



# WEST-TECH SERVICES

"As The Records Spin - The Memories Begin"



West-Tech Services

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## ASTATIC: An Idea that grew into an Industry



**NOTE:** This history was taken from an Astatic brochure from circa 1946.



*F.H. Woodworth, President*



*C.M. Chorpening, Vice President*

Away back in 1930, two radio amateurs, C.M. Chorpening, W8WR radio (now W8MJM), and F.H. Woodworth, W8AHW, both of Youngstown, Ohio, began searching for a better microphone for their 'phone transmitters. Up until this time they had been using various carbon type microphones. The condenser type appealed to them as an answer to their problem. Several units were designed and given trials on the air. Before long, other amateurs among their acquaintances began visiting their shacks, interested in either building or buying this new type of "mike." Chorpening and Woodworth, encouraged by this interest, decided to form a partnership and build these units for their friends. While this condenser unit proved reasonably satisfactory, it had certain limitations which it was hoped could eventually be overcome.



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*A group of Astatic officials and employees in the early days.*

### **NEW ELEMENT SUGGESTED**

It was about this time that an old acquaintance, Mr. Charles E. Semple, of Cleveland, who had been visiting his "ham" friends frequently, invited them to pay him a visit. With a background of phonograph and loud speaker experience, Mr. Semple was then occupying bench space in the Brush Laboratories, experimenting with elements made from Rochelle Salts, (Sodium Potassium Tartrate). Through Mr. Semple, the two visitors met A.L. Williams, electrical and mechanical engineer, and Dr. C.B. Sawyer, scientist, who demonstrated to them the action of these new elements in relation to microphones, phonograph pickups, speakers, recording heads, earphones, and other devices where it was desired to transform mechanical energy into electrical energy or the reverse. Here, it seemed, they had found the answer to a simple, low cost, dependable "mike" for the ham rig.



*Astatic's first Crystal Microphone, Model D-104. Manufactured in 1933.*



*Humble home in which Astatic had its beginning.*

### **INCORPORATED IN 1933**

**By 1933, Messrs. Chorpening and Woodworth found it advisable to incorporate a manufacturing and sales company and to branch out with a line of Crystal Microphones, Crystal Phonograph Pickups and Recording Heads for manufacturers and radio jobbers. Mr. Semple was brought into the new organization as designer, and later served as general manager until his death in 1939.**



*Main Plant and Offices of The Astatic Corporation at Conneaut, Ohio*

**Today, The Astatic Corporation occupies a large, modernly equipped plant on a three-acre tract of ground in the heart of Conneaut, Ohio, second largest ore-unloading port on the Great Lakes. The move to Conneaut, from Youngstown, Ohio, where Astatic was originally incorporated and maintained its offices and manufacturing plant until late in 1944, was made necessary by the rapid growth of this important electronics parts industry. Like every new manufacturing venture, Astatic experienced, but successfully overcame, many vexing problems to finally find a place of leadership in an industry which today knows scarcely any limitations. A pioneer in this relatively new field of science, Astatic has contributed immeasurably to the fidelity of sound pickup and reproduction as related to radio, electric phonographs and combinations, with their multiplicity of**

applications. As the use of electronic devices became more generally understood and practiced, the demand for Astatic Microphones, Phonograph Pickups and Cartridges increased and Astatic moved forward in product design and product facilities.



*Left to right: assembling needle chuck to crystal element; servicing microphone cables; testing phonograph pickups*

The phenomenal growth of The Astatic Corporation is best illustrated by the fact that twelve hundred employees, as compared to less than a dozen during the first year of Astatic annals, are now engaged in the manufacture of Astatic's large line of products. The name "Astatic" has become a symbol for Microphones and Phonograph Pickups, familiar to everyone interested in electronics. With representatives in eighteen key American cities, as well as in foreign countries, the market for Astatic products is world-wide.



*General View of Main Assembly Floor*

A trip through Astatic's modern Conneaut plant and its amazing complicity of operations is a revelation in manufacturing achievement. Machines and equipment of the most modern design are utilized for the making of tools and dies, machining of parts, in assembly operations, finishing and otherwise contributing to the manufacture of Astatic products. Visitors to this Astatic plant are deeply impressed with its modern equipment and facilities, with its fully equipped laboratory and large engineering department, with its extensive tool and machine shops, its up-to-the-minute painting and drying department, its long, busy lines of assembly workers, large office personnel, its clinic, its cafeteria and other features. And one cannot fail to be impressed, as well, with the constant supervision over all these operations, designed to insure, through careful manufacture and constant testing, the ultimate performance of Astatic products in the field.



