



THE HISTORY OF THE BVARA

THE 1930s

BY RICH SOLTESZ, K3SOM

THE 1930s

In 1931 another group of radio amateurs in Beaver County joined together and founded the Beaver Falls Amateur Radio Club.

Now there were two clubs within the area that shared their hobby for the hams within Beaver County. The world was changing and the technology for radio communication was rapidly undergoing many changes as well. During this decade,

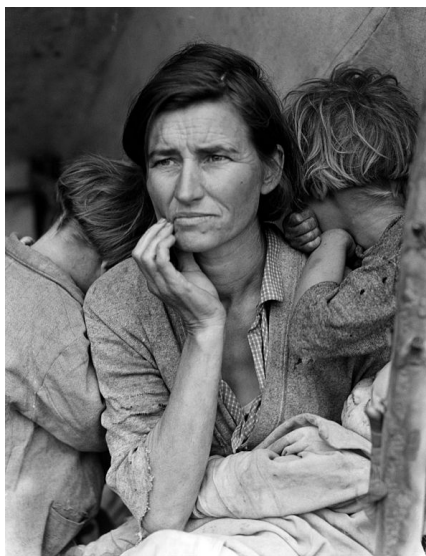
evidence of club activities, equipment, and the identification of individuals from the clubs begins to surface. We continue our high-level review of the culture, the current events at that time, both locally and globally, and some of the obstacles those

inquisitive individuals faced with radio technology. From another perspective, these were dark times – times heavily weighed down by the era of the Great Depression and other major events.

GLOBAL EVENTS IN THE 1930s

Beginning with the Stock Market Crash in October 1929 and continuing until the U.S. entry into World War II in 1941, our country was tightly in the grip of The Great Depression. From 1929 to 1932, 86,000 businesses failed and 9,000 banks went out of business. By 1934 the number of unemployed people was huge; a quarter of the U.S. work force was without jobs and many people became homeless. Droughts and the Dust Bowls of 1934 and 1936 further devastated our land. Red snow caused by this dust bowl fell in New England during the 1934-1935 winter.

The popularity of the sport of



Migrant mother and children during the dust bowl



War of the Worlds radio broadcast by Orson Welles

boxing spurred the sales of radios during the 1930s. The Star Spangled Banner became our Official National Anthem in 1931. In 1936 Andrew Carnegie wrote the book "How to Win Friends and Influence People." Amelia Earhart vanished near the end of her attempted round-the-world airplane flight in 1937. In 1938 Orson Welles broadcast "The War of the Worlds" story of a Martian invasion. That same year, Walt Disney Studios gave us "Snow White and the Seven Dwarfs." In 1939, World War II began in Europe and the movie, "Gone With the Wind" premiered.

On the political front, Herbert Hoover was soundly defeated by Franklin D. Roosevelt in 1932 and Roosevelt was later elected for an unprecedented total of four terms. He campaigned on a New Deal program that eventually resulted in many new initiatives including the Federal Emergency Relief Administration, the Civil Works



Administration, the Wagner Act to promote labor unions, the Works Progress Administration (WPA), the Social Security Act, and many other programs. For most Americans, the 1930s were extremely difficult and tumultuous times.

The Great Depression had a peculiar side effect on amateur radio. With the huge loss of jobs and subsequent increase in free time, many men and boys turned to amateur radio to fill the gap in their lives. Although there were other contributing factors, the U.S. ranks of amateur radio operators swelled from 16,829 in 1929 to 46,390 in 1934 resulting in a 275 percent increase. Throughout the remainder of the 1930s, the number of hams began to stabilize as daily living conditions continued in depression.

TECHNOLOGY EVENTS IN THE 1930s

In 1930 the first frozen foods of Clarence Birdseye were sold in

Massachusetts. That same year the chocolate chip cookie was accidentally developed by Ruth Wakefield. In 1930 the ARRL's Sweepstakes Contest first began. In 1932 the Panadapter display was developed by the French engineer and ham Marcel Wallace, F3HM. But it wasn't until 1936 that the ARRL recognized that the "cathode ray tube" made an excellent tuning indicator for the receiver. In 1933 3M Company marketed Scotch Tape. Also in 1933, Edwin Armstrong developed the wide-band FM receiver. ARRL's Field Day began in 1933.

