

TEK TALK



VOL. I NO. IV

FEBRUARY, 1952

TEKTRONIX CLIMATE CONTROL

BY LOGAN BELLEVILLE



The air conditioning system at Tektronix is designed to provide maximum year-round comfort to the employees. (In answer to the small voice I hear in the back row, I know--we have been cold several mornings. We are sorry and every effort will be made to reduce the number of times this may happen.) Now, may I go on with my story.

The heating and air conditioning problem at Tektronix is one of the most complicated yet encountered in this area according to our heating and air conditioning engineer, Dick Blankenship, of the engineering firm of W. Bruce Morrison. Mr. Blankenship also provides the information that Tektronix is one of the three large buildings in Portland which is completely air conditioned. The other two are the Oregonian Building and the Equitable Building. Also, that Tektronix is the only completely air conditioned factory in Oregon. The complication of our air conditioning system is due to the varied activity of the various departments of Tektronix. At one extreme we have the offices on the east side of the building, which, in cold weather, require considerable heating. On the other extreme is the Test and Calibration Department, which is in the center of the building with no outside walls to lose heat and with a large amount of heat produced within the room by the many instruments in operation. As a result, even

CONGRATULATIONS

The first of a group of fifteen special Type 517 instruments was sent to the Naval Research Laboratory, Washington, D.C., on Friday, January 11 by air. It is well worth noting that this initial instrument was requested by the N.R.L. people for delivery January 15, but our earliest possible estimated delivery date was set for January 25. A phone call from N.R.L. indicated their pleasure with the earlier than estimated delivery.

This is the kind of service that TEKTRONIX would like always to give our customers. In this case, we were able to do so through the valiant efforts of CHARLES NOLAN, BILL POLITS, and BOB POULIN who made the design changes; and the 517 crew under the leadership of "WHITEY" EMMARSON and LEONARD MASON who again demonstrated their ability to survive "modifications". RON HANKINS and LEON PRENTICE of the Drafting Department turned out a new front panel mock-up for the special instrument in "jig-time".

TRANSFORMER SCHOOL

The Tektronix transformer school in theory and design has begun with Professor GORDON SLOAT wielding the chalk and pointer. It has been planned that there should be about 8 or 9 sessions meeting every Thursday afternoon from 3 to 4 o'clock. There are twelve people taking the course and each person has been given a problem in designing a transformer which must be completed by the last class session.

N.Y. OFFICE LOCATION CHANGED

After February 1st, Tektronix Eastern Division activities will be centered at our new office address, 49 Pondfield Road, Bronxville 8, New York.

We hope to be able to include a detailed story from reporter JACK DAY on Eastern "doings" in an early issue of TEK TALK.



Vol. 1 No. IV

February, 1952

EDITOR Blanche Cook

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We wish to thank the following
for assisting on this publication:

Gladys Ernstmeyer	Mel Lofton
Chris Larsen	Ken Walling

W. K. DALLAS is the author who took us around the world in "Tektronix Abroad" in the January paper, and MILES TIPPERY is the one who presented the funds to "pay for the trip" in his article "Production Pay Adjustment" which appeared in the December copy. Our thanks to both for a couple of fine articles.

* * *

Test work on 517's, which until recently has been done in the Engineering Department, is now done in the Test Department by DICK SCHMIDT and RODGERS JENKINS. This has relieved Engineering of a large load and has given them more time to do development and design work.

* * *

ATTEND SAFETY SCHOOL

MILTON BAVE, GORDON SLOAT, MILES TIPPERY, and JACK TURLEY attended an intensive one day course on Human Relations in Safety and Supervision sponsored by the American Society of Safety Engineers, January 30th.

* * *

RHIGER REMAINS IN RUNNING

DICK RHIGER passed the candy recently with a practiced hand. Last January 12 this world of toil and turmoil was greeted by the fourth of what appears to be a long line of Rhigers. CHUCK GASSER has not yet confirmed plans to use this material in 517 advertising. Daniel Richard is the lad's name; he appeared weighing 7 pounds and 13 ounces, and why do people ask?

