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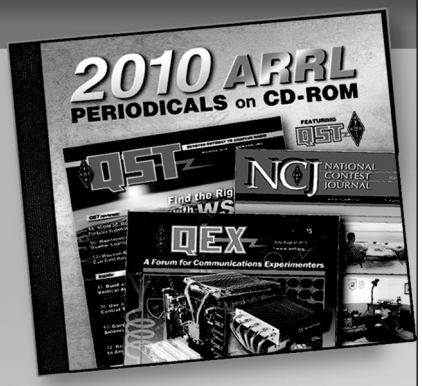

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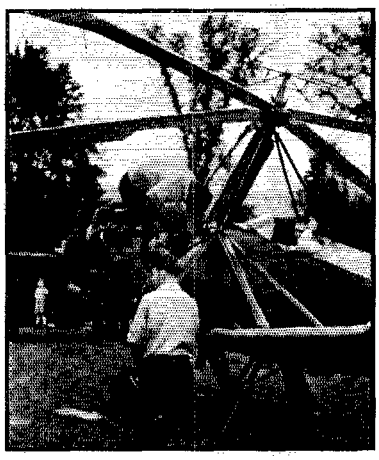
The 56-mc. Eclipse Expedition

FLYING down from North Conway with John Wells, W1ZD, on the day after the eclipse, we spent our idle moments planning this brief story on the tests. The title, we decided, would be "The Eclipse (Oh, Yeah) Tests" and the page under it would be left quite blank. That was yesterday. To-day, after the first decent sleep of the week, we feel a little better. The tests, we now realize, were not altogether a waste of effort, even though we did fly into the worst series of incidents we have experienced in many years.

The 'plane used for the work was an autogyro, under-powered with an engine designed to develop 120 horse-power. First tests revealed that with one passenger and 28 lbs. of radio gear it had a "ceiling" of about 3000 feet if everything went well. They showed, also, that the rotor of the gyro was to give much trouble from frequency modulation of both transmitted and received signals. There was, however, nothing much to be done about it. Attempts to obtain a replacement 'plane proved unsuccessful. We were obliged to go ahead.

The first move was the installation of a vertical transmitting antenna in place of the horizontal one used at first. Because of the proximity of the rotor, this antenna could not be placed above the fuselage. Insufficient ground-clearance did not allow it to be mounted permanently below the fuselage. Eventually, we had to resort to a hinged quarter-wave rod arranged so that it could be lowered into a vertical position when the ship was off the ground and pulled back under the fuselage before landing. This arrangement eliminated frequency modulation of the transmitted signal by the rotor and gave us an effective radiator. To clean up frequency modulation of received signals, we installed a ten-foot length of shielded antenna lead between the six-foot antenna and the receiver. The whole affair, of course, was lowered over the side of the 'plane. It solved the problem.



IMMEDIATELY AFTER TOTALITY

John Wells, in the cockpit, muses on the joys of flying while mechanics go in search of the trouble. The writer is not standing on the "lizzie" in the background. (He felt about that size, however.)

The apparatus used in the 'plane was especially designed and built for the work. It comprised a three-tube receiver and control-box located in the cockpit, a push-pull oscillator mounted back in the fuselage and a Class-B modulator slung in the luggage compartment. Type '30 tubes were used in the receiver, Type '31's in the oscillator and 49's in the modulator. The whole affair was run from a hot-shot as filament supply and three light-weight 45-volt batteries as plate supply. A Westinghouse anti-noise microphone enabled the operator to win his noise battle with the engine (not three feet in front of him).

Final tests, on the day before our departure for points north, gave strength to our expectations. At 1800 feet, we worked solid 'phone up to 50 miles, were heard at almost twice that distance.

During the flight to Mount Washington, F. C. Beekley of this office accompanied John Wells and operated the gear. The writer, in a 56-mc. equipped automobile (W1UY), was successful in contacting the 'plane for most of the journey, the car being stopped for schedules every 15 minutes. Late that evening, after many delays in search of gasoline, the gyro landed in an unbelievably rough field near the expedition headquarters. From then on, things started to happen. First off, it was realized that the fields, about which we had heard such good reports, were quite unsuited even for the gyro. The following morning (Tuesday) was therefore spent in finding something else. Eventually, the radio end of the expedition decided to take leave of the photographic end and move to North Conway (some 30 miles distant), at which point a fairly good field was found to be available. During the afternoon, tests were conducted with the N.B.C. group in preparation for a possible broadcast and many CQ's were called. A 1500-foot ceiling undoubtedly had a hand in preventing us from working farther than W1EXL at Casco, Maine (about 45 miles). The mountain country, however, seemed to be fairly sprinkled with 56-mc. portables. Driving around in the car, we could stop almost anywhere, call a CQ and work someone.

