Mr Burt

The SIGNALEER

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CRYSTALS PLAY MAJOR ROLE IN WAR

by Shirley Samberg

COMMUNICATION - the back bone of our army - used in every theatre of war. Walkie talkies, tank, cars, planes, jeeps and other vehicles all use quartz crystal units to control the frequency in their tactical radio sets.

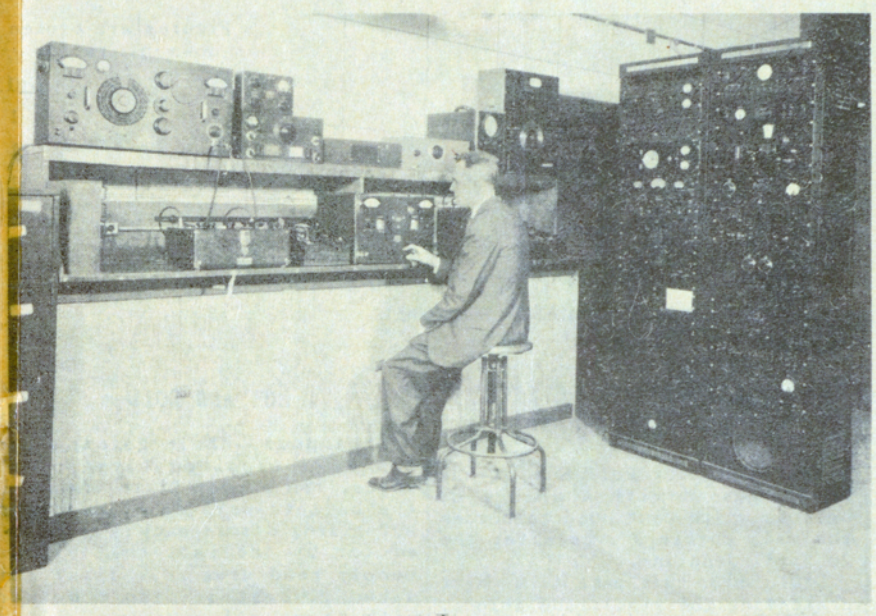
The story of production and development of these units is the story of phenomenal growth of a small industry as a result of war time demands.

At the time of the Jap sneak attack there were only three or four companies in the entire country with the proper tools and equipment to produce quartz cyrstal units. With the heavy demand put upon production by the Army and Navy it soon became apparent that in order to attain the quantity needed other manufacturers would have to learn the technique and "pitch in." This was acheived with the aid of personnel in the SCGSA (then the Signal Corps Development Laboratories) and the Office of the Chief Signal Officer in Washington, who had machinery designed and made available for their use.

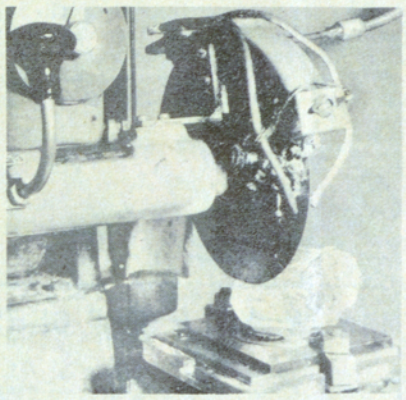
A quantity of crystals were being imported from other countries to keep the supply as great as the demand. This necessitated the development of special test instruments so that tests could be made without recourse to the radio in which it was being used. These instruments were developed by the SCGSA, LBSL, and development is continuing at present. When new problems arise they are delt with; namely, the design of new crystal units for new equipment and development of changed techniques in order to avoid the deterioration known as "aging." The "proof of the pudding" as the old slogan goes, "is in the eating" and the increase of production by 500% from 1941 to 1944 is a sure sign of the success of the job undertaken.

The widespread activities of the Sig. Corp have included the grading of raw material in Brazil, assisting National Bureau of Standards in determining grades to be used in classifying the national stockpile of raw quartz, setting up repair shop facilities in depots and crystal grinding equipment for use in theatres, assisting manufacturers in construction of quartz crystal units for the Army, design of crystals for new radio equipments, and cooperation with other branches of the service and our Allies.