* * *

W. K. DALLAS' definition of work: "That flurry of activity between coffee times."

ACTIVITIES

JURI KAUK has volunteered to teach skiing fundamentals to those who are interested. For further details see Juri in the shop days. If you are wondering who Juri is, see his picture in Tektronix Twosomes column.



FRANCES "Bunny" LUKEN at Timberline

* * *

The Portland Figure Skating Club, of which JACK MURDOCK is vice-president, extends an invitation to all those interested in learning to ice skate or desiring some good exercise to come ice skating on Thursday evenings. Club period is from 7:00 to 8:00 and public skating is from 8:00 to 10:15. For additional information on club activities and skating you may contact either MERLE MILLER, in stock, HOWARD VOLLUM, or JACK MURDOCK, all old members of the club. They have some free passes which will entitle you to a swell session of skating and an introduction into the club activities. It is hoped we will see many of the TI gang at the Thursday night sessions.

SQUARE DANCING
INTERESTED?

see

JACK TATE
Shop - Swing

PLANT TOURS

The Naval Reserve Volunteer Research Unit 13-4 will visit Tektronix on Tuesday, February 12, 8 p.m. This group is composed of Electrical Engineers who are interested in scientific research.

* * *

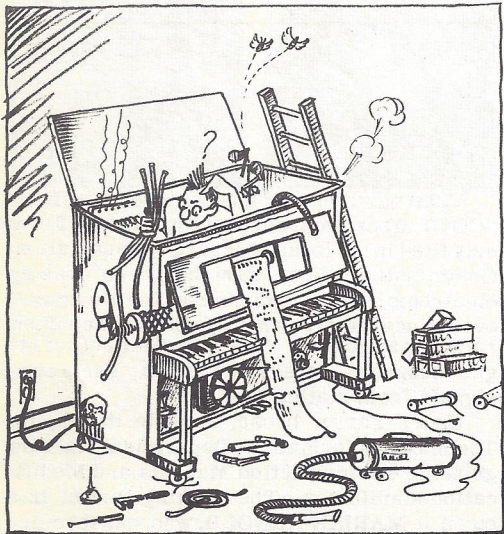
SCOTTY says: "The quantity of orders is fine, and the only way it could be better is for everyone at Tektronix to buy an oscilloscope to check their three minute eggs."



In answer to your many questions about our cartoonist, his name is **ARNOLD RANTALA** and he is a member of the Drafting Department. He joined Tektronix November 1, 1951, and in a very short time made himself known through his ingenious cartoons and spontaneous

sense of humor. He is one of these people to whom something unusual is always happening, and he never fails to take advantage of the occasion by whipping out a funny cartoon. Several of our Tektronix people have found themselves caricatured in one of these objects of funnery, so let this be a warning to you.

In talking with Arnold, we find he has two hobbies which overshadow the greater part of his extracurricular activities. One is his player piano which he procured in June. He immediately set out to clean the inner workings, and if you have ever seen the inside of a



player piano, you can realize what a task this was. We would like to know, Arnold, were there any parts left over? Arnold has a collection of 200 player piano rolls, 100 of which are expression player piano rolls; these are a very rare item. As part of this hobby, he has quite a collection of phonograph records, about 200 albums to be more explicit.

This interesting member of our organization, prior to coming to Tektronix, was drawing for a landscape architect. At one time, he did production illustrations for the ship-

yards.

Arnold not only does drafting and cartooning, he has another main hobby; textile design. We hope that someday we will see some of his designs on fabrics selling in the best department stores over the country.

