

BY AIR MAIL



From: Wing Commander D.F.H. Grocott, AFC, RAF

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CAW/S93/4/Air

11th August 1964

Lieutenant Commander William R. Fearn, USCG
Chief, Electronics Branch
Aids to Navigation Division
US Coast Guard
WASHINGTON DC 20226
U. S. A.

SP *[Signature]* MWK
SI *[Signature]*

Dear Commander Fearn
LORAN 'C'

Thank you very much for your letter OAN-3 of 29th July 1964, giving me some information on the expansion of the Loran 'C' system.

2. Bill Polhemus probably told you that there is considerable military interest in this system from an RAF point of view. Subject to an official statement from the U.S.A. on the expected life of Loran 'C' (and Loran 'A'), I see Loran 'C' airborne equipment (probably Sperry AN/ARN 78) being installed in all our long range maritime patrol aircraft and transport aircraft. At a later date, I should like to see Loran 'D' adopted as a joint US/UK tactical navigation system - but that is a little way off yet. Boscombe Down, a pint size Eglin cum Wright Patterson, is currently flying a modified Decca SPN 31 Loran 'C' marine receiver, and will shortly start flying a Sperry AN/ARN 78 equipment and an EDO 600T Loran 'A'/Loran 'C' (ugh!) envelope matching only equipment.

3. I note that you do not show the Sylt station on your coverage chart and I assume this is merely an oversight as we receive this station in the UK. I was rather surprised to see that Bonavista (Cape Race) will work in conjunction with the Carolina Beach station. This is a baseline in excess of 1500 nms and would only appear to make sense if the E. coast chain was being re-sited and/or the Bonavista station was a master station working with another slave located at Flores in the Azores. There would then be excellent fixing on the great circle routes New York - London and New York - Paris. Are you permitted to comment on this?

4. May I thank you again for your letter and hope that you enlighten me about the likely configuration of Loran 'C' stations on the E. seaboard of the U.S.A. and in the Azores.

Return to Bill
[Signature]

Yours sincerely,

'Pinkie' Grocott

OAN-3

Wing Commander O. F. H. Grocott, AFC, RAF
Royal Air Force College of Air Warfare
Manby
Louth
Lincolnshire, England

AUG 24 1964

Dear Wing Commander Grocott:

Unfortunately, I have not had the pleasure of meeting Mr. Polhemus. Commander C. J. Kelley, USCG, who is detailed to duty with the Federal Aviation Agency, actually transmitted your request to me.

I was intrigued by your comments concerning English interest in the Loran systems, and the hardware available at present.

Sylt was, as you surmised, omitted from the coverage diagram through oversight. The Cape Race to Carolina Beach tie is not as difficult as you deem it to be. First we have the necessary frequency stability available in rhenium standards. These eliminate the need for frequency slaving. Cycle synchronization, of course, remains to be accomplished. This aspect will be solved in either of two ways; by a control monitor or by taking time position from the Nantucket (SO-Y) signals. Thus, we will not need to receive the master signals at the Cape Race station.

As to your intuitive reasoning concerning a tie to the Azores, it would no doubt be desirable, but we have no plans for expansion in the Atlantic.

Thank you for your reply. It is gratifying to have a contact in England. I hope I may hear from you again.

Sincerely yours.

15/
WILLIAM R. FEARN
Lieutenant Commander, U. S. Coast Guard
Chief, Electronics Branch,
Aids to Navigation Division
By direction of the Commandant

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WRFEARN/sft 8-20-64