

APPENDIX "A" TO LETTER DATED 19 MARCH, 1959**SECRET**AVROCAR PRESS RELEASE

1. The design principles embodied in the Avrocar have been under extensive research and development at Avro for more than six years.
2. The Avrocar vehicle itself is jointly sponsored by the USAF and the U.S. Army.
3. The Avrocar is the result of intensive engineering investigation in which the feasibility was proven by rig, wind tunnel model and component testing and the Company is confident of its success in both the military and civilian applications.
4. The Company believes this vehicle to be the first of a new family of subsonic vehicles as well as the forerunner of a high performance, supersonic, high altitude version.
5. The Avrocar is 18 feet in diameter, has a height of 56 inches and its waist-high structure facilitates ease of maintenance. Also, it is not difficult to visualize similar type vehicles in smaller and larger sizes.
6. The operational economics of this vehicle are such that it has a development potential which will make it cheaper to operate over the design range than any other aircraft, including conventional and rotary wing types.
7. The Avrocar has a speed range of 0 to 200 m.p.h. plus, an altitude range from ground level to 10,000 feet plus, a gross weight of 5650 lbs. including a useful load of 1 ton (excluding fuel) and, depending on the payload, the vehicle is capable of carrying out a mission up to a distance of 500 miles.
8. The Avrocar is a two-place vehicle with a large cargo capacity. It integrates a versatile propulsion system having multi-engine reliability into a circular plan-form structure. It is presently equipped with Continental J69T9 engines.
9. Control is effected through a very simple mechanical control system operating a peripheral jet.
10. Because it is a wing and as such produces aerodynamic lift at forward speeds, the Avrocar can rise vertically off the ground and make transition to forward flight carrying heavy loads.

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11. As a result of the automatic stability designed in the Avrocar, precise loading of the vehicle in respect to the C.G. is unnecessary.
12. The circular plan-form provides for simple, low cost manufacture due to the symmetry of components and the high ratio of identical parts and furthermore provides an efficient structure having a high strength weight ratio.
13. Because of its unique basic design, the Avrocar combines efficient VTOL and STOL characteristics with outstanding mission-performance capability.
14. Because of inherent features in its design and controls, the Avrocar has the capability of being operated through the complete speed range at altitude or only a few feet from the ground.
15. By exploitation of the ground cushion effect resulting from the unique configuration of the jet, man, for the first time in history, has been relieved from his dependence on the wheel for travel over the ground. But the vehicle retains the ability to operate as a conventional aircraft.
16. The Avrocar ^{It is Estimated} has the ability to hover or make a transition to free flight either at altitude or close to the ground.
17. The Avrocar ^{will} has the ability to hover at low height above water and to travel in the ground cushion over a wide variety of surface conditions.
18. After selection of switches located on the control stick, vertical take-off and landing in the Avrocar is controlled by the throttle.
19. Not only is the Avrocar a VTOL vehicle but it has greater lifting power per unit area than rotorcraft and is optimized for the cruising condition.
20. Because of the peripheral jet, the vehicle operates close to the ground with a minimum of disturbance to the environment.
21. Because of the configuration of the jet with respect to the circular wing, the Avrocar is capable of being aerodynamically supported at very slow speeds.

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Because of the security aspects and also to protect Avro's own proprietary rights, the following points should not be included in the press release:

1. There should be no reference to the Coanda nozzle or the Coanda effect used to bend the jet.
2. There should be no reference to the internal flow paths of the air through the vehicle.
3. There should be no reference to internal physical details and their functioning.

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