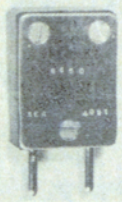
The trend leading into the future indicates that development will concern itself with further work in standardization so that the several different types will be reduced in number. Testing methods will be examined to the end that crystal units may be defined in terms of their own properties without regard to the equipment in which they are used. Efforts are being made for the improvement of precision frequency control in order to provide more channels for broadcasting. Likewise exploration of the many applications of quartz crystals outside of communications suggest an almost unlimited field of development.



Section of Lab. Frequency Measuring Equipment and other Testing Instruments as used by the Circuit Section.



Sawing the Quartz Crystal.



Crystal Unit in holder ready for use.

LT. COL. SPOERL NEW CHIEF SERVICE DIVISION

Lt. Col. Frederick N. Spoerl has taken over the post of Administrative Executive Officer and Chief, Service Division. He replaces Lt. Col. Charles R. Wagner who was acting in the dual role of Chief, Materiel Division and Chief, Service Division since the departure of Lt. Col. A. E. Burt to OCSigO. Col. Wagner will continue as Chief Materiel Division.

Lt. Col. Spoerl is a familiar figure to those who have been with the Agency during this war. His first tour of duty in World War II was with SCGSA (then Signal Corps Laboratories). He reported to the Labs on 29 January 1941 as a major. His duties have covered many phases of Agency activity including the following: OC, Materiel Division; Director, Toms River Signal Laboratory; Director, Detroit Signal Laboratory; OC, Florida Field Station; Asst. Chief, Engineering Division, to mention a few. He received his promotion to Lt. Colonel in June 1942.

He has a fine World War I record, which included service with 315th Infantry beginning in September 1917 and then the 307th Engineers. In December 1917 he transferred to the Signal Corps in the Meteorological Section. Shortly thereafter he went overseas and was at Colombey Les Belles, France at Meteorological Headquarters 1st Air Depot through to January, 1919.

Col. Spoerl's home is in Philadelphia, Pa. where he and Mrs. Spoerl have their permanent residence. The Colonel is an ardent sportsman, being partial to golf and bowling.

ACTION ON "HOME" FRONTS VAIL COMMUNITY

Rounding up the eligible sons of Agency fathers presented little difficulty, with the result that the Vail Community Scout Troop 85 was born. With Clarence Moore (CSL) as Scoutmaster, and Art Levine as Assistant Scoutmaster, the troop has embarked upon a luring program of activities, with the result that each week sees new faces-lads anxious to join. The smartly uniformed lads enjoyed several hikes to Cheesequake Park, and are presently active in salvage paper collections in the Vail Homes.

The little men from seven to ten are enjoying the sponsorship of the Vail Mother's Club, with Mrs. K. L. Hahn as its President, Mrs. Ted Biddle, guardian of the funds and Mrs. Hazel Abrams as the Scribe.

It's a "dog-gone" state of affairs when man's best friend, the dog, becomes a dog-gone nuisance. But despite many warnings, Vail Agencyites persist in letting man's best friend annoy their friends and neighbors to such an extent that drastic action is being taken to remove all stray dogs from the project. So, if you value your pet, keep it tied...securely, and permanently.

Abbott Blank heads the Vail Athletic activities, and is now organizing hard ball and soft ball teams.

Mrs. Helen Bohart and Mrs. Elinor Hulick, Vail Girl Scout Troop Leaders, attended a dinner for the Northern Monmouth County Council and its leader of the district at the Molly Pitcher Hotel during National Girl Scout Week.

Agency dad's lads are going "air-minded" in a big way if the attendance at the Model Airplane Club Meetings is any indication. The junior pilots assemble in the new Rec Hall every Friday evening at 7 P.M. and are now making plans for their first Airplane Flying Meet. Tiny rubber-motored craft are being built during meetings, and some members are displaying larger planes in their homes.

Vail Community parents wanting a few hours to themselves in the afternoon but kept at home by young children will welcome the new and fully equipped Nursery School which is being opened with a competent teacher and registered nurse always in attendance.

Large airy rooms, and an outdoor fenced play area guarantee safe play under most healthful conditions, and these Agency mothers can now pursue their occupations free from worry as to the whereabouts or well being of their young ones.

Interested parents should see Mrs. Bady, 79 Belshaw Ave., Ext. 437 R.