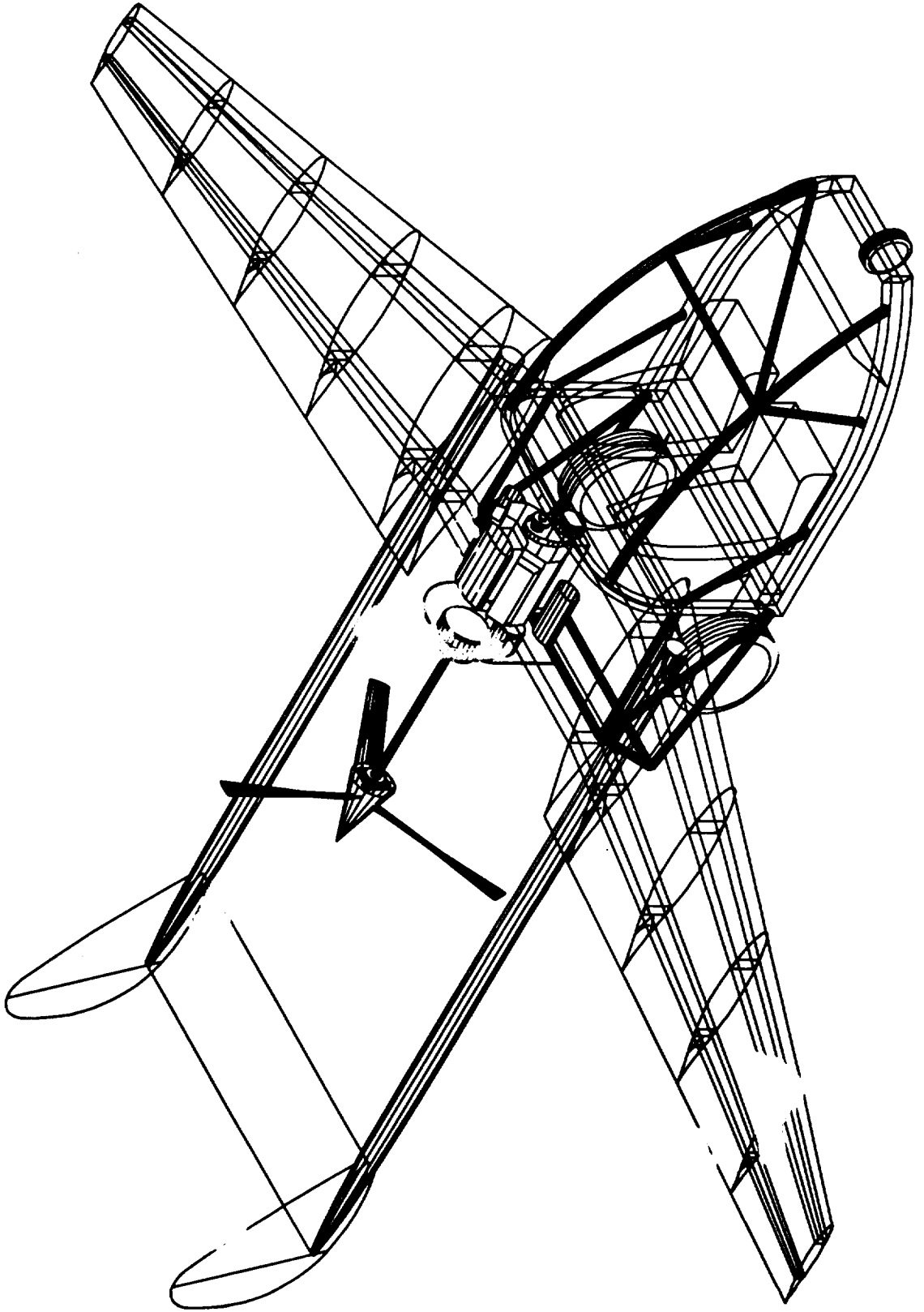
■ Traliccio in acciaio / Steel structure / Cadre en treillis en acier

