

1st June 1965
C. S. I. R. O.
Stowell Avenue
Hobart, Tasmania
Australia

Mr. Bruce Kelley
Main Street
Holcomb, New York
U. S. A.

Greetings Bruce:

The spring 1965 issue of O. T. Bulletin contains on page 2 a very nice article by Charles Henry entitled "DeForest Three Stage Amplifier - The First Neutralized Circuit?". Judging by description of connections and what resulted, I believe the circuit is negative feedback. Neutralization is a kind of bridge. Too much capacity puts bridge out of balance and amplifier oscillates just as strongly as with too little capacity. Negative feedback not only stops oscillation, but too much will greatly reduce the gain. A less obvious result is a large increase of bandwidth. See my enclosed reprint.

I expect to return to U.S.A. next year. If a three stage amplifier can be located in working condition, I will undertake to make a set of gain and frequency response curves using different amounts of capacity as described by Henry. These should clearly demonstrate the modification had nothing to do with the Hazeltine "neutrodyne" patent. Instead the circuit puts negative feedback a dozen years earlier than the Sargent Infradyne and over twenty years before the Black patent.

Best wishes,


Grote Reber

encl: "Negative Feedback a Third of a Century Ago",
Grote Reber, Proc. I.R.E., vol.47, July 1959.

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Bruce:

Please put the following in the O.T. Ham-Ads at your convenience.

Wanted: BC set containing, or kit of parts for assembling RUSCO I.F. amplifier. Also ACME type R-1 R.F. transformers. Pay fair price or borrow for electrical test. Grote Reber, Research Corporation, 405 Lexington Avenue, New York 17, N.Y.

Grote Reber