

Take-off Procedure

Prior to take-off the ground support unit, consisting of a compressed air tank and an ignition system mounted on a small wagon, is connected to the jet pack by couplers. Next the master electrical switch is turned to "On" and the starter lever is moved from full off to the "Start" position. This turns on the oil booster system. When the green panel light, indicating sufficient lubricant flow, goes on an electrical switch on the starter lever is used to energize the solenoid controlling the compressed air valve. Air released from the tank at 125 lbs./cu.in. pressure now turns the rotor at 20,000 rpm. A substantial pressure increase is now observable on the diffuser discharge pressure gauge which serves as a tachometer. The starter lever is now pushed half way toward idle from the start position and fuel is injected into the combustion chamber. The fuel ignites immediately causing a rapid increase in rotor speed. Tail pipe temperature should now read a normal 640 degrees. The starter lever is now pushed forward a full stop to the idle position where, at 36,000 rpm, the engine becomes self-supporting and the ground support unit can be disconnected. Throttle settings are made by means of a vernier-type control knob.

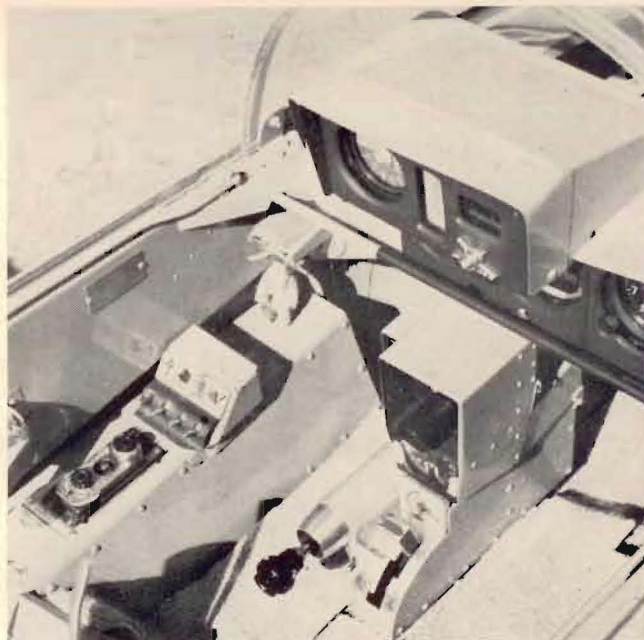
In the air the engine noise level does not seem to be high. Operating the *Baby Mamba* at 60 percent power gives the impression of flying in fair lift and full power gives the *Prue 215* a climbing speed of 80 ft/min.

Summary

In the future I want to install an air restart system and in light of the easy ground starts this does not seem to present any great problems. My experience to date with small Turbo-Jet engines is very encouraging and I would like to point out the following facts:

- ★ The Turbo-Jet is both light and small and can be attached to most existing sailplanes without major modifications;

- ★ If the engine were to be built into the air-frame a



The cockpit of the *Prue 215* has been modified to a considerable degree to accommodate control consoles and jet instrumentation. Here again Max Dreher's exceptionally careful workmanship is evident.

retractable air intake could be used to keep drag to a minimum;

- ★ A detachable jet pack should permit the pilot to use his sailplane in contests where auxiliary power is prohibited. Perhaps something like an interchangeable oxygen pack (for wave flying) could be devised;

- ★ Turbo-Jets are smooth, vibrationless machines which help retain the sailplane feel, not noisy internal combustion engines.

I hope that in the future that more people will turn to small Turbo Jets for self-launching sailplanes. So far I seem to be the only one in this country who has made a step in this direction.

HOW TO WIN FRIENDS & INFLUENCE FARMERS

E. J. REEVES

As an old lightning rod salesman and one time itinerant soaring pilot, I continue to be grieved at the awkward behavior of those putting in with their gliders in rural areas. I hear often of instances where the sailplanests were not only received unenthusiastically but were caused to lay folding dough into the hands of landowners for the privilege of landing.

This is all so very unnecessary. If only a few of my time-honored and field-tested rules are followed not only will the pilot be able to extricate himself and machine expeditiously, but also go away with (perhaps) a full belly from a farm-cooked meal and the blessings of the entire farm family. Additionally, if the pilot be of the age and the inclination, he may well be thrilled at the coy glance of the farmer's pretty daughter, (I used to notice things like that—I now have forgotten why).

You must recognize the fact that you are at first glance *not* going to be recognized as a conquering



I'll tell you what, you give us a hand with this load of grain, then we'll see what we can do about finding a telephone to call your crew!