Next morning, the eclipse day, we awoke to find the sky heavily clouded. Towards noon, however, the sky cleared and we hopped off for a final check of the gear. Everything was in order. We were all set for the big party. At 3.30 D.S.T. (clouds having obscured the sun) John Wells climbed into the 'plane accompanied by George

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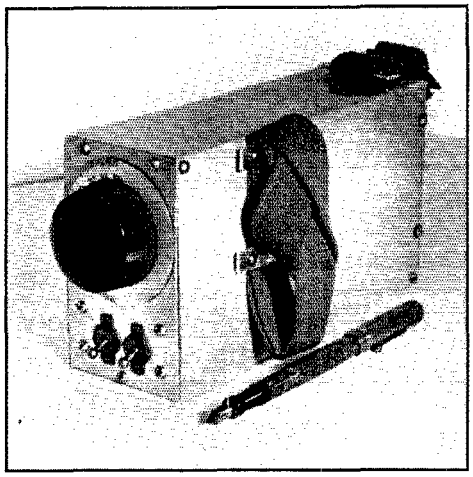
Hicks, N.B.C. announcer. Contact was established with the N.B.C. ground station. The engine was started. John manipulated the clutch to put the rotor in motion. And — nothing happened. In just about one split second we realized that the 'plane was hay-wire; that we could never get in the air in time for the eclipse; that we were completely washed-up. We were right. A pin in the drive shaft to the rotor had sheared. We were grounded for the rest of the



THE RECEIVER-CONTROL BOX USED IN THE PLANE

This unit, together with the remainder of the equipment, is to be given full treatment in a review of new 56-mc. equipment to appear in the November QST.

day. While mechanics tried to find the trouble, John Wells, George Hicks and the writer sat on the grass deploring the limitations of a language in which we could not fully express our emotions.

Now that our mind has cleared, we wish to offer our sincere thanks to the N.B.C. crew. Mr. C. K. Atwater (W2JN), who operated the N.B.C. 5-meter gear, gave us all the help humanly possible. Mr. W. R. Brown and Mr. Harold See, though working against time on the N.B.C. broadcast, coöperated with us to the limit. We would thank, also, the many amateurs who worked with us. We are particularly indebted to Harold Whitford and Clinton Sherman, who operated W1EWW on the top of Mount Washington, and to Paul Hendricks and John Dyer, who operated W1AML at the expedition headquarters near Pinkham Notch. Mr. John Wells is naturally in receipt of our sincerest gratitude. We only hope that he will not feel too badly over our restrained but nevertheless nasty remarks about his 'plane. We know that he is to join us in the search for a powerful ship — a gadget that will fly so high into the upper atmosphere as to oblige us to fit out a combination microphone and oxygen mask. — *R. A. H.*

Canadian Convention

At Toronto, Ontario, October 7th–8th

THE Wireless Association of Ontario is sponsoring an A.R.R.L. Convention to be held at the King Edward Hotel, Friday and Saturday, October 7th and 8th, respectively. A cordial invitation is extended to all Canadian amateurs and our cousins across the frontier. The event takes place near our Thanksgiving Day, and should enable many to take advantage of this holiday to make us a visit. Director Woodruff, W8CMP, has promised to be with us and to bring along his usual box of "tricks." Lectures on Rochelle Salt Crystal Microphones and loudspeaker units; latest type of tubes available; many side trips, etc. A.R.R.L. Headquarters is sending Ross Hull, Associate Editor, and our Australian cousin.

Arrangements will also be made for putting up as temporary members of the Toronto Flying any of the fellows coming, so that they will be able to arrange for machines at reasonable figures if they wish to make any flights during their visits in Toronto. Now, Canadians, let's put this thing over in the right way, and your attendance will do it. Keith Russell, former C.G.M., is the Convention Manager, so please write him at Room 303, 53 King St. West, Toronto, Ontario, for further particulars.

Strays

On the night of August 6th thieves entered the home of Andrew Janiga, Jr., 4002 Fir Street, East Chicago, Indiana, and made away with three W.E. 211-E's, a 50-watt socket, a Martin Vibroplex, an RCA 210 and a 281. Hams in the vicinity are asked to keep an eye out for any unusually cheap offers of articles corresponding to this list.

The six-volt field coils for the old Magnavoxes make good filter chokes for the high-power transmitter. The inductance is about 15 henrys, and the wire will handle an ampere without difficulty. They can often be picked up for a song.

— *K7AD*

Mrs. W5EB has this one to propound: If Eve was Adam's rib, are OW's "hambones"?

Navy Day

(Continued from page 20)

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