*Assembling Pickup Cartridges*



*Left to right: Testing Astatic microphones, testing crystal cartridges, cementing damping pads in cartridge housings*

**Astatic engineering personnel, quarters and equipment have been extensively increased at the new Conneaut plant to facilitate research and development work. This new department now includes a modernly equipped laboratory with the most approved types of measuring and testing equipment, and is co-ordinated with the mechanical engineering and drafting units.**



*Partial view of Astatic Engineering Laboratory*

## FIELD OF APPLICATIONS FOR ASTATIC PRODUCTS IS CONSTANTLY INCREASING

With science delving ever deeper into the possibilities of electronics, the broadening field of applications for Astatic pickups and sound reproducing devices knows scarcely any limitations. Long familiar to almost everyone associated with radio and phonograph manufacturing and amateur activities, Astatic Microphones, Phonograph Pickups, Cartridges and Recording Heads are now destined to find modern uses in hundreds of new applications. Astatic engineers and laboratory technicians are in a position to offer assistance to Astatic customers in the possible adaptation of Astatic products to special applications.



*Mobile Sound System equipped with two Astatic K-2 Microphones*

Astatic Crystal and Dynamic Microphones are designed in many models for general use, as well as special applications. Among these are: radio broadcast stations; amateur radio stations; public and mobile address systems; airway communications; police radio networks; inter-office, plant, and field communications systems; educational institutions; home recording combinations; office dictating machines; criminal detection devices and many others. Their use now, naturally, will include two-way communications systems for railroads, ships, bus lines, taxicab networks. In addition, Astatic Microphones have many and varied industrial applications; to test machinery for vibrations and noises; watch timing; water-leak detection and location; and other special demands.



*(upper left) Police Network Installation employing Astatic Microphones.*

*(center left) Astatic Microphones used in Airline Dispatch.*

*(center right) Office Installation with Wilcox Elec. Co. equipment.*

*(upper right) Astatic Microphones extensively used with amateur rigs.*

**Astatic Phonograph Pickups and Cartridges are used by a majority of the leading manufacturers of electric phonographs, radio-phonograph combinations, coin operated phonographs, home recording combinations, and other similar types of equipment. Most phonograph pickup arm designs used by important set manufacturers are based upon Astatic Cartridge dimensions, thus making Astatic Cartridges suitable for practically all replacement requirements.**



*Two versions of Astatic Pickup Arms as used on portable phonographs.*

**In addition to supplying manufacturers of original equipment, Astatic products are distributed by parts jobbers here and abroad for repair, replacement and improvement of existing equipment.**

**Phonograph Pickup Cartridges, of which Astatic is perhaps the world's largest producer, are made in many models to meet today's varied requirements and exacting demands. It is natural, therefore, that Astatic Cartridges are the choice of most engineers designing phonograph equipment, whether it is for simple, manually operated players or the most elaborate automatic changer combinations.**



*Manufacturer and Jobber Service Department*

**For the accommodation of its many Radio Parts Jobber and Manufacturer customers, Astatic has long maintained a special service department. Products failing to meet Astatic's high standards of operating efficiency, as the possible result of defects in material or workmanship, are here repaired or replaced according to their needs. This cooperation insures customer satisfaction and confidence.**



*Astatic Microphones popular for public address and sound system applications. Tommy Tucker's Orchestra shown above using Astatic microphones.*

### **ASTATIC'S CONTRIBUTION TO THE WAR EFFORT (WORLD WAR II)**

**For its liberal contribution to the war effort, The Astatic Corporation received, along with many congratulatory letters for meritorious accomplishments, the U.S. Navy Certificate of Achievement.**

**In addition to great quantities of Microphones, Pickups and Crystal Cartridges supplied to the Armed Forces and essential industries during the war period, Astatic designed, perfected and manufactured many other types of electronic equipment. Included were a number of under-water sound detection or Sonar devices. Astatic, as a result, became one of the largest producers of Hydrophones for the U.S. Navy under direct contract, and for other manufacturers of Sonar equipment on a subcontract basis.**

**For Army and Navy Bomber and Fighter Planes, Astatic perfected and produced,**

in large quantity, a Static Discharger, for dissipating static electricity which accumulated, due to friction in flight, on wing surfaces, fuselage and tail assemblies.

A further contribution was made by Astatic in the design and manufacture of Co-Axial Cable Connectors used exclusively by both the Army and Navy for Radio, Radar and Sonar hookups and installations. As a result, The Astatic Corporation became the country's largest producer of these items, shipping in one month, during peak production, a total of over 650,000 units.

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