

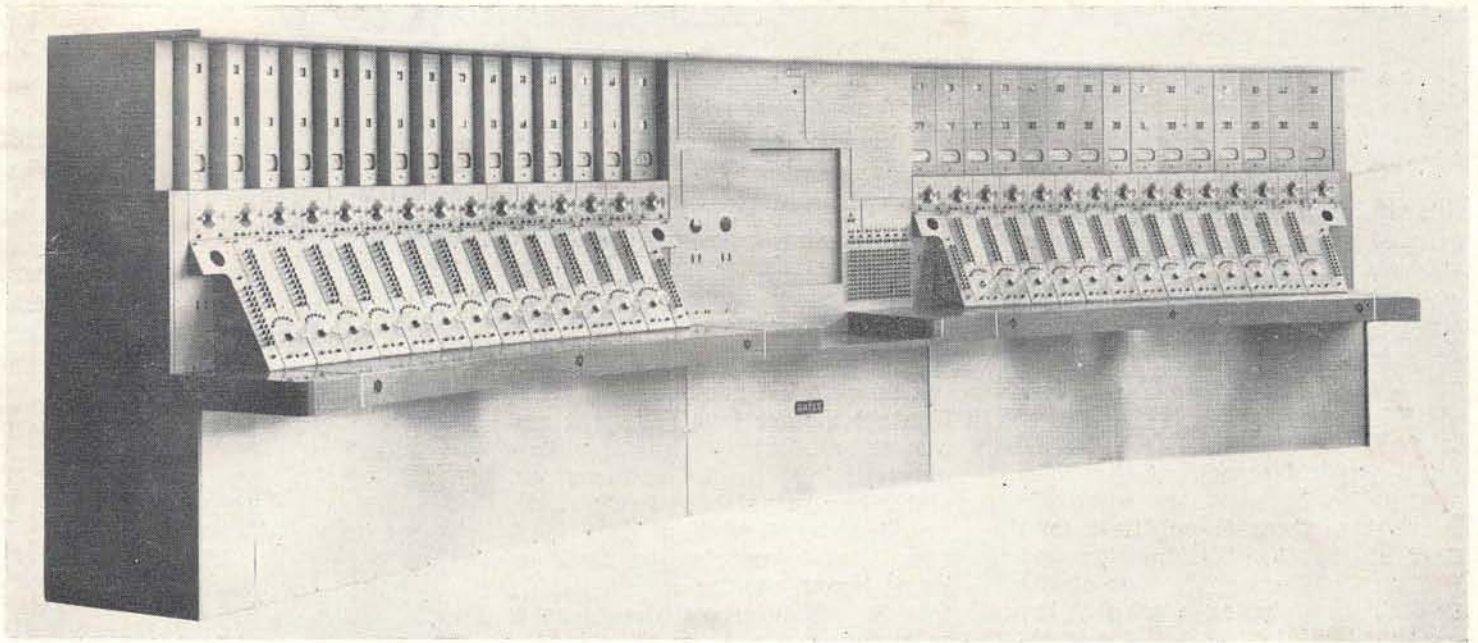


# GATES

## STUDIO REVIEW

GATES RADIO COMPANY, QUINCY, ILLINOIS, AUGUST, 1955

### Gates Equips Largest Studio Installation In the World



All programs going directly on the air from the new studios of the Voice of America will be selected, controlled and monitored by this 22 foot Master Console. 26 of the 30 sections making up this console control outgoing transmitter lines; the remaining four sections control the four over-

head loudspeakers in the master control room. Push-buttons on the center panel make it possible for one operator to switch all line sections in any desired sequence. Standing six feet high, the console is constructed around a welded steel frame, with plywood covering top and back.

Regardless of the line of endeavor, every individual or manufacturer has the desire to produce not only the largest and the best, but also the unusual. The ordinary is interesting—the unusual intriguing and challenging.

The opportunity to produce the unusual was most adequately presented to us in the recent U.S.I.A. (Voice of America) contract. Not only did this contract request the construction of equipment to form one of the largest installations of its kind in the world, but it also imposed delivery schedules and manufacturing techniques, smacking of the impossible.

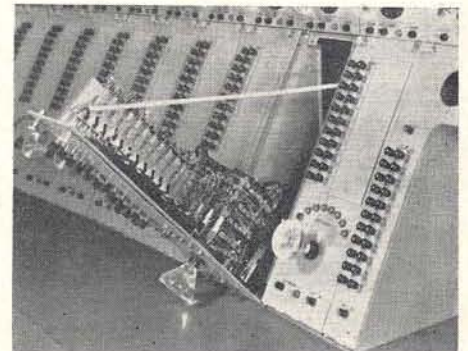
At this writing U.S.I.A. Contract No. IA-W-215 is history. The unusual aspects of design and manufacturing procedures, the magnificent job performed by all Gates' personnel, the immensity of its physical size, the importance of its effect in bringing the word of freedom to the oppressed and its strategic location in Washington, D. C.—all of these factors justify the presentation of the history of this contract through word and picture.

