

CRAFTSMAN'S CORNER...

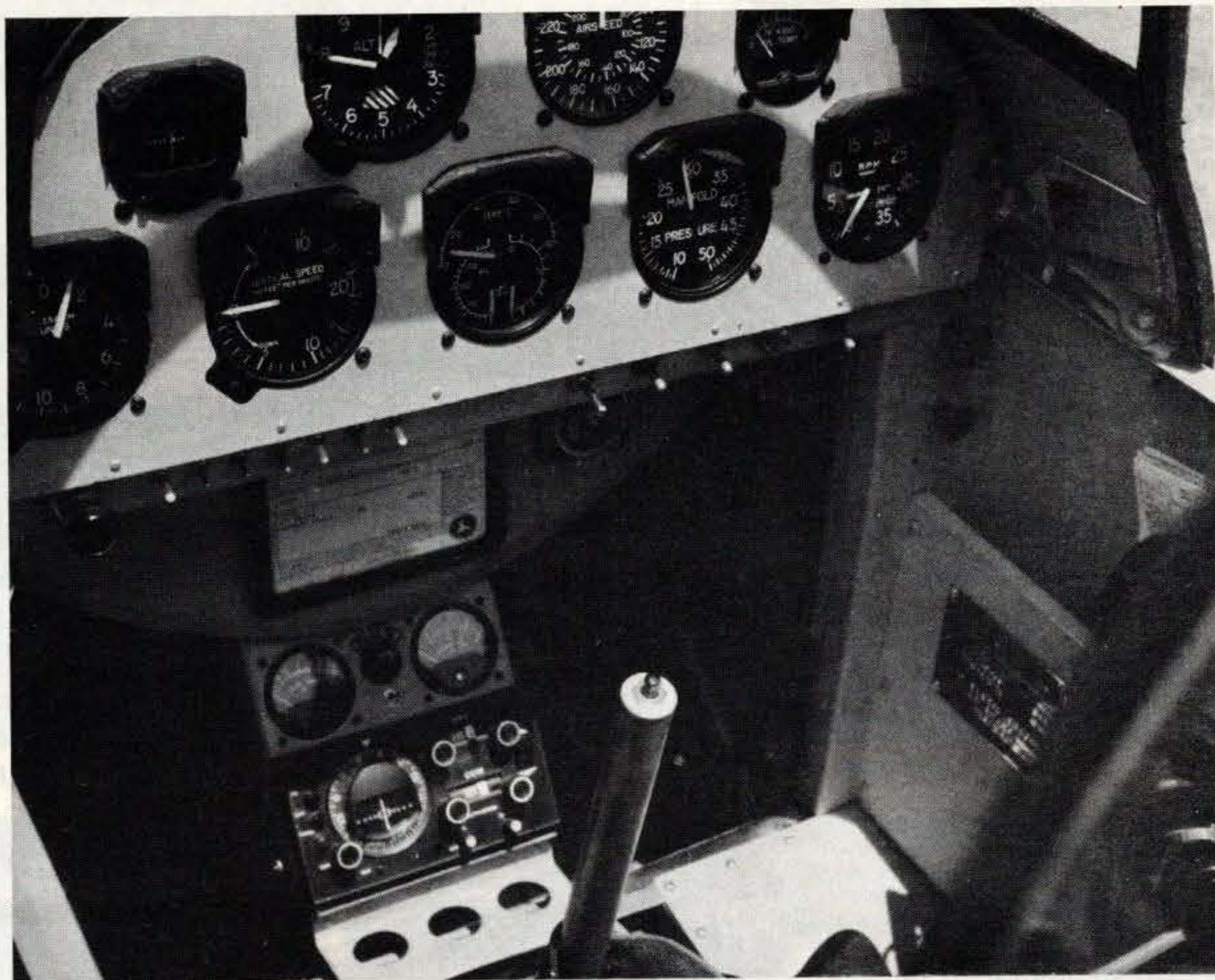
By Ben Owen, EAA Technical Counselor Administrator

INSTRUMENT PANEL AND COCKPIT DESIGN

When completing an amateur-built airplane, you may be building someone else's design but you are generally the designer of the cockpit and the instrument panel area. There is something to be said for standardization of instrument panels as it helps to be able to look for an instrument where it is usually found in the cockpit of most airplanes. This is especially true in tense situations. The Cessna 150 that most of us are familiar with would help you set up your instrument panel. However, using a creative approach to instrument installation sometimes does make things easier.

