

# GREAT ADVANCE MADE BY RADIO IN LAST YEAR

Transmission and Reception  
Show Steady Progress  
During 1930.

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(Written for NEA Service and The Times)

WASHINGTON, Dec. 31.—The great laboratories of this country continued to produce their wonders in 1930, without curtailment of effort or expense and with no letup in the steady progress of broadcasting developments and other improvements in radio.

Both broadcast transmission and reception made marked gains during the year. Many stations improved their equipment to give better quality and signal strength. There was a parallel improvement in received design, which made for greater selectivity and consequently less interference from stations on adjacent frequencies.

This tendency was stimulated by the federal radio commission's general orders 91 and 97, in which it is stated that broadcasting stations bring the standard of their equipment up to the present state of the radio art.

The immediate effect of this tendency was a higher percentage of modulation, better frequency stability and better quality of reproduction.

## Synchronization Biggest Step

The outstanding single development of the year in broadcasting, however, has been the experimental trials of synchronization.

First there was the work of WOC and WHO in Iowa, which stations attained approximate synchronization and now are able to serve a large area together than either could alone.

Then the special experiments of the National Broadcasting Company and the Columbia Broadcasting System, both of which have shown that it is entirely possible to operate a group of stations on exactly the same frequency and with the same program.

The commission authorized and encouraged these experiments and observed their results. The benefit to the public is that it will be enabled to hear any station at any point where proper facilities may be created.

## Flying Made Safer

Theoretically, there is no limit to the number of "booster stations," which may be used to spread the programme broadcast on any given frequency. Thus the usefulness of the few broadcast channels may be extended many fold.

Outside of broadcasting, the biggest development in radio in the past year was in aviation communications. A year ago only a few passenger carrying airplanes used radio. Today three major air transport routes operating across the United States have radio in every plane carrying passengers and mail.

By means of radio telephones the pilots of these airplanes can talk to the ground for weather information, landing instructions and other necessary information.

## Phones Extended to Sea

In one year plans were developed and this equipment was built and installed on all our major airways, a really remarkable achievement.

The year also saw the development of communication to the point where passengers on board liners at sea can talk by telephone to any one in the United States or Europe. In addition, 85 per cent of all the world's telephones can be connected.

Radio-telegraphic communication with other countries has continued to expand and just recently the first direct radio circuit between the United States and China was opened.

In our larger cities 1930 was the first big year in the development of police radio.

## \$350,000 IN TRAPPING

### Skunk Most Sought in Indiana

With Muskrat Second.

One of Indiana's little known industries—trapping—brought in an estimated revenue of \$350,000 to Hoosiers last winter, according to experience for buyers, and Walker Shirts, superintendent of the state fish and game department.

The winter's revenue is expected to be somewhat less because of a lower fur price.

Most trapping in the state is done by school boys, although there are a few veteran trappers left. The skunk is the most valuable fur bearing animal in the state, and muskrats are considered second. Shirts said. Other animals in the state sought by trappers are opossum, raccoon, mink, fox and wolf.

The development of hydro-electric plants in Italy is expected to reach a production of 10,000,000,000 kilowatt hours of electricity by the end of this year.

## Dance TONIGHT

New Year's Eve  
Frolic  
Seed Webb's "Creolians"  
"The Orchids Without a Name"  
"Wings" and "Mannone"  
Loren Griffith  
And 3 Other Acts  
Dance Till Dawn  
Admission \$1.00

## INDIANA ROOF

UNREDEEMED  
Ladies' and Gent's  
DIAMOND RINGS  
18-karat White Gold  
Mountings  
To Be  
Sold  
For  
Low  
Charges  
Only  
WOLF SUSSMAN  
Established Years  
23-11 W. Wash. St.  
Opposite Matchouse  
\$10

## Times Radio Dial Twisters

### STATIONS OF THE NATIONAL BROADCASTING COMPANY

KDKA	980	KTHS	1040	WCKY	1210	WGN	1250	WLS	750	WSAI	1350	WFBM	(1230) Indianapolis
WRC	820	KDKA	1050	WCKY	1210	WGN	1250	WLS	750	WSAI	1350	WFBM	(1230) Indianapolis
KOA	820	KWK	1230	WDAF	610	WHS	820	WLW	700	WSP	650	WFBM	(1230) Indianapolis
AMC	820	KDKA	1230	WCKY	1210	WGN	1250	WLS	750	WSAI	1350	WFBM	(1230) Indianapolis
KSD	1100	WBAB	800	WFAF	800	WJR	1250	WFBM	1100	WFBM	920	WFBM	(1230) Indianapolis

### STATIONS OF THE COLUMBIA BROADCASTING SYSTEM

WABC	800	WBAB	220	WRC	850	WOW	1166	WCCO	810	KOJ	1250	WFBM	(1230) Indianapolis
WBT	1100	WJJD	1150	KRLD	1045	WLW	1240	WLAC	1170	WFBM	1250	WFBM	(1230) Indianapolis
WBT	1100	WBAB	800	WFAF	800	WJR	1250	WFBM	1100	WFBM	920	WFBM	(1230) Indianapolis
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### WEDNESDAY

### WEDNES