Letters

Kitten in the Kit

Dear Lloyd:

Donald Miller, Luther Moyer and I are assembling a Schweizer 1-26, and gaining a wonderful education. Enclosed is a picture of our solution to the problem of mouse droppings in aluminum wings as pointed out by Vic Saudek in the Novem-

ber, '61, *Soaring*. This kitten, Skoshi, has enjoyed playfully inspecting the whole project, and was also very helpful in installing the spoiler cables. With a light string attached to her collar she followed our scratching right through the wing, after taking a course on the first try which would be acceptable neither to Schweizer nor FAA.

We are thinking of suggesting the addition of this item to the list of recommended tools for the kit.

LOWELL C. YUND

1624 Cleveland Ave., Wyomissing, Pa.

Request for Construction Details

Dear Sirs:

B. H. Carmichael's study of the 1 foot per second sinker is so fine that I write to thank you, and him.

I find that it also suggests another article, based upon the reference 7, by Helmut Haessler. It might be that someone could expand upon the types of construction that he describes in the March issue of the *Canadian Aeronautical Journal*, or better, that he be asked to write a series of articles on the subject of construction.

Being impatient, I have gone to the local library to try to get the address of the CAJ so that I might request the March issue, but find that they do not even have it listed. Can you please send me their address? (I am about to get on with a job that was sent me years ago by a friend, but do not want to miss too many tricks.)

SYD M. HALL

20 Laurel Ave., Kentfield, Calif.

(Editor's note: The address is Canadian Aeronautical Institute, 77 Metcalf St., Ottawa 4, Ontario, Canada.)

Radio Frequency Stability

Mr. F. B. Compton, Chairman
SSA Radio Subcommittee

Dear Mr. Compton:

In reply to your letter regarding F.C.C. Docket No. 14452, which includes a proposed requirement for .005% transmitter frequency stability rather than the present tolerance of .01%, we are pleased to advise that all Skycrafters radios are designed to maintain a frequency stability of .005% and no modification will be required when and if the above amendment goes into effect.

For the information of the Subcommittee, we submit the following information on Skycrafters radios:

Model TRV-122: This model meets the .005% frequency stability requirement, but is not presently F.C.C. Type Accepted. It is licensable until 1965 without modification and can be modified to meet F.C.C. Type Acceptance requirements for approximately $50. TRV-122's currently being produced meet all F.C.C. requirements and do not require modification for use after 1965.

TRV-128: This model meets the .005% stability erquirement but must be modified to meet Type Acceptance requirements by the 1965 deadline. However, it is licensable, as is, until that time.

TRV-128A: This unit is Type Accepted and is listed as having a frequency stability within .005% in the F.C.C. "Equipment Acceptable for Licensing" publication.

AM-122: This unit has a transmitter stability within .005%, is licensable without modification until 1965, and can be modified for Type Acceptance for approximately $25. Current production units meet Type Acceptance requirements and no modification will be necessary for use after the 1965 deadline.

AMT-9/AMR-4 VHF SUPERPHONE: This model is Type Accepted and meets the .005% frequency stability requirement. The F.C.C. publication mentioned above shows the frequency stability to be .01%; however, this is a printing error and will be corrected to read .005% according to the information we supplied at the time of filing.

In closing, we would like to assure all of our friends in soaring that their Skycrafters radios won't be made obsolete if the F.C.C. rules are amended according to Docket No. 14452. Furthermore, current production VHF MULTIPHONES meet all the requirements for Type Acceptance. The model TRV-128A is already on the F.C.C. "Equipment Acceptable for Licensing" list and models TRV-122 and AM-122 will be on it as TRV-122A and AM-122A this year. For those who wish to modify their VHF MULTIPHONES to "A" models, this can be done at a nominal charge.

We trust that this letter will clear up any misunderstanding that may have arisen regarding future licensing of Skycrafters radios for soaring.

J. LYNN BROWN

Skycrafters, Inc., 1365 Gladys Ave., Long Beach 4, Calif.

Performance Measurement by Decelerating Level Method

Dear Sir:

I was interested to read Mr. C. A. Moeller's article, "New Performance Test Method" in the Oct., 1961, issue of *Soaring* because I did in fact try this method 18 months ago at Lasham Gliding Centre using a Slingsby T.42 Eagle tandem two-seater. This was done as a senior year thesis at Imperial College, London, under the supervision of F. G. Irving.

The principle of the decelerating level method is to fly the glider straight and level and measure the rate at which it slows down. At any given speed the deceleration is proportional to the drag and so the drag-speed curve is obtained. Potential advantages include (a) few test runs needed to obtain the entire drag polar since, in principle, the whole speed range can be covered in one run, and (b) errors due to unmeasurable large-scale air motions are eliminated, since the runs can be made close to the ground (not too close, because of ground cushion effects).

In our tests we used a recording air speed indicator to measure the speed-time curve, and to fly straight and level, the glider was aimed along a line of small hydrogen balloons about 150 ft. above the ground. Six of these balloons were spaced along the main runway and each was tied down by a piece of cotton such that all balloons were the same height above sea level. Altimeters had been rejected because of lack of sensitivity, since simple sums showed that, at the low speed end, the glider should fly in a vertical height band of plus or minus 1.5 ft. to keep errors to within 1%.

Although flying accurately along the line of the balloons was quite easy, the balloons themselves flapped about a surprising amount in the slightest breeze, and since days of dead calm are rather infrequent in England, we had to make the runs in a steady, one-knot cross wind which was the calmest day which occurred in the three months available. The balloons were then flapping about through an angle of about plus or minus 20° from a 45° mean position.

Three runs were made, one starting at the never-exceed speed, one at high speed and the third at medium speed. The pilot was B. J. Davey, and there was considerable overlap in the speed range of the three runs, since the total "stopping distance" was less than twice the length of the runway (6,000 ft.).

Then the weather returned to normal and no more runs were made.

The results gave a smooth drag polar and were consistent where the runs overlapped. Unfortunately, the performance of this glider has never been measured otherwise, and so a direct check on the results was not possible. However, the drag polar obtained was consistently 12% worse than the maker's estimates, which seems about right.

Of course, three runs were not nearly enough to prove the method, but in view of the reasonable results obtained in the unfavorable weather conditions I feel sure that if a more suitable way of flying level can be found, it could be very useful.

The detailed report on these tests was not published (it rests in pacem in the Imperial College Aeronautics Library) but I will gladly send further details to anyone interested.

D. M. ASHFORD

Imperial College Gliding Club, Lasham Gliding Centre, Near Alton, Hampshire, England.

(Editor's note: Mr. Ashford is a Silver C pilot and an aerodynamicist with Hawker Siddeley Aviation. He recently spent a year at Princeton University as an exchange student.)