Another Arnold Hobby--bowling over the girls



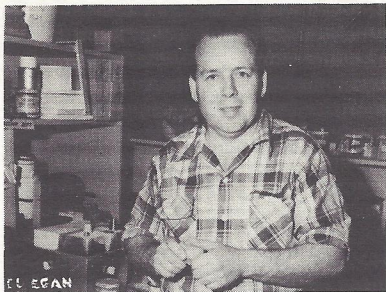
THIS 'N THAT

BOB LIVINGSTON, 517, found it necessary to get a '47 Dodge to battle the snowdrifts around Damascus---another newer car owner is **KEN KING** who bought a '51 Plymouth Suburban---**JOE VISTICA** can now be found in Stock; **KATE PROBSTFIELD** and **FRANCES TRAYER**, in 512---on lendlease are **JOYCE NEILAND**, **ELEANOR CUTLER** and **AILEEN SIMMONS**---**DOROTHY GARRISON**, 517, insists her '38 Dodge is green when it is really blue---color-blind, Dorothy?

Recently recuperated from the sutures and scalpels of various hospitals are the following: **HARRY ALLISON**, **FRANK HOOD**, **TINY DAVIS**, **RUTH WELLS**, and **HENRY HAASE**. Still recuperating from a dog fight--yes, we said dog fight--is **IRENE PARSONS**. Don't you know it is permissible to bite back, Irene?

The men in the Test Department are really happy now that **BUCK MURPHY** has finally shown them a week's output of his "sluicebox" which he has "hid away" somewhere. Of course, everyone had to have a magnifying glass to see the minute particles of gold, but since everyone in Test has the old "squint", lo and behold, a few specks (nuggets as Buck calls them) could be seen. So everyone is now anxiously awaiting the day when he drives up in his Cadillac.

CERAMICS DEPARTMENT



If you happen to hear TED GOODFELLOW say that he is going to "fire" something or make a "kill" don't rush for cover for he is really quite gentle. When he speaks of "firing", he is talking about baking porcelain parts in his test kiln (pronounced kill) in his department. A kiln is a high temperature oven used in ceramic-work.

The Ceramics Department is the place where some of our special electrical porcelain parts are made. It came into existence about October 1951, and occupies a corner in the Shop near the aluminum stock room. In the mold-making process, you will recognize it by the bits of plaster of paris and clay dust over the general vicinity.

After the mold is perfected, Ted takes a dash of silica, a measure of kaolin, and a pinch of nepheline syenite; mixes it well, forms it in the mold, and bakes it at 2500 degrees F for several hours in one of his kilns (his own design) and presto--some delicate porcelain part has been made. These parts will conform to strict heat, mechanical, and electrical requirements.

Ted is a man of most varied background and capabilities. Both he and his wife have interests in ceramics, she being the designer and he the manufacturer. For five years, they made many items such as bells, mugs, vases, etc., and retailed them in their own shop on the coast. It was there that Ted became acquainted with Dr. West, a retired ceramic engineer, famed through England and Southern California.

Completely apart from ceramics is radio communications, and Ted is experienced in this line also. During the war, he was radio operator for the Federal Communications Commission. They say he sends code very expertly.

Still far afield from ceramics or communications is music. Ted once was a member of the Arkansas Travelers vaudeville show; the Weaver Brothers were a part of that group

also. Here, Ted met such people as Joe Penner, Fred Allen, and the Duncan Sisters. More recently he played the oboe with the Portland Symphony Orchestra and the Summer Band. He has worked under the direction of many distinguished guest conductors such as Paul Lemay, Willam Van Hoogstraten, Sir Thomas Beechem, and Ephraim Kurtz. He has played with the orchestra during concerts of guest soloists such as Jose Iturbi, Gladys Swarthout, and Alec Templeton.

Presently, Ted is lending his musical abilities to Tektronix through direction of a Flageolet Ensemble on Monday evenings. Each person in this tin whistle (Flageolet) brigade pipes very melodious tunes under Ted "the Pied Piper" Goodfellow's direction.

TEKTRONIX TEAM FOR TECHNICAL TOPICS



Tektronixites are pleased to welcome EARL SCOTT to our Engineering Department. Formerly filed in the local Federal Communications Commission office, Earl has been chasing electronic emanations all over the Northwest ever since the days when sparks were courted rather than cursed. The saltwater roll of his gait bespeaks his service at sea, separating signals from static.