From September through October 1933 a three-part article appeared in a small Los Angeles magazine called "S/9" authored by Robert Moore entitled: "Single Sideband Transmission for Amateur Radiophones." Although the article chronicled an actual on-the-air modulation method, not much interest in the technology was aroused until after World War II when new experimental efforts were begun by hams. In 1934 Congress passed the Communications Act creating the Federal Communications Commission which survives today. In 1936 Kodachrome color film was developed by Eastman Kodak. That same year, regular broadcast service of HD television (then defined as at least 200 lines) was begun from the BBC. The ARRL in 1937, after extended discussion about what should be called a "country," began the DXCC award program. In September 1939 war

came again to Europe. Amateur operations halted almost immediately in most European countries. Canada, a British Commonwealth nation, also went silent for hams.

BEAVER COUNTY IN THE 1930s

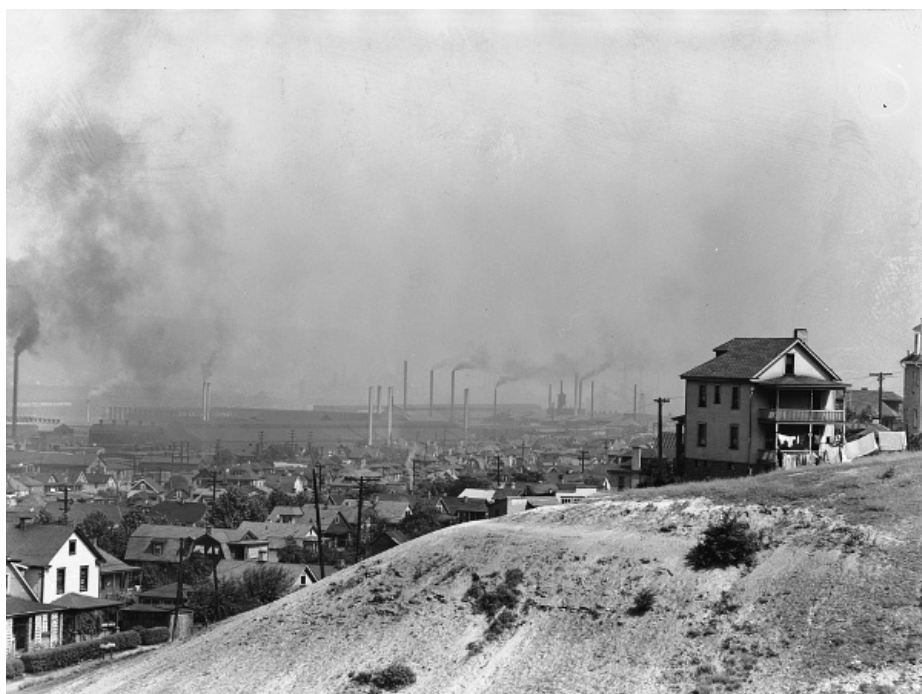
In Beaver County, the St. Joseph Lead Company authorized the erection of a zinc smelter along State Rt. 18 in Potter Township in 1930. That same year, the U.S. Census reported the population of the county totals at nearly 146,889 people.

Ice jams up-river combined with heavy snowfall caused the worst flooding on record on the Ohio and Beaver Rivers in 1936. The Ohio River crested at 54.5 feet causing countless homes to be flooded and resulted in many bridge closures. All industrial plants in the county

were shut down due to high water or electrical failures.

In 1936 on the Ohio River, opposite Industry, Montgomery Island Lock and Dam were completed and dedicated, replacing several smaller dams and greatly reducing the threat of recurrent flooding in the Valley. In 1937 the last trolley car to operate in the county made its final run to Beaver Falls from Junction Park.