I think one of the first things for a builder/designer to concern himself with is safety. This means that the switches, knobs, etc., aren't pointed right at the pilot in the event of a mishap. It is always a good idea to consider covering the instrument panel with at least one inch of foam, the energy absorbing type like Ensolite (which is a trade name), and possibly covering that with fabric to present a good appearance.

The accompanying photos include some instrument panel ideas that I hope are helpful.



This light colored panel has all the instruments lighted with "eyebrow" lamps for the inevitable poor visibility condition. Partially recessed switches and a light color panel are good ideas.

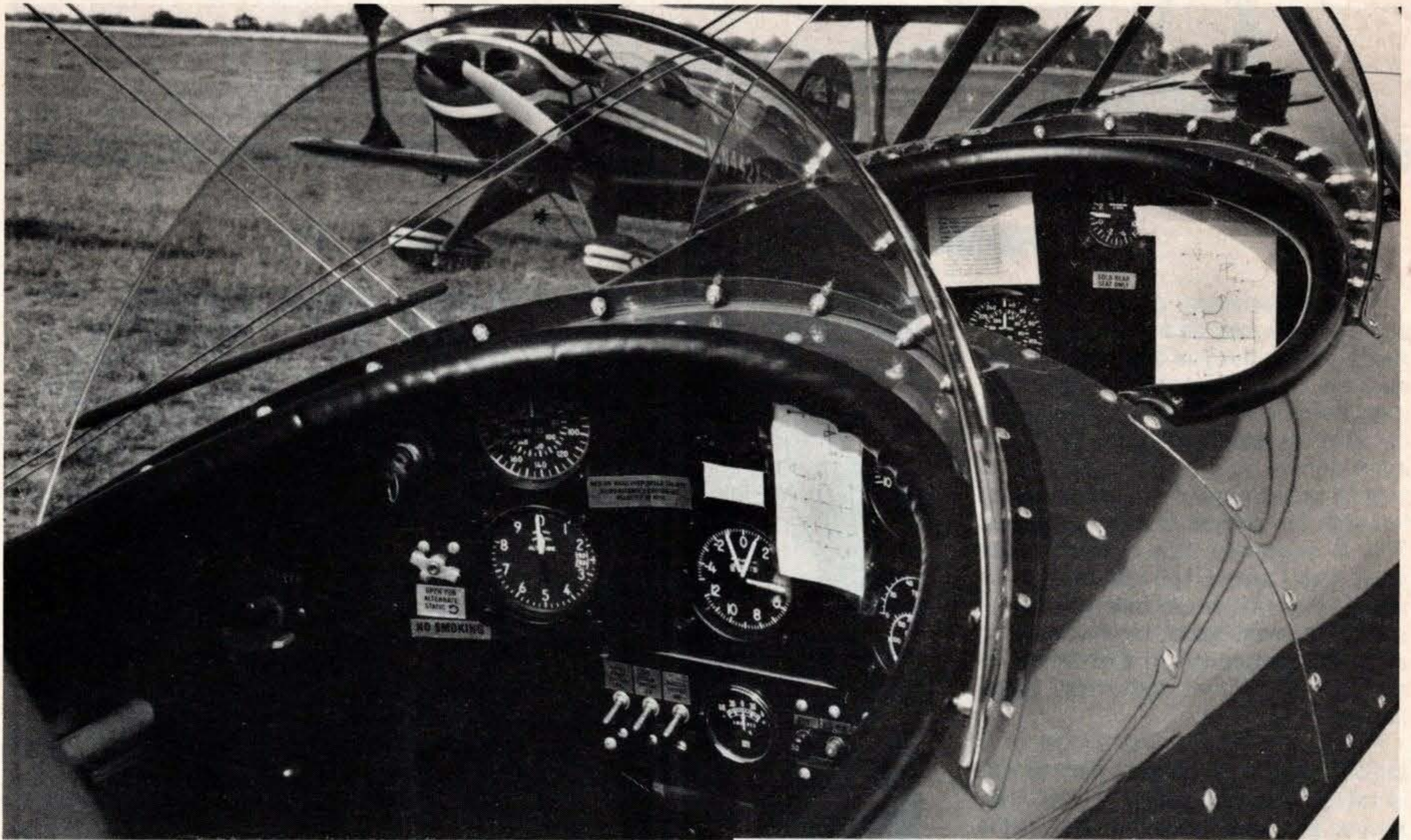


This light colored panel is free of switches and protrusions. The RPM gauge is like an "Indy" car . . . the needle is designed to be straight up when proper RPM is easily seen.