Under Earl's broad, capable thumb, the Technical Information Department is now grinding out Instruction Manuals and Modification Manifestos. The working part of this outfit is MARIAN ARNOLD, who was formerly with the Sangamo Electric Company in Illinois. Probably permeated by beta rays at Sangamo Electric, Marian now insists on searching out intimate items of inter-element electron itineraries in between the manufacture of manuscript for Type 517 Instruction Manuals.

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IN JANUARY

TEKTRONIX TWOSOMES

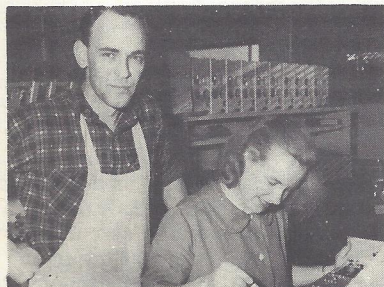


Did you know there are ten married couples working within the plant? We might know all or some of them as individuals, but let's combine them as happily married couples.

One of the twosomes is **BERT and ROSE AVERY**. Rose has worked for the Company since August, 1949, while Bert has been here since August, 1951.

Rose is the group representative of the Special Group on day shift, and Bert works days in the Transformer Department. Before coming here, Bert was a merchant marine and saw many foreign ports. He brought home several souvenirs for their home which is near Beaverton.

Bert's hobby is stamp collecting and Rose's is sewing--baby clothes, right now.



HARDA and JURI KAUK came to work in April of 1951. Juri works in the Shop and Harda is that little blonde with the perpetual smile in the 512 Group. They are refugees from Estonia and can tell many stories of the time spent in the German Prison Camps and Displaced Person's Camps.

Harda's father was a land engineer in their home town in Estonia prior to its surrender to the enemy. He is now living in Portland.

Juri and Harda are great sports fans, and Juri placed second in the Estonian National Ski Jumping Championship in 1943. They belong to an Estonian group at the Y.W.C.A. and are very active members.

Oil painting occupies Harda's spare time, while Juri repairs radios at home and at the

Portland airport.

Watch for some more of our happy twosomes next month.

BASKETBALL

This year Tektronix is sponsoring a basketball team in the Portland Basketball Association Leagues. The Tektronix team was placed in the Industrial League; some of the other teams in the league being Bonneville Power, Army Engineers, First National Bank, and Portland Traction Company. The players on the team are: **BOB LEIPZIG, CLAIR KIDD, HARRY REISCHEL, BERT AVERY, HAWKIN AU, JOE GAYTON, and LES STEVENS**. **ROSE AVERY** has been the scorekeeper and Harry Rieschel's wife, Bea, has been the timekeeper.

The first half of the season ended with the team having a 4-4 record. The team was moved up to the Cascade League for the second half. Now that the men have become accustomed to each other's playing, the team is rapidly improving.

The games are played at various high schools. No admission is charged. Following is the schedule for the remainder of the season:

Feb. 5, at Roosevelt High, 8:15,
Tektronix vs Army Engineers.

Feb. 7, at Roosevelt High, 7:10,
Tektronix vs West Hills American Legion.

Feb. 13, at Washington High, 7:30,
Tektronix vs Belmont Boosters.

Let's get out and root for our team.



BILL LEE walking out front door with a cup of soup in his hand...**HELENE SCHMITT** breaking the ice at the arena..**BARB EKSTROM** asking for comedies with the movies....fellows in Shipping offering maps for those losing their way in that department..**GINNY LEVENS'** pet snail presenting her with twins...**MOLLIE SISSON** conserving the wire clippings from her chassis by inserting them into the end of her tricky kaleidoscope..**NORMA CAUFIELD** thumbing a ride home....

