



July 23, 1959

Dr. Grote Reber,
National Radio
Astronomy Observatory
Green Bank, West Virginia

Dear Dr. Reber:

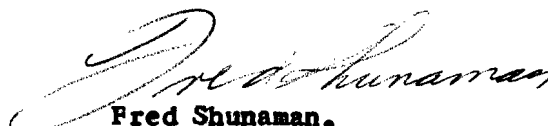
We were very much interested in your letter in the Proceedings of the IRE, July, 1959. However, we were a little puzzled as to the modus operandi. Is the capacitance between the center tap of the grid circuit and ground an actual negative feedback, or is it simply a device to swamp out positive feedback? As the signal in successive stages would be out of phase, it would appear that the total feedback to the first grid circuit might be positive?

As I (vaguely) remember earlier descriptions of the set, it was represented only as a variable bypass condenser. I was able to turn up an early story in Radio News, but could not find the article (which, I am sure, appeared in the same magazine) describing the Remler version of the Infradyne. That story, I believe, was more detailed.

Incidentally, the Wells-Gardner circuits of the same—or a little later—period also had a peculiar control over a number of if or rf stages which, if I remember correctly, operated by varying the capacitor. However, possibly the earliest true application of negative feedback in rf circuits was Tuska's Superdyne, which had an rf circuit with the familiar tickler coil upside down. That appeared several years before the Infradyne. At the time, regenerative circuits were very common, and the idea of reversing the regeneration to squelch oscillations seemed obvious. It was when degeneration was applied to audio that it was thought a new thing had been invented.

Sincerely,

RADIO-ELECTRONICS


Fred Shunaman,
Managing Editor

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