#### What Is The Voice of America?

This is a question which cannot be answered in a few words. In fact the gigantic scope of the V.O.A.'s operation is such that many volumes would be required to justify full knowledge of all of its activities. In essence the Voice of America is you as a citizen of the United States, speaking your thoughts, words, and suggestions of freedom to the peoples of the world.

Because of its worldwide scope of operations, the V.O.A. must broadcast and record in 34 languages. This in itself is a tremendous project and indicates clearly the need for the elaborate studio and recording facilities, which supply programs to 30 high-powered domestic transmitters scattered from New York to Los Angeles, and a large number of relay stations located strategically around the globe, reaching far behind both the iron and bamboo curtains. The V. O. A. performs a function which can best be described by quoting from President Eisenhower's remarks concerning the United States Information Agency. The Agency's purpose he said, "is to submit evidence to the

peoples of other nations . . . that the objectives and policies of the United States are in harmony with and will advance their legitimate aspirations for freedom, progress and peace."



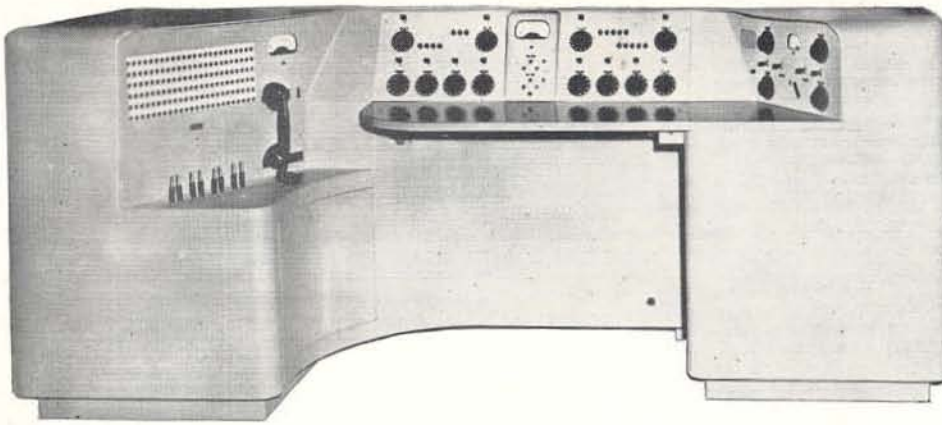
A section of the Master Console, showing the push-buttons which permit selection of any one of 100 program sources to be sent out on the transmitter line. Actual switching, however, is done by rack shown on page 3. The selector switch, made up of thirty sections, connects with 270 wires to circuits that permit grouping of all of the panels.

It should be of great comfort to all of us to know that such an excellent organization is working in our behalf.

To provide facilities to carry on  
(Continued on next page)

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One of 16 studio control consoles. Four of these, along with their associated power supply racks, were the first items shipped to the U. S. I. A. The date was August 27, ten weeks after the awarding of the contract. They were put into service immediately by the Agency, which was handling the move from New York to Washington on a tight schedule.

this vital work, our company supplied over 40 tons of equipment to the U.S.I.A., including 16 studio control consoles, 60 wall-mounted control cabinets, 71 equipment racks, 74 switching racks, two large switching consoles, and a sizeable amount of accessory equipment—in all, 258 major items.

The physical aspects of the Voice of America facilities are extremely interesting. Located on the second floor of the Health, Education and Welfare Building within view of the Capitol, the studios represent the most modern ideas in acoustic treatment and color styling. The first view seen by visitors on the daily guided tours is the Master Console, located just beyond an enormous picture window behind the receptionist's desk. Walling off the master control room from the large equipment room is a row of 13 racks associated with the console.

The equipment room contains all the switching racks, the amplifier racks, house monitor equipment and battery supply. At the far end of this room is another wall built around racks associated with Recording Console; and beyond, the console itself.

The studios, with their control rooms, are located along corridors beyond the equipment room, and are visible through large windows in the corridor walls.

Basically the studio operation can be divided into two functions; feeding programs to the domestic transmitters, with the Master Console as the focal point, and recording programs on disk or tape for delayed broadcast or mail distribution, with the recording console serving as a switching center. All the equipment listed above is tied in with either, or both, of these consoles.

At present, program sources common to both systems are 16 studios, 23 remote lines, and 10 tape playback

machines, with provision for expansion to a total of 100.

The studio control console has been designed to fit perfectly with the Agency's complex programming procedures. It contains provisions for handling four microphones, three turntables, three tape machines, and a number of spares. All amplifiers are contained in the end sections, and extensive patching facilities are provided for flexibility. The front panel turret contains two sets of signal lamps, one for each switching console, which serves the operator as a warning or status signals. Access to internal parts for servicing is provided by removable back panels and turret tops, and by doors in the lower part of the end sections.

