ENGINEERS STUDY PROBLEMS FACING RADIO INDUSTRY

General Electric Puts Up New Experimental Laboratories.

By NEA Service

SCHENECTADY, N. Y., Jan. 15.—Transmission quality and reliability, static and fading will bcome objects of a thorough investigation in the new enlarged experimental laboratories the General Electrical Company has put up near here.

The laboratory buildings and masts cover an area of fifty-three acres. Four steel towers and numerous wooden masts rise from the ground, for experimentation with all sorts of antennas and any variety of wave-lengths.

Small buildings are scattered over the lot, in each of which a different type of transmitter is being tested. A special plant supplies the power needed for all these laboratories.

In these huts the engineers are facing the following problems:

The conversion of ordinary 110-volt lighting current to 15,000 or 20,000-volt direct current.

Means of converting this direct current into radio frequency currents.

Means for holding the radio frequency supply constant.

Modulation, whereby the audio-frequency energy may be accurately and efficiently superimposed upon the radio frequency energy.

Wavelengths most desirable for any given type of service.

Power required to cover a given distance under specified conditions.

In much of his work on transmitter circuits, the engineer has to work with the men testing receiving apparatus so that best results may be obtained from both ends.

The Voice From WBZ

Most of the voice you hear when you tune in station WBZ, at Springfield, Mass., belongs to Thomas H. McNally. The rest comes from two other announcers that this busy station has to employ to cover its broad range of events. When you hear "Good night, folks, MCN," it's McNally who has been announcing.

When Tuning for DX

Do not increase the tickler dial to a point where the set will oscillate and act as a miniature transmitter when tuning in a distant station with a regenerative receiver. By doing this a wave will be sent out which is slightly different from that of the transmitting station, therefore making it impossible for the neighbors to pick up the same station. The many whistles heard when fishing for DX are in most cases oscillating receivers and are a source of annoyance all must help to eleminate.

Radio

ERIC W. PALMER

I am a university, right in your room.
I am an opera, sung by your fireside.
I am an orchestra, to set your feet a-dancing.
I am a band, to enthuse your musical soul.
I am an orator, whose eloquence holds you still.
I am a violin recital, rendered by a master at your side.
I am a statesman, conferring with you on the Nation's needs.
I am a diplomat, voicing a foreign friendliness.
I am a doctor, coming to your home without charge.
I am a banker, watching your laid-away dollars.
I am a leader of industry, analyzing the economic trend.
I am a newspaper, describing events as they happen.
I am a drama, played in your parlor.
I am a debate, where you hear both sides on the day's problems.
I am a ball game, with thrills by the score.
I am a boxing championship, with a seat at the ringside.
I am a governess, teaching your children each day.
I am a scientists, revealing wonders that you know not of.
All these am I, and more—
I am a patriot, kindling anew your love of country.
I am a preacher, reawakening your faith in God!
Yet poor, foolish men just call me RADIO.

Broadcast on Display

The broadcasting studio of station WJZ and WJY recently was moved down to the display windows of the Aeolian Bldg. in New York, so that passersby may see how the thing works. "Broadcast Central," through which WJZ and WJY go out to the world, is stationed atop that building.

More College Courses

Station WBZ broadcasts a triple college course, under auspices of the Massachusetts department of education. The subjects are short story, French and foundation of modern music.

RECENT SHIFTS IN CLASS 'B' STATIONS A SUCCESS

Separation Between Wave Lengths Reduced From 10 to 7 Kilocycles.

By Times Special

WASHINGTON, Jan. 15.—According to reports to the radio bureau, its recent shift of the wave lengths of class B stations above 498 meters so as to provide new channels has ben almost a complete success. Under the shift, the separation between the wave lengths of these stations was reduced from ten to seven kilocycles.

Observers located in different sections of the country report that practically no interference has been caused by the change. There has been some heterodyning, the reports state, but not enough to cause serious annoyance.

If the stations maintain a constant frequency it is believed they will work satisfactorily on the new wave lengths without interference. If they do not hold to the wave length assigned them, trouble is going to result.

Considerable interference at present results from stations separated by ten kilocycles or more because of their failure to maintain constant frequencies. Nearly every night, Chief Radio Supervisor Terrell receives a number of telegrams and long distance telephone calls reporting that some station is off its proper wave length and is spoiling reception from some other station.

Under the new arrangement, two additional class B channels are created. As the demand for more Class B channels grows, the separation between class B stations below 498 meters will be reduced from 10 to 9 and 8 kilocycles. It is hoped in this way to obtain seven new channels, which will accommodate fourteen new class B stations.

Fingers Across Ocean

Scotland Yard and the New York police force are uniting in an experiment on the transmission of photographs and fingerprints by radio. These are being sent from New York to London and back.

Californai Has Most

California has more broadcasting stations than any other State, according to the Department of Commerce. There are forty-three stations in that State. The next in line is Pennsylvania, with thirty-seven.