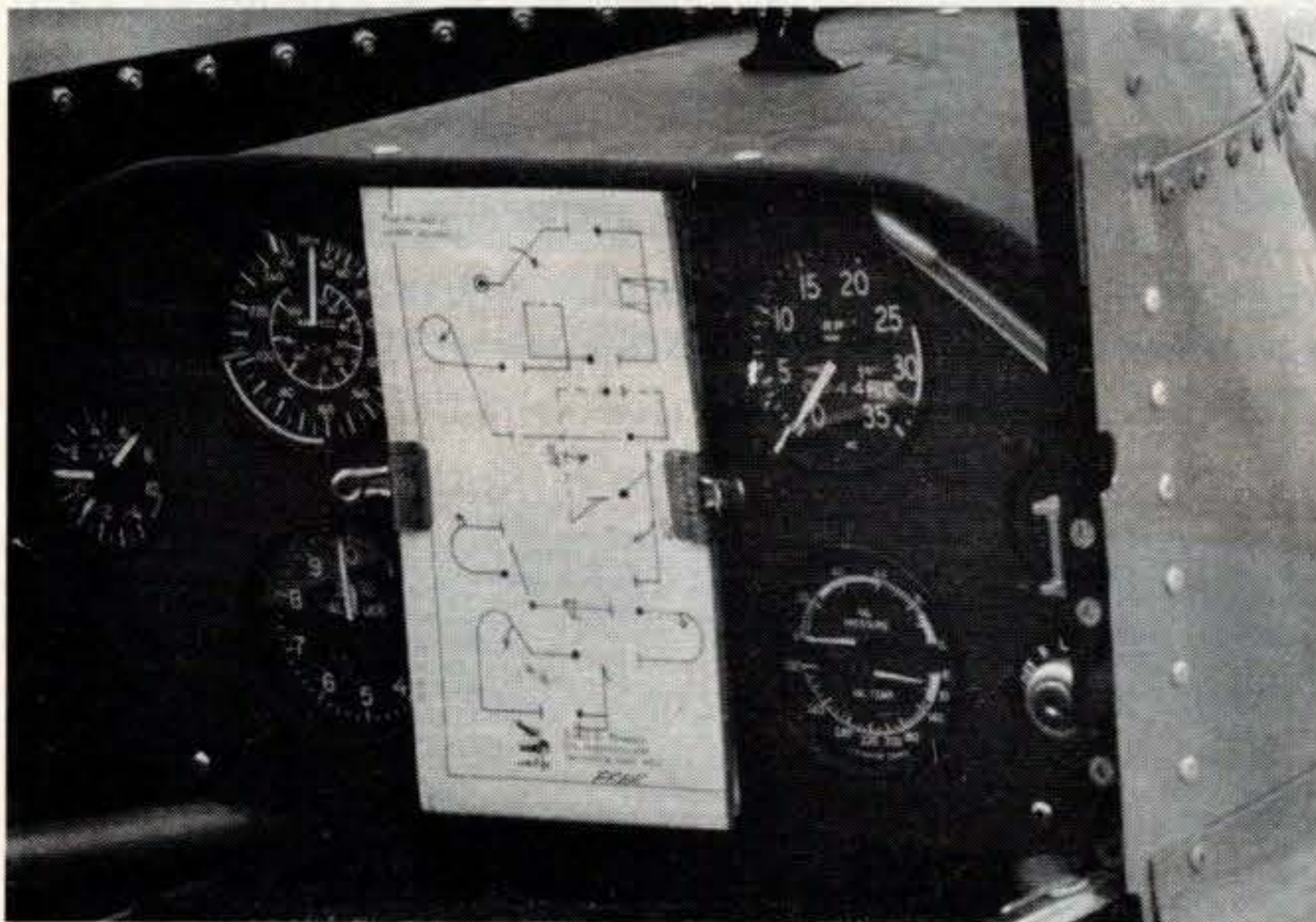


This instrument panel is very nearly standard. Foam padding would help here.

