



INTERNATIONAL GLOBAL SHORTWAVE CLUB Newsletter

President

William G Davis Jr

Contact Us!

Don't forget to call or write to us at least once a month. We welcome more if you have time!

Phone Numbers

315-775-8790

Address

International Shortwave Club
PO Box 973
Abingdon, Md. 21009
U.S.A.

Visit our website!

www.ictchurch.org

We have a whole area dedicated to our International Shortwave Club members. You can also find our current frequencies and times!

Current Radio Schedule

WWCR
Worldwide Christian
Radio

Monday through Friday

13.845 - 1800 UT
5.890 - 0300 UT

Saturday

12.160 - 1700 UT
4.840 - 0200 UT

Sunday

9.350 - 2100 UT
4.840 - 0200 UT

Shortwave Radio History

People who did not live in the 1920s cannot know what it meant when radio exploded, granting instant human communication because before, we lived in isolation. Suddenly, music, laughter, and news poured into our homes, and the world shrank with the radio.

Before radio, we relied on electric telegraphy to send messages long distances, only reaching 12,000 miles at most, but as the population grew and spread out over America, they had to discover communication over vast distances.

In the early 1900s, the government financed AM transmission experiments; widespread AM broadcasting began twenty years later. For the next 30 years, it remained the dominant broadcasting method, a period called the "Golden Age of Radio," until television and FM replaced it.

In 1933, Edwin Armstrong invented the wide-band FM, which announcers used worldwide to transmit high-fidelity sound over broadcast radio. He built the prototype FM broadcast transmitter in the Empire State Building, New York City, and used it for secret tests of his system between 1934 and 1935. Finally, in April 1935, FM subcarriers replaced AM subcarriers with much-improved results.

Armstrong proved that FM has a better rejection of static than AM. With the help from General Electric at its New York lab in 1940, he sent a million-volt arc as a source of interference behind a radio with both AM and FM receivers; the AM receiver produced a roar of static, while the FM receiver reproduced a music program from Armstrong's experimental FM transmitter in New Jersey.

Years before AM and FM became popular, Guglielmo Marconi, the wireless pioneer, was active in experiments with wireless telegraphs since 1895. His company in England was the main contributor to the development and application of wireless telegraphs worldwide. In addition, Marconi was very interested in the achievements of radio amateurs in the shortwave band.

In 1923, he asked his assistant Charles Franklin to conduct a wide range of research on the characteristics of

shortwave proliferation. Marconi requested to examine the ability to conduct secure and reliable long-distance communication day and night in all seasons.

Two scientists (the American Arthur Kennelly and the British Oliver Heaviside) came out in 1902 with the theory that there is a conductive layer that reflects the radio waves to earth around the globe. However, other scientists did not accept their theory until the British scientist Edward Appleton proved it. He researched the ionosphere layers and showed that they reflected the sky waves, enabling the proliferation of short waves worldwide.

The success of these experiments prompted the establishment of worldwide shortwave communication by the late 1930s, and Edward Appleton received the Nobel Prize in physics for this research in 1947.

Shortwave broadcasts supply a significant source of news and popular entertainment in much of the world except in highly developed regions such as western Europe, North America, and Japan, where people receive government or commercial programming within other bands of frequencies.

Among the world's most powerful shortwave broadcasting stations are China Radio International (formerly Radio Peking [Beijing]), the Voice of Russia (formerly Radio Moscow), the British Broadcasting Corporation, and the Voice of America.

Besides their use in international broadcasting, people use shortwave radio frequencies and techniques to relay telephone and telegraph communications long distances. In addition, amateur radio stations and portable two-way radios operate at shortwave frequencies.

Since shortwave radio can reach far distances, it should not surprise us to learn that governments used it during the time of war. In fact, when Russia invaded Ukraine on February 24, 2022, it blocked access to BBC websites. In response, the BBC resurrected its WWII-era shortwave broadcasts. In our next issue, we will discuss using the radio as a tool for war.