In a landmark case, the U. S. Supreme Court reversed a decision by the Federal Appeals Court in 1937 that had declared the NLRB Act to be unconstitutional, thereby validating grievances brought by Beaver Valley Lodge No. 200 of the Amalgamated Iron, Steel, and Tin Workers of America against the Jones & Laughlin Steel Corp. and establishing the legal basis for collective bargaining between labor



1938 view of houses and steel mills in Ambridge, Pennsylvania

unions and employers.

The Recreational Demonstration Area (RDA) in Raccoon State Park was constructed by the Civilian Conservation Corps (CCC) in 1935 as well as the construction of three organized group camps at the park during the Great Depression.

HAM CLUB AND MEMBER ACTIVITIES

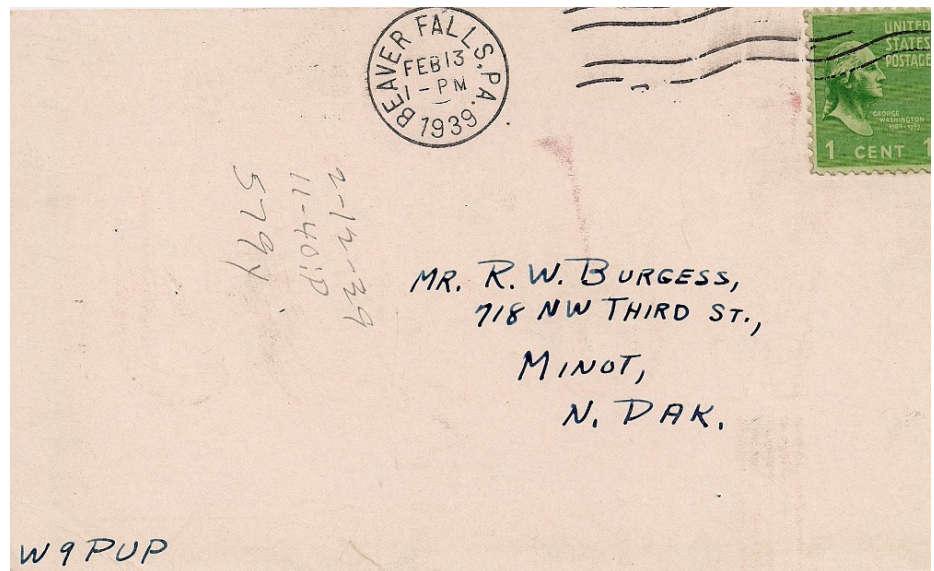
Courtesy of the November 1934 issue of QST Magazine, we find this club-related announcement: "The Beaver Valley Amateur Radio Club of Rochester, PA, announces what it hopes to be the largest hamfest ever held in Western Pennsylvania. It will be the Third Anniversary Party of the club. The date: October 27th. The place: Saxon Hall, Sixth Street, Monaca, PA."

Members of the BVARA were actively involved with the United States Naval Communications Reserve. The club scheduled Ensign Burton Williams to discuss the organization of a naval reserve unit in the Beaver Valley at their September 1st 1932 club meeting.

From collectors of old QSL cards come three cards from Stanley Dobrowski, W8HXZ from Beaver Falls; Zygmund Sepanik, W8MTB from Freedom; and from John Pernal, W8HYE from Beaver Falls. All of these cards are from the mid-1930s. But perhaps the most interesting QSL card for the BVARA Club comes from Thomas W. Roney, W8SGJ of Beaver Falls from February 1939. Later in the 1950s the BVARA club call sign was changed to W3SGJ to honor his memory (see sidebar, p. 8).

THE ORIGINAL W8SGJ QSL CARD

Shown below is the QSL card of Thomas W. Roney, W8SGJ of Beaver Falls. Later in the 1950s the BVARA club call sign was changed to W3SGJ to honor his memory. Both the front and back of that card are shown.