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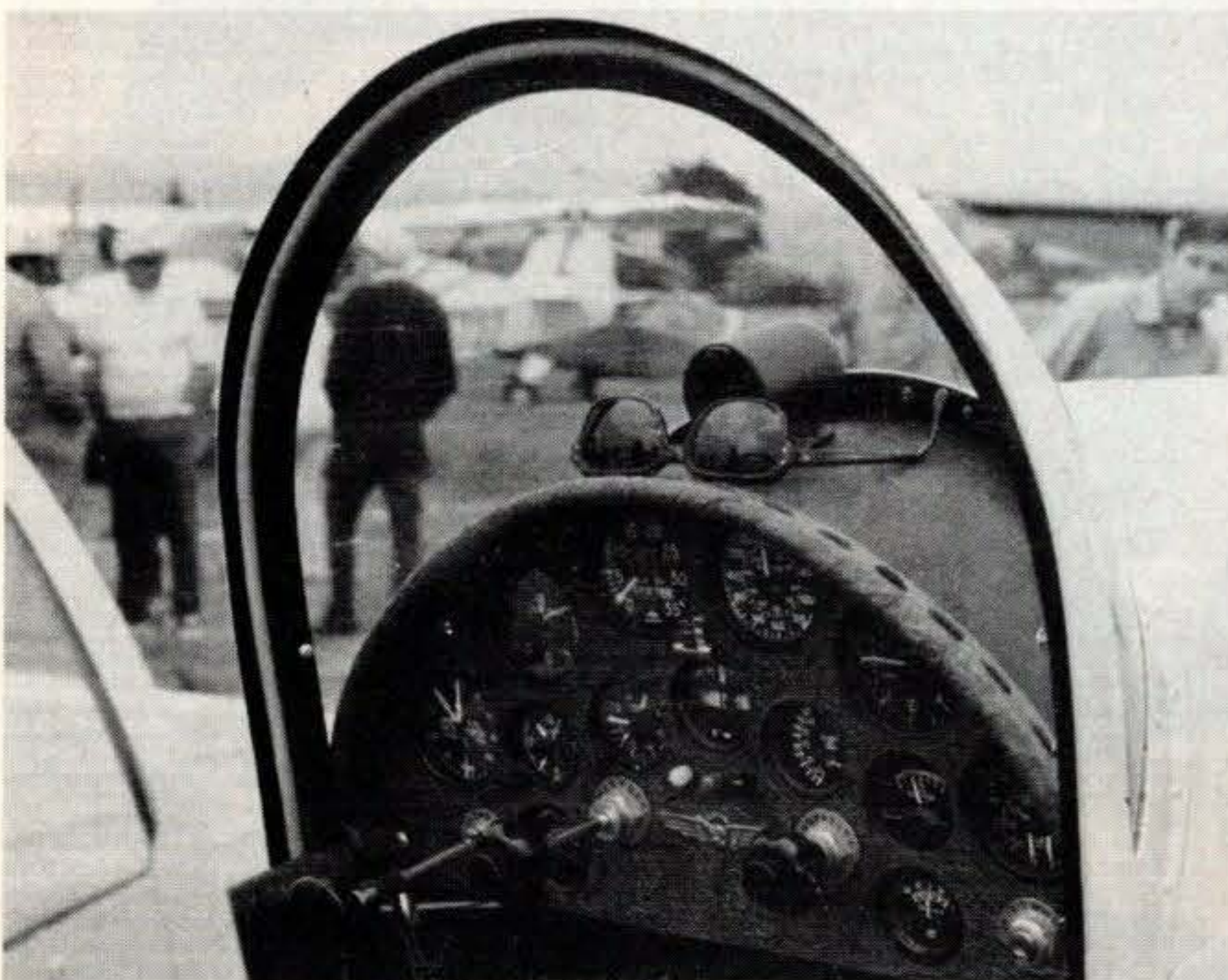
For VFR aerobatic machines, simplicity leads to quick comprehension for a quick panel scan.



