



an introduction to

BOONTON RADIO CORPORATION

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The Boonton Radio Corporation was formed in 1934. Since that time it has been developing, designing, and manufacturing precision electronic instruments. To understand some of the details of the Company's growth, we must take a look at the field of electronics for a few years preceding 1934.

Many of the concepts that made wireless communication possible were discovered before the First World War. During this war many new ideas evolved and considerable practical experience was gained in the use of the new ideas. A keen public appreciation of the usefulness of the transmission of intelligence over a distance without wire connection appeared at this period. In the years following the war, manufacturers began devoting time and money to the use of radio devices for many purposes. They found it necessary to obtain component parts which were new to most of them, and they needed methods for testing both the component parts and their final products.

Under these conditions the Radio Frequency Laboratories was organized in Boonton, New Jersey. The staff consisted, at first, of one radio engineer, and their work concerned the manufacture of coil forms and other radio parts using insulating material. As time passed, additional technical personnel was added and the work of general engineering consultation was undertaken. This type of work naturally led to a good understanding of test equipment requirements.

In 1934, Mr. William D. Loughlin, who had been President of Radio Frequency Laboratories, together with several of his associates, formed the Boonton Radio Corporation. The first product of the new company was a Q Meter which read Q directly on a meter scale. Up until that time the measurement of Q had been made indirectly by use of bridges for measuring the effective reactance and resistance concerned. These measurements had been subject to error because of the techniques required, and useful measurements took a great deal of time.

With the new Q Meter, measurements were simple and rapid, and the instrument proved capable of many additional valuable laboratory measurements on basic components and circuits. The flexible, accurate, easily used instrument was accepted almost immediately by the growing radio industry.

By 1941 a new model, replacing the earlier Q Meter, was introduced and the Company undertook development work on a frequency-modulated signal generator to meet the requirements for test equipment which the new frequency-modulated communication equipment demanded. Commercial instruments were made available and Boonton Radio Corporation continues to this date to make several forms of frequency-modulated test signal generators.

The early years of the Second World War brought the use of higher and higher frequencies, and a Q Meter similar to the earlier models, but applicable to higher frequencies, was designed. At the same time the activities of the Company were directed more and more to military applications. Its Q Meter and Frequency Modulated Signal Generators were widely used in military work and the Company produced a pulse modulated RF signal generator for use in testing radar systems. This instrument was produced in large quantities and is still used by all military services.

At the end of the War the FM Signal Generator was redesigned to permit coverage of a wider frequency range, to include AM as well as FM, and to obtain deviations in frequency which did not vary with carrier frequency. This instrument had very low leakage and a wide selection of accurately calibrated output voltages. It soon became the standard in its field and still maintains that position.

The aircraft transportation field in the 1940's was developing more accurate methods of navigation and better methods of landing in bad weather. A system for solving these problems was approved by the Civil

Aeronautic Administration and put in use both commercially and by the military services. Unusually accurate and specialized test equipment was required by this system and Boonton Radio Corporation was asked to undertake a design. A Signal Generator for Navigation equipment was produced in 1947 and an additional piece of equipment for testing receivers used in landing airplanes came very shortly after this. In 1952 the Company produced a more advanced model of the "Glide Path" testing equipment for the landing of aircraft.

In the last few years, the Company has turned its efforts to the development of self-contained, broad-band, flexible instruments containing RF bridges for measurement of components and cables. A new instrument, the RX Meter, was introduced which measures parallel resistance and parallel reactance of two-terminal networks over the LF and VHF ranges. The low frequency and high frequency Q Meters have been redesigned to include new features which increase the usefulness and accuracy of the equipment.

Companies, like people, have characteristics which identify them. From its formation to the present time, the Boonton Radio Corporation has built products of high quality. No attempt has been made to produce cheap instruments, and the quality and usefulness per invested dollar has been kept high. Close tolerances, high stability, mechanical soundness, and broad applicability have all been built into the Company's equipment. The Company regards its products as fine general-purpose tools for electronics craftsmen.