From these and many other QSL cards from the 1930s we can gather information about typical equipment in use during this period (see sidebar, p. 9).

Perhaps the best example of

what a well-equipped ham station in Beaver County was using can be found courtesy of the August 1932 issue of QST Magazine where the station of William Wetzel, W8AXJ from Beaver Falls was described:

"The transmitter employs the push-pull t.p.t.g. circuit (tuned-plate, tuned-grid), essentially the same as that described in both the June and September 1930, issues of QST, except that it is built rack-and-panel style. A pair of 210's are

used as oscillators with 750 volts on the plate. The entire transmitter is wired with copper tubing, and condensers (capacitors) and meters mounted on a 21" x 28" Bakelite panel. Operation is chiefly on 7250 kc (kHz)."

"A 750-volt Thordarson transformer furnishes the plate power, and a separate 7.5-volt transformer lights the filaments of the 210's. A third transformer handles the filaments of the 866 rectifiers. The filter consists of two 4-ufd condensers, an 18-henry and a 30-henry choke. A 50,000-ohm bleeder resistor is used across the output of the rectifier. Voltages are regulated by Bradleystats (rheostats for voltage adjustment) in the primaries of all transformers. These are located on the switch board. A large Weston precision type meter which cannot be seen in the photograph is located just back of the main panel."

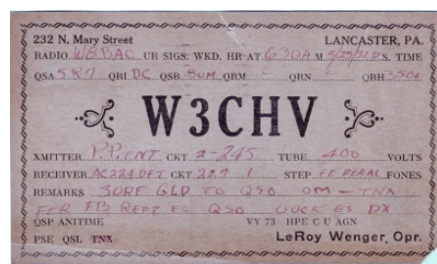
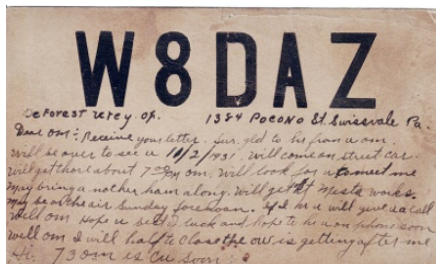
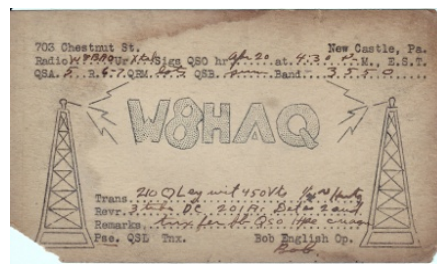
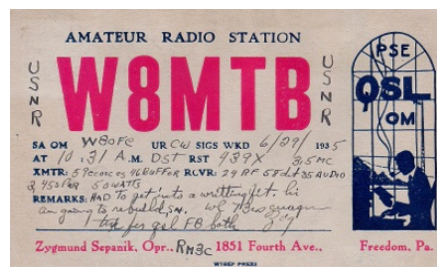
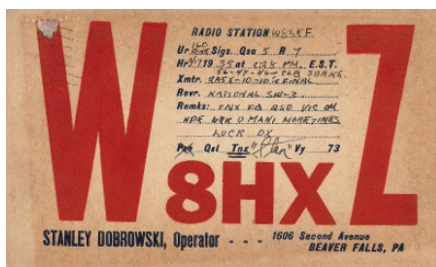
"The monitor, built in an aluminum cabinet, is very substantially made so it will retain its frequency calibration, which is regularly checked from W1XPs Standard Frequency Transmissions."

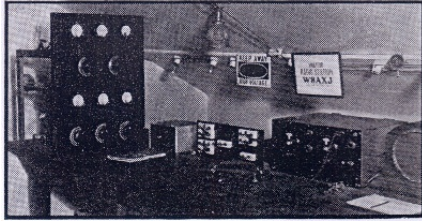
"The antenna is a 65-1/2 foot Zepp with 34-foot feeders. All U.S. districts have been worked, and W8AXJ's signals also have been heard in Australia and New Zealand."

