Editorial

A-O-5 REPORTS

The launch of AUSTRALIS-OSCAR 5 had been eagerly awaited by radio amateurs all over the world. The remarkable success of the satellite after launch fully vindicated their interest, and often exceeded their expectations. A large number of amateurs worked the satellite and submitted enthusiastic reports. Judging from their comments, the satellite was a ham's greatest delight.

To convey a flavor of these reports, we have prepared for you a smorgasbord of 19 reports in this issue. The formal report submitted by AMSAT to NASA and FCC leads the list. Next come summaries of 17 reports submitted by hams to AMSAT. The reports reflect the moods and reactions of individual authors: informal, colorful, excited, amazed, observant, methodical, learning, innovative, analytical, meticulous, or just plain delighted. Last but not least is the summary section of a detailed and thorough report prepared by John Fox, WØLER. We hope that you get as much pleasure reading these reports as we got in putting them together.

The reports came from many countries, showing international participation in the program. Bill Browning, G2AOX, the A-O-5 coordinator for Europe, has listed in his report the European stations that submitted reports to him. Stations whose work was found to be useful by R. Soifer, K2QBW, in preparing a report for the 1970 ARRL National Convention, included the following:

K1CSQ, K1HTV, K1QFD, K2QBW, K2SS, K3JTE, K4SAO, K7MWC, K8QYR, VE3EDZ, VE6IP, VK3ATN, VK7PF, VK8KK, W1DGJ, WA1IOX, W1JSM, WA2EJM, WA2FLX, WA2KSB, WA2KUL, WA2UDF, W2UTH, W3GEX, W3HI, W4IUD, WA4JID, WB4PLW, W5CAY, W6OYJ, W6RP, WA7DUR, WA7GCS, W7GVX, W7JVF, W7ZC, W8BI, W8FAZ, WA8LOW, W8SMC, WA8YBT, W9BHR, WA9HCZ, W9TGB, WØEOZ, WAØFLL, WØFWN, WØJUV, WØLER, WØPB, WØPGP, WØPHD, WØWMP, WØZWW, and ZL1WB.

We have chosen only a few reports and listed only a few call letters. It is impossible to name all those who participated, and our apologies to those not included. Project Australis plans to send QSL cards to every one who submitted a report. If you haven't sent in your report yet, please do it now and receive the card shown below!

Sajjad Durrani

WIRELESS INSTITUTE OF AUSTRALIA PROJECT AUSTRALIS
RADIO AMATEUR SATELLITE CORPORATION

AUSTRALIS - OSCAR 5

AUSTRALIA'S FIRST AMATEUR RADIO SATELLITE
LAUNCHED FROM CALIFORNIA, U.S.A., 23rd JANUARY, 1970

Confirming Reception by ..... of the $\frac{29.450}{144.050}$ MHz Beacon

on ..... 1970 ..... hrs. G.M.T.

ACKNOWLEDGES THIS REPORT AND YOUR SUBSEQUENT REPORTS.

FROM THE PRESIDENT'S DESK

The planned AMSAT-OSCAR-B (A-O-B) satellite will herald the beginning of a new series of long-life operational amateur repeater satellites. Amateur satellites orbited to date, including Australis-OSCAR 5 sent aloft in January 1970, have been met with enthusiastic response, but from a relatively small percentage of the total amateur population. We deem it of utmost importance that wider participation be sought for the upcoming series of amateur repeater satellites, beginning with A-O-B, which hopefully will be launched next year.

Some reasons for the importance of greater participation are:

1. Space represents a new technology in which amateurs should share as they have in other technological developments in the past.
2. Greater numbers of amateurs equipped for communications via these repeater-satellites will ensure a larger pool of hams capable of participating in amateur space-oriented scientific studies which may prove to be of great benefit to amateurs and mankind in general.
3. Increased participation in amateur satellite communications will hopefully lead to increased scale of AMSAT's operation in terms of membership and operating revenue. This in turn will provide an improved base from which to embark on further amateur space activities.

Previous satellites were limited to use by VHF and UHF enthusiasts. Other amateurs, whose interests generally lie in the HF bands, apparently saw no need to utilize the satellite channels. The limited lifetime and one-of-its kind nature of the satellite was also a significant deterrent to widespread interest. We believe that, to popularize amateur satellite communication, we need a program designed to first motivate, then inform and educate the general amateur population regarding satellite communication. The motivational phase of this program would be aimed at convincing amateurs that satellite communication has something to offer them in the course of their routine operating activities. The educational phase would provide amateurs with the necessary knowledge for achieving satellite communication capability.

To encourage investment in suitable ground station equipment for use with A-O-B, it is appropriate to establish some guidelines to be applied to the design of this and follow-on AMSAT satellites. The guidelines are:

1. Duplication (or near-duplication) of space hardware, so that in case of launch vehicle or system failure, another launch attempt is possible.
2. System redundancy, where possible, to reduce the probability of complete system failure once the satellite is in orbit.
3. Consistent choice of frequencies, insofar as possible. A-O-B is expected to contain a channelized FM repeater using a group of uplink channels near 146 MHz and a group of downlink channels in the vicinity of 432 MHz, and a linear repeater employing an uplink band near 432 MHz and a downlink band just below 146 MHz. It is anticipated that future AMSAT satellites in this series will utilize similar arrangements. However, other frequencies and bands may be used in order to accomplish specific experimental objectives.

There are within our hobby a number of groups having specific interests such as contests, DX, traffic handling, VHF and FM. To the DXer, contester, and traffic man, an amateur satellite may not appear to offer anything he does not already have on the HF bands. Thus, perhaps the creation of operating activities may help lure these amateurs. For example, might sponsorship of a satellite "Worked All ..." award provide some operating incentive? Should a point bonus be offered for satellite QSO's in Sweepstakes and for Field Day? Sponsorship of special contest activity some time after the launch of A-O-B might be appropriate. What about an OSCAR BPL award? These are a few possibilities for operating activities which might be used to spur interest in amateur satellite work once A-O-B is in orbit.

ARRL Headquarters plans to study details of an achievement award based on the structure of the ARRL field organization for those amateurs communicating through the A-O-B repeaters. Consideration also will be given for A-O-B QSO's to count during selected ARRL contests.

To the FMer, satellite communication does offer something new in the form of long distance circuits for channelized communication. Therefore, in this case, planned operating activities do not appear to be necessary, although promotion of the idea of using the satellite among FMers should not be overlooked.

The VHF man will require little inducement and already possesses the necessary knowledge to equip himself for satellite communication. Judging from experience, the participation of serious VHFers in amateur satellite activities will be no problem. In fact, these amateurs can be expected to play a leadership role in helping hams not yet familiar with VHF techniques in equipping for satellite operation.

Once motivation has been provided, information must be made available so that amateurs can equip themselves for satellite communications. Prior to the launch of A-O-B a number of basic magazine articles are needed. One should describe an HF-to-432 MHz transmitting converter for amateurs without previous VHF experience. Another would provide constructive information for a suitable 144/432 MHz antenna and associated azimuth-elevation mount. A third would contain information for the preparation of FM gear available to amateurs for use with A-O-B's FM repeater. The operating procedure aspect of satellite communication would be the subject of still another article. In addition, it is desirable that commercial equipment manufacturers be encouraged to produce suitable gear to work in conjunction with amateur satellites.

Assistance is needed in all these areas. Can you help?

Perry Klein
K3JTE

The above AMSAT policy statement was suggested by Bill Dunkerley, WA2INB, and approved by the AMSAT Board of Directors, on April 25, 1970.