

SECRET

ROUTE SHEET
PRNC-NRL-10-863c (Rev. 5-54)

SECRET

CODE	DATE	INITIALS	PURPOSE	REMARKS
5435	1-30	RBO		
5430	1-30	RBO		
5403	2/2	ley		
5400	2/2/59	MS		JAN 30 1959
1570	2/3	(D)		
1525	2/4	A		
1523A	2/4	(M)		mailed
5430A	2/5	RBO		Class 3
5000	2/6/59	GAP	1	Show green.
4000				Show green.
2020 1040	2/9	A		Show green.
4010	2/10	J.M.		FEB 10 1959
1071	2/24	(M)		
1523A				

5404 RBO 1/3

Classified by: Dik NRC
Review on: 4 FEB 1989

Prepare copies of this route sheet and forward ALL copies together with necessary correspondence and other documents.

- PURPOSES**
- FOR INFORMATION
 - FOR APPROVAL
 - PREPARE REPLY
 - FOR SIGNATURE
 - FOR NECESSARY ACTION
 - FOR MEMO. COMMENT
 - FOR GUIDANCE
 - FOR COMPLIANCE
 - DISTRIBUTE ENCLOSURE
 - RETAIN ENCLOSURES
 - RETAIN COPY
 - FILE

FROM Director, U.S. NRL, to Chief, BUAER (Aer-AV-42)		DIVISIONS DO NOT FILL IN	
DATE OF MATERIAL	BRANCH IDENT. SYMBOL 5430-13:RBO:as SER: 0076	DATE MAILED A FEB	FILE NO. R06-29
ORIG. IDENT. SYMBOL (Mail Room Fill In)		SUBJECT Intercept System, Lightweight, Subminiaturized, for Supersonic Vehicles, BUAER Project No. AV-42004, NRL Problem 54R06-29; quarterly progress report on; forwarding of	
SECRET		HANDLED VIA BY MAIL CONTROL SYSTEM ONLY	

5430-13:RBO:as
SER: 0076

4 FEB 1959

~~SECRET~~

From: Director, U. S. Naval Research Laboratory,
Washington 25, D. C.
To: Chief, Bureau of Aeronautics (Aer-AV-42)
Subj: Intercept System, Lightweight, Subminiaturized, for Supersonic
Vehicles; BUAER Project No. AV-42004, NRL Problem
54R06-29; quarterly progress report on; forwarding of
Ref: (a) BUAER Conf ltr Aer-AV-4212 Ser 02982 of 5 March 1958
Encl: (1) 4 copies of subject report 5430-13A:RBO:as of
28 January 1959

1. In accordance with reference (a), enclosure (1) is forwarded herewith.
2. This is an interim report; work is continuing on this problem.

L. A. GEBHARD
By direction

Copy 1 - BUAER (Aer-AV-42) (w/4 copies of encl) *Fig # 949795*
Copy to:
Copy 2 - BUAER (Aer-TD-42) (w/8 copies of encl) *Fig # 949795*
Copy 3 - Code 5430 Problem File (w/encl)
Copy 4 - Code 5430 Correspondence File (w/encl)
Copy 5 - Code 1523A (Green) (w/encl)
Copy 6 - Code 1523A (Pink) (w/encl)

Copy 5 of 6 Copies

Downgrade to confidential when enclosure is removed.

~~SECRET~~

~~SECRET~~

BY SIGAN
CONTROL SYSTEM ONLY

~~SECRET~~~~SECRET~~5430-13A:RBO:as
28 January 1959

Subject: Quarterly Progress Report on Intercept System, Lightweight,
Subminiaturized, for Supersonic Vehicles

1. Work has progressed on many phases of the development of an unattended intercept system suitable for operation in supersonic vehicles and designed to receive, amplify and re-transmit (on another frequency) radar signals in S band.
2. A brief outline of the work during the quarter from 1 October to 31 December follows.
 - a. The specifications for the commercial procurement of a transistorized S-band crystal-video receiver assembly were completed, bids invited and received; the proposals were analyzed and the bid of the lowest bidder, International Telephone & Telegraph Laboratories, was accepted. Plans were made to hold a conference with the contractor's engineers at an early date to assure an understanding on all points and thus expedite completion of both the prototype and the production units. Acceptance tests of the prototype have been outlined and preliminary preparations made to conduct them upon receipt of the prototype.
 - b. The prototype of the tracking transmitter is completed and preliminary tests confirm adequacy of design.
 - c. Construction of the data-link transmitter is under way.
 - d. The design of the programmer, for controlling the time during which the data-link transmitter operates, has been completed.
 - e. The mixer-amplifier and modulator circuits are in the design stage.
 - f. Design of the antenna array (for use with the tracking and the data-link transmitters and the command receiver) and of the associated phasing network is nearing completion.

Encl (1) to
NRL ltr 5430-13:RBO:as
SER: 0076

Copy 14 of 16 Copies

~~SECRET~~Classified by: DIR NRCon: 4 Feb 1989~~SECRET~~

HANDLE VIA
BYEMAN
CONTROL SYSTEM ONLY

~~SECRET~~~~SECRET~~5430-13A:RBO:as
28 January 1959

g. Provision of equipment for the ground stations includes the following:

- (1) For the manual control of the orientation of the Yagi antennas which are to be used at the command transmitter and the receiving sites, a steering and braking mechanism is being designed.
- (2) The two ground station shelters mentioned in the last report are being reconditioned, rewired and fitted with heaters and blowers.
- (3) The command transmitters have been ordered.
- (4) Comparative evaluation of two VHF receiving systems has been undertaken to obtain data on which to base the choice of a type of receiver for the ground stations.
- (5) Tape recorders for the receiving stations have been received and tested.

~~SECRET~~

2

~~SECRET~~
BY EMAN
CONTROL SYSTEM ONLY