His receiver was a superheterodyne unit and is shown at the right of the photograph. Given the economic times of the 1930s, this had to have been considered an expensive and very complex station with outstanding performance for that time period. He may well have been a member of one of the two radio clubs in Beaver County.

QSL CARDS OF THE 1930s

Below are a few more QSL cards from Western Pennsylvania.





Station of William Wetzel, W8AXJ from Beaver Falls. Courtesy Aug 1932, QST

RADIO TECHNOLOGY IN THE 1930s

Ham receivers spanned the gamut from simple three-tube sets with a detector and audio stages to advanced superheterodyne configurations. Advances in circuit design were happening at a very rapid pace during the 1930s with the availability of newer tubes with improved performance specifications as compared to what was in use just 10 years earlier. Looking at the QSL cards tells us what many hams managed to get along with during the Great Depression era. However, if a ham were not too strapped for cash, several quality sets were available, as advertised in the pages of Radio News for June, 1936. Let's look at what was available if you had the cash.

RCA Manufacturing Company was offering the ACR-175 superheterodyne receiver, a 10-metal tube beauty with an RF and two IF amplifier stages as well as a two separate oscillators, crystal filter for selectivity down to 50 cycles, and coverage from 0.5 to 60 MHz.

National was offering the HRO Junior communications type receiver with 9 tubes, two RF stages, its famous HRO worm-

drive precision condenser with large micrometer dial. This set had many of the features of its big brother, the HRO Senior but at a more affordable price.

For the ham who demanded superior receiver performance, the Hammarlund Super-Pro was being offered. This beauty offered an exclusive silver-plated, five-band cam switch that was positively fool-proof and noiseless. It also sported a 12-gang band spread condenser. This one was a favorite of the government, airway, police, and other agencies.

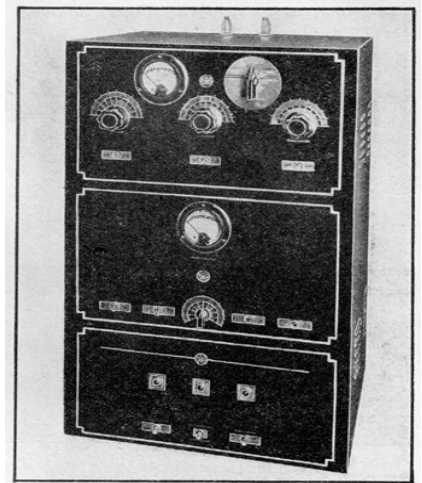
Moving down the scale, Hallicrafters offered the Super Skyrider with 9 metal tubes and numerous features. For the kit builder, Wholesale Lafayette offered the Professional – a 9-tube superheterodyne receiver with the typical five-band configuration and BFO for CW reception. One can only wonder if there were any boat anchor clubs during the 1930s.

Ham transmitters advanced in complexity as well. Now kits and fully assembled transmitters were becoming available.

United Transformer Corporation (UTC) offered a kit transmitter consisting of three modules in a desk-top rack-mounted configuration. The first unit consisted of a 50-watt RF module for CW operation. The second unit was a 50-watt plate modulator. The third unit was a controlled-carrier module that enabled the power input to follow the audio modulation for

additional power to the signal. With the third unit, the power output approached 75 watts.

As the builder accumulated more cash, a controlled-carrier Class B linear stage could be added that included a 3,000 volt DC power supply for the push-pull 852 tubes in the linear amplifier. A companion antenna tuning unit and cathode-ray oscilloscope in a separate cabinet were also available to complete the transmitter.



The UTC Transmitter Kit

NEXT MONTH

Next month we'll move ahead to the 1940s and continue our journey as we follow the early history of the BVARA. World War II had a significant impact on not just ham radio but on everything. We'll look at what was happening around the globe and locally during the 1940s. In addition, as technology continues to change and war surplus equipment becomes available, we'll examine the effect on ham equipment and operating practices. Stay tuned! ➔