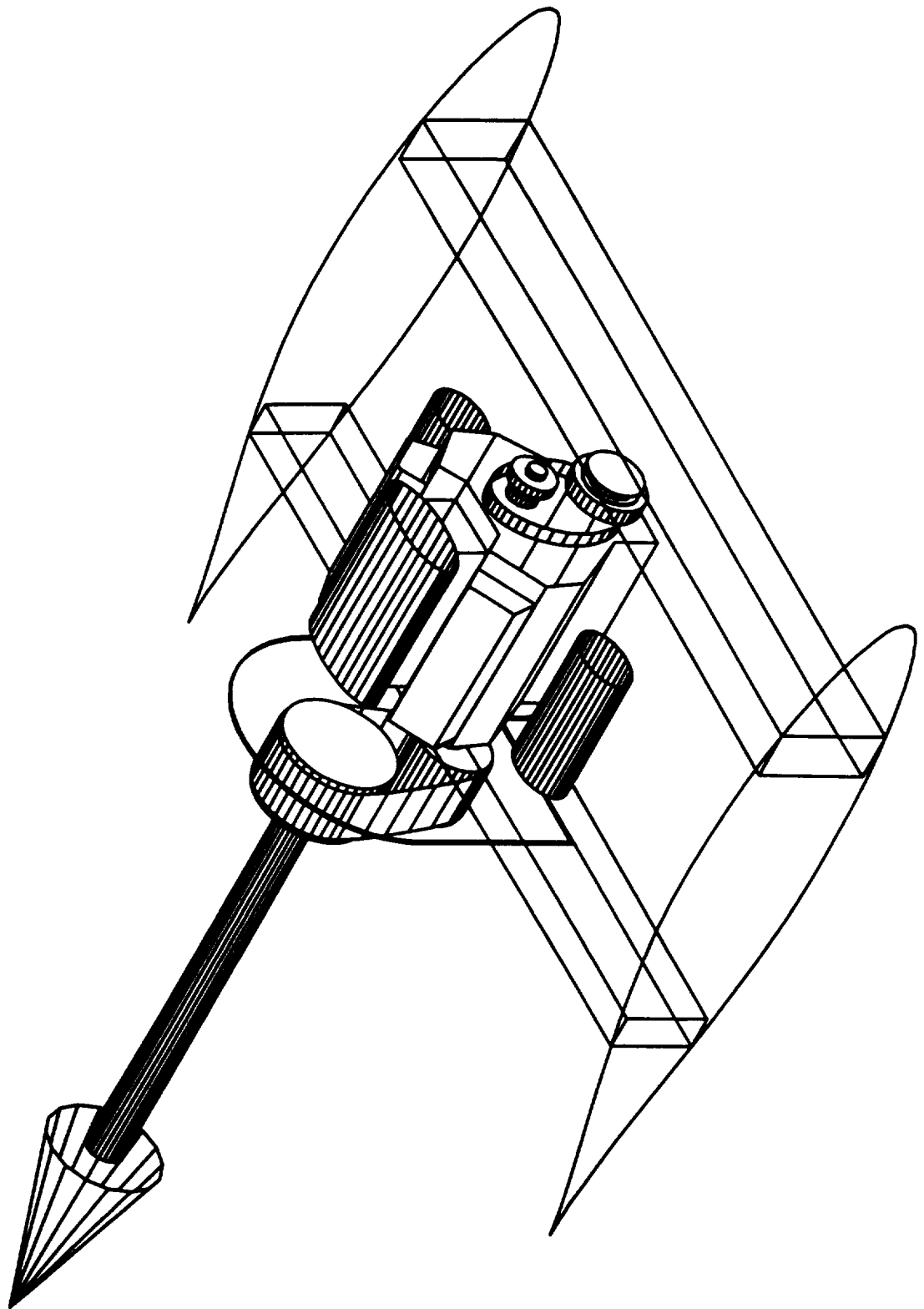
■ Adesivo strutturale bicomponente / Dual component structural adhesive / Adhésif structural bicomposant











## **Conclusion and Goals**

### **Conclusion**

Flying cars are possible and have commercial potential.

The penalty for roadability is about 500 lbs.

### **Goals**

Integrate an automotive engine with a dual-mode transmission.

Build a flying car similar to Starcar 3 but self-contained, with folding wings and telescoping tail booms.

