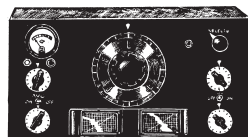


THE COMMUNICATIONS RECEIVER



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The Radio Engineering Laboratories Model 278 Short-Wave Receiver

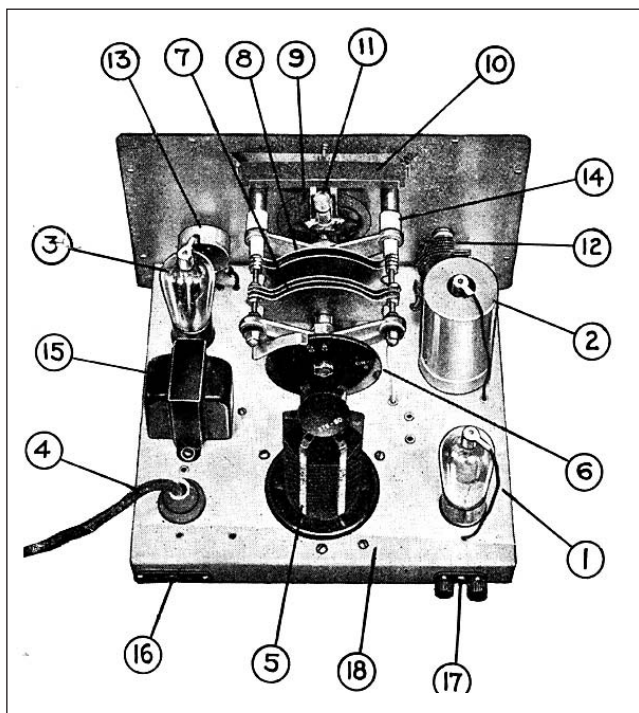
The decade of the 1930s witnessed the introduction of international short-wave broadcasting, coupled with a considerable, rapid advance in the technology of short-wave commercial and amateur radio communication. One of the early participants in this effort was a little company, known as the Radio Engineering Laboratories, of Long Island City, NY. Founded in 1921, it survived until 1972, quite a remarkable record. Barry Mishkind's Web site, www.olderadio.com, gives a brief and interesting summary of the company.

The REL products usually designated usually by three-digit serial numbers. This receiver, the No. 278, was introduced late in 1931. The two-page instruction sheet which accompanied the set, dated 10/21/31, was authored by Frank Gunther, who had joined REL in 1925 as the salesman, and who, in 1960, became REL's president. The 278 was listed for \$30.00, including coils for the 80, 40, and 20-meter amateur bands. One information source suggests that the 278 was introduced as competition to the National SW-3.

In a December 1931 ad by Wholesale Radio Service Co., on Vesey St. in New York City, the 278 was quoted at \$28.50 and the SW-3 at \$32.34. The 278 couldn't have been a significant competitor, though, since it is scarce today while SW-3s are common. Promotion was weak and spotty, as opposed to the massive and

continuing advertising presence for the National products. In early 1932 REL moved away from amateur radio and into UHF communications gear for police and fire departments, aircraft, railroads, and the military, to name just a few commercial applications. A major factor in this shift was the active presence of Major Edwin Armstrong, who pioneered FM and the first two-way police car radios (1)

The circuit of the 278 was simple enough and, with one exception, was certainly not unusual. At a time when most radios used triode tubes, this radio used the newly-introduced screen-grid

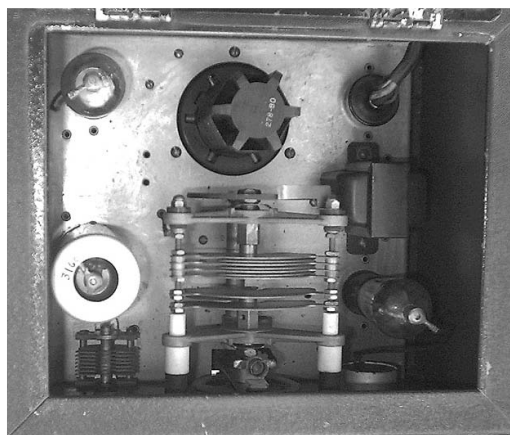


The 18 "necessary features" for a good ham bandspread receiver (see text).

types. An untuned screen-grid RF stage was capacity-coupled to a regenerative detector, followed by the single-tube audio amplifier. The 36, 36 and 38 battery tubes could be replaced by the AC types 35, 35, and 27.

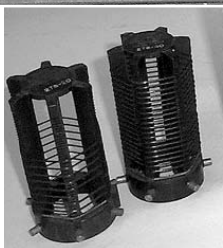
What was also noteworthy was the quality of the components and construction. For example, the cabinet, with its hinged lid, and the plated chassis were made of heavy duty steel.

The REL ad in the December 1931 issue of *QST*



touted some 18 features that the company considered necessary in a good amateur band-spread receiver. While some of these are almost laughable today (such as the dial light), remember that in 1931 we were still in the wood-breadboard-Bakelite panel era. The special REL tuning capacitor, No. 187, was a combination band-spread and band-set device. The rear section was set for the particular band in use by a disc and ratchet, and the smaller front section was the tuning capacitor. Likewise, the special REL plug-in coils were wound on large, heavy, threaded, ribbed Bakelite forms with heavy-duty studs, which snapped into a molded base with heavy phosphor-bronze contacts.

Frequency reproducibility was quite good, and once the dial was calibrated for a particular band the user could have confidence that he would return to the same spot. The three amateur bands (80, 40, and 20 M) were each spread over much of the dial. Two other coils, for the 49 and 25 Meter bands, could be purchased separately.



Front and cover-open top views of the 278 receiver.



As mentioned above, the No. 278 receiver is a scarce item. For that matter, all of the REL amateur products are in the same category. They were and are rarely seen at flea markets even in the days, 30 years ago, when the early products were still on the tables. This especially applies to the complete receivers, transmitters, and associated pieces of gear. Only occasionally has the writer found a distinctive REL component such as a transmitting coil or capacitor. So why the relative scarcity of REL HF amateur products, when their catalogs listed so many items? Perhaps it is a matter of timing. REL appears to have dropped out of the HF amateur field in the early 1930s, as witnessed by the lack of advertising in *QST*. Technology was advancing by leaps and bounds, the UHF field was wide open, and REL went after the government

money, which with the coming depression, appears to have been a sound business decision.

REL products from the 1920s and '30s remain desirable collector items for those fascinated by early communications technology. It would be interesting if someone could start a reflector, or create a comprehensive Web page devoted to the REL product line. Any volunteers? Or another thought...if you have a piece of REL equipment, how about writing me at w2dgb@ptd.net and sharing your experiences. Perhaps we can foster an awareness of these relatively obscure pieces of radio history. ☐

REFERENCE

(1) www.olderadio.com