* * *

The girls in cables had a discussion about departments in which they would like to work, when this remark by **HAZEL DAVIS** was overheard, "I'd like to work in Testing, it's dark in there and there are lots of men."

Cont'd from page 1
in cold weather the Test Department requires cooling rather than heating.

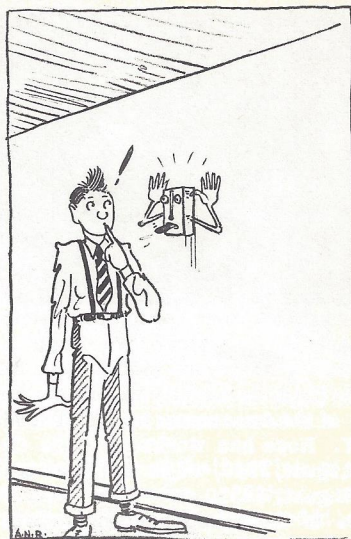
In an effort to satisfy these varied conditions, the building is divided into nine zones and the flow of heated or cooled air to each zone is controlled by a thermostat in that zone. Shipping and the General Office is one zone, the Front Office and Drafting another, the several Engineering Rooms comprise a zone as does Personnel, Conference Room and Howard Volum's office. Test is another zone and Assembly and Shop account for two zones each so that the two ends of such large rooms can be individually controlled.

Fresh air is taken in through an opening in the roof and mixed with the return air from the various zones. This mixed air is then passed through the Westinghouse Precipitron (an electrostatic air filter which removes nearly all of the dust particles, pollen, and even the very minute particles which constitute smoke). The cleaned mixed air then goes into the mixed-air chamber and at this point receives a push from two large fans each driven by a ten horsepower motor. Beyond the fans is another mixed-air chamber where the air divides, one part passing through heating coils and the other part passing through cooling coils. Beyond the heating coils is the hot chamber and beyond the cooling coils is a cold chamber. There are openings from each of these chambers into air ducts leading to each of the nine zones. Dampers in each opening permit the proper proportion of warm and cool air to be sent to each zone to suit its need as determined by the zone thermostat.

In order to make working positions near the windows as comfortable as those in the center of the rooms, there are pipes embedded in the cement floor through which warm water is circulated to provide the additional heat needed near the windows.

A furnace which burns heavy oil is located in the small building in the parking lot and generates the steam which is transmitted through pipes running underground to the heating coils in the equipment room. The oil furnace is also the source of heat for our hot water system.

Cooling is provided by means of two large refrigeration pumps rated at 25 horsepower each. These are large editions of the sealed units used in modern home refrigerators. The heat which they pump from the cooling coils is carried by hot freon gas to condensing coils on the roof. These condensing coils have a spray of water and a large fan blowing air on them. Due to the resulting cooling, the hot



freon gas condenses to freon liquid and is then returned to the cooling coils in the cold chamber. At the input to the cooling coils, the liquid freon is released through a reduction valve and at the reduced pressure again becomes a gas at low temperature. The vacuum side of the pump draws freon gas through the cooling coils where it picks up heat and is again compressed to repeat the cycle.

Control of the above operations is accomplished by means of electronic equipment manufactured by the Minneapolis Honeywell Company. This equipment includes sensing elements which check the outside temperature, the inside temperature, the hot and cold chamber temperatures, the mixed air temperatures, and the temperature of the circulating water in the floor. The information from these sensing elements is sent to electronic control units which in turn control the steam valves, the air dampers, and the refrigeration pumps. The colder the outside temperature, the warmer the hot air chamber and the water in the floor heating panel must be. When warm weather comes the cold chamber will run colder as the outside temperature rises. The proportion of fresh outside air is also controlled to meet the changing needs. In very cold weather or very hot weather a minimum of fresh air, about 25%, is taken in. In only slightly cool weather the proportion of outside air is increased to reduce the cooling load. All of these functions are controlled by electronic control equipment and the aid of a small boy, who hopes that with a little more practice and instruction the electronic equipment will require less and less aid.