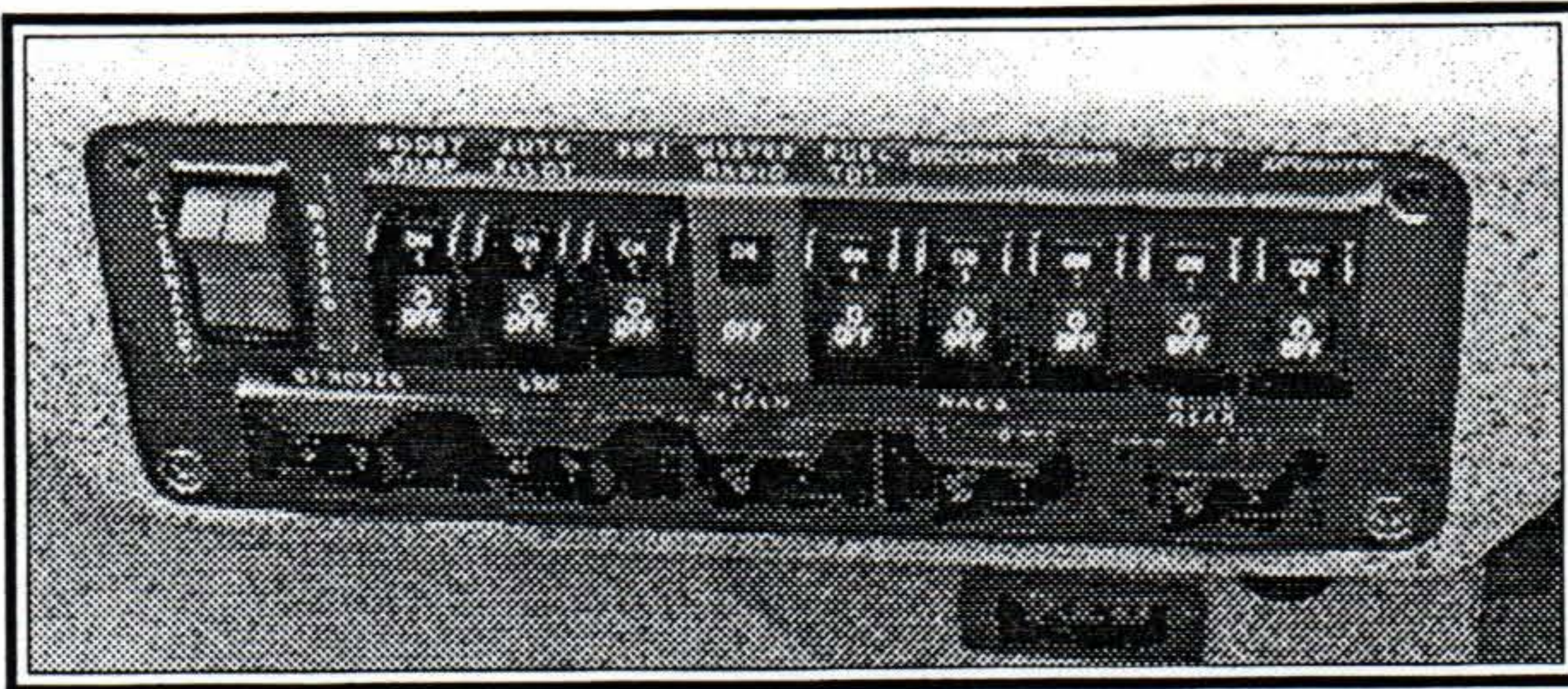


Switch Breakers

While at **KCGIG 94** I saw many great ideas. Norm Dodge's Long-EZ sported a really clean switch panel which was less cluttered than most because the switches were also circuit breakers. Cost was reported to be about \$13 each.

He used M-series rocker actuators from Carlingswitch. They are much less expensive than conventional circuit breakers and act as a switch. Their use allows less weight, less wiring, less stuff to make panel space for, and less clutter for the pilot to deal with. They are rated up to 25 amps and 65 VDC. They are available in a choice of colors, circuits, time delays, and actuator styles.

I called for a catalog and found lots of great switch solutions with DC ratings. East US & Canada 800-243-8556, West US, South America 805-527-0202, Europe 011/44-392-364422.



Wes Gardner Accident Report

I recently received a thorough report of the Gardner / E-Racer accident from the author, Harry Bawcom. The accident was investigated by: Tom Mcneilly, Jim Hays, and Harry Bawcom. The engine tear down was performed by Jim Hays, Shirl Dickey, and Jerry Madsen, an A&P.

The fact that this aircraft was an E-Racer appears to have had no bearing on the accident or its survivability. Any of you wishing a copy of this report should just send me a SASE and I'll forward a copy to you.

Go-Fast Vari-Eze O-320 Powered

Wes Gardner's Vari-Eze, baggage pods, electric EZ-Lift nose gear, intercom, Nav lights, Leather upholstery, always hangared, trays installed for KX155 Nav com & K197 mode C transponder, gyros, O-320 engine (800 TT since new!), balanced 160+ hp, Ellison TBI, Klaus Savier's electronic ignition, Contact: Wes Jr. or Maria Gardner (909) 874-8742



**WOW, A
GREAT
IDEA!!**

Compute % Power

Edra Parker (IA) - I recently came across an easy way to determine the percent power that one is obtaining from an engine.

You need to know manifold pressure and RPM.

Add the Manifold Pressure to the RPM/100. If the sum = 48 you are producing 75% power. If your sum changes 3 units either way you have made a 10% power change.

i.e. If your sum is 45 you are producing 65% power, if it is 42 you are producing 55% power or going the other way, if your sum is 51 you are producing 85% power.

GPS Interference?

Once upon a time thousands of people trashed their LORANS and ran to the land of GPS thinking that there would be no more interference. After all, the transmitter was high in the sky and if the antenna was exposed to the sky there could be no problem, right? Well maybe not quite right all the time.

It turns out that GPS satellites broadcast on a frequency that is about the 12th or 13th harmonic of several aviation communication frequencies. Normally radio designers don't worry about frequency multiples that are that far removed from the primary frequency because they are so weak. The GPS signal turns out to be a pretty wimpy thing and is easily interfered with.

If your GPS drops off without any good reason (satellites are blocked by a tree or wing or ?) try this and see what happens. Turn your GPS receiver to display signal quality diagnostics. Turn your com radio to 121.15 MHz (the 13th harmonic of the com frequency) and key the mike for about 10 seconds. The GPS will probably display a loss of signal quality.

The fix is to go to the local avionics shop and get a com filter to put in the transmitter antenna lead. This may not cure all the problems, however, as some of the com energy may sneak out of the transmitter's shielded case and penetrate the GPS receiver. You might try to add some shielding between the radios as the only real fix is to put the com radio in another airplane when you use your GPS. Not too practical; but it does work, I've been told.

You might try the shielding material described in a recent CSA newsletter article (Apr 94 p 23) that described new products by 3M. Let me know how it works. I don't have a GPS but those who do would love to hear.