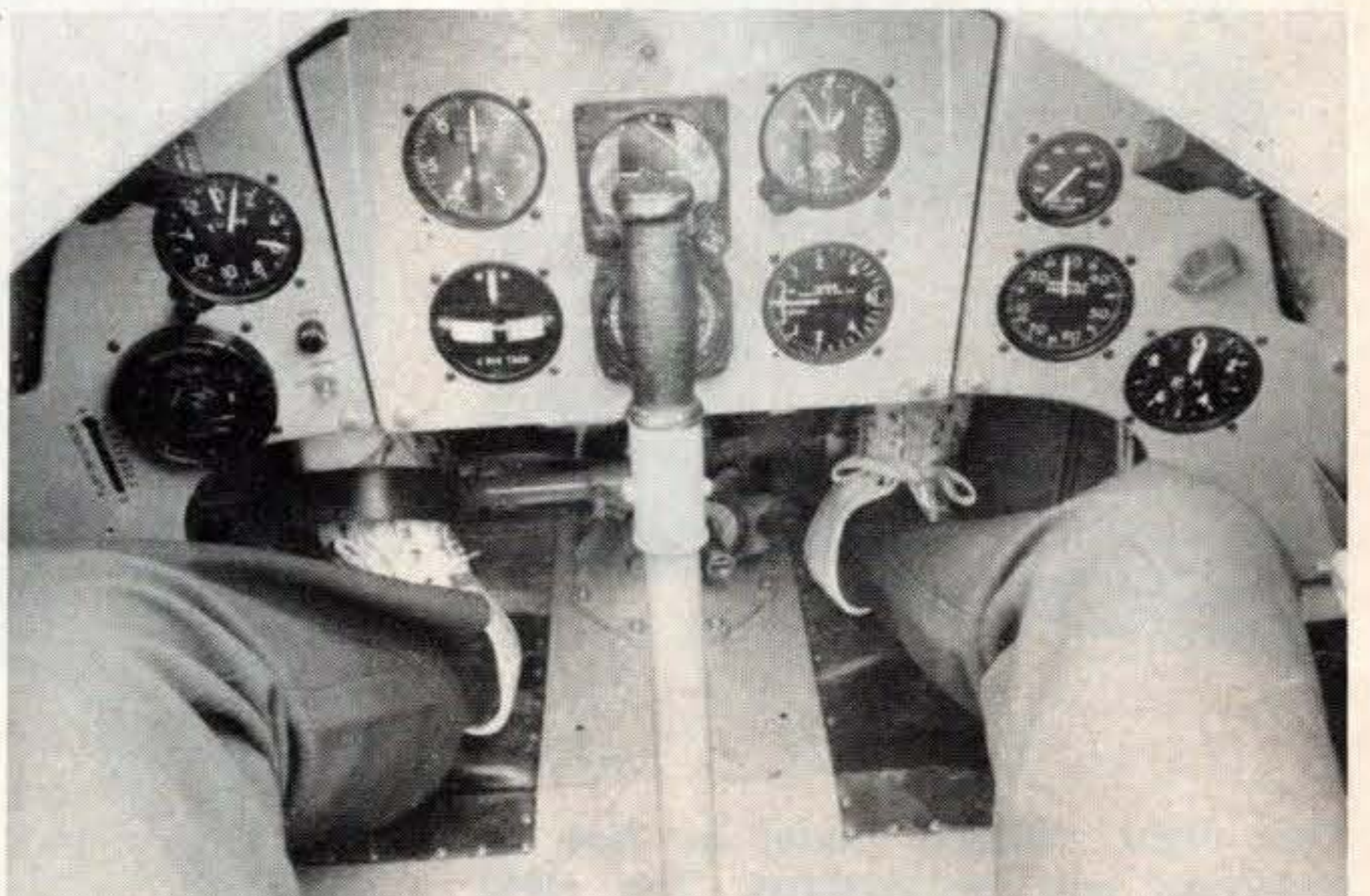
This Stephens Akro shows the bare minimum for aerobatics or VFR flight - clear and easy to read.



This simple panel also uses the "Indy car philosophy" with the stall speed indicator straight up. See center dial.



Here we have a fairly tight cockpit with all the knobs pointed right at the pilot. This is not the best for safety.



This light colored panel is easy to read. All engine instruments are on the right. The cockpit even is equipped with a rudder bar and toe straps! Not a bad design idea - simple and safe.