The recording facilities center around 10 separate, soundproof recording rooms, each housing four recording machines, either disk or tape, four wall-mounted control cabinets, and one central switching cabinet.

The control cabinets, similar to the one shown on page 3, contain an intercom telephone which permits the operator to talk to recording control or studio control, and an extensive signal lamp system which indicates to the operator the sequence in which to run the machines, and when to start and stop recording. The large industrial vacuum pumps, connected to each of the 25 disk recording machines through copper tubing provide the suction required to pick up and dispose of the groove thread that is a by-product of disk cutting.

An interesting feature of the studio installation that involves a considerable amount of equipment but has no direct relationship with programming is the house monitor system. Operating through a private exchange set up, the system feeds monitoring loudspeakers in up to 150 offices located in the building or elsewhere, with provisions for the listener to dial any

program source, including seven FM receivers tuned to Washington stations.

#### History And Organization of V.O.A.

The U.S.I.A. project started in 1950 when design work began on a new Voice of America studio. At that time the Voice studio was located in New York City and plans called for a new modern facility approximately twice the size of the present day V.O.A. studio in Washington, D. C.

The Smith Meeker Engineering Company, in collaboration with Mr. Howard DeLong, engineer for the



HOWARD DE LONG

Voice of America, spent approximately two years in completing the design work and setting up specifications for the new studio. Their work was finished in 1952 but further action



The above picture is one of 16 producer cabinets, designed for each of the 16 studios. They are equipped so that a program producer can maintain simultaneous 2-way communication with the control room by the two loudspeakers.

on the project was held up by the McCarthy investigations.

Requests for bids were issued to



industry in 1954. The amount of equipment involved was sharply reduced from that originally planned but the urgent need for fast delivery was emphasized by a penalty for late deliveries. First units of the equipment had to be in Washington, D. C. by September 1, 1954 and specific delivery requirements were scheduled each 30 days thereafter.

In competition with some of the largest manufacturing firms in the country, Gates Radio Company was the successful bidder. The contract was awarded late in May, 1954.

Production of the various audio and special switching equipment was suited to the manufacturing techniques and plant facilities of the Gates Radio factory in Quincy. However, the size and scope of the job made it apparent that special organization and handling would be necessary to produce the first units and deliver them in Washington in only three months.

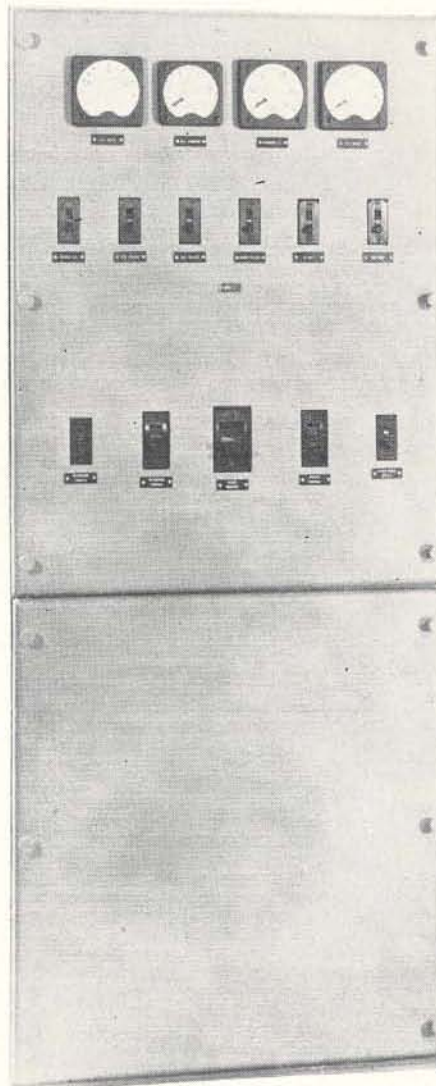


Ten tape cabinets like the one pictured above were installed in 10 tape playback machines. Facilities on this tape cabinet were such that a tape program on either of the tape machines could be selected and routed to either Master Control or recording console at the same time or to a Studio C Console.

Special groups from the engineering and drafting departments were assigned to the project. Office space and production areas were set aside at the company's new plant at 30th and Broadway in Quincy. Drafting tables, assembly units, and all the tools of production were moved in. The organization was designed to operate smoothly and swiftly in order to maintain the flow of information and material to the production units. Schedules were geared to hours and minutes rather than a normal pace of weeks and days.

The contract contained sixty pounds of blueprints and specifications. 240,000 square inches of paper were carefully examined by the engineering and drafting group in their task of converting the original design data into bills of material and manufacturing drawings from which material could be ordered and from which the sheet metal and machine shop could produce the multitude of parts and cabinets which would go into the finished product.

A total of 411 purchase orders for components and material were processed by the procurement department. Special stock areas were set up and personnel assigned to receive the material into the plant. Expediting was based on the delivery schedule of the contract and partial shipments were authorized whenever a supplier could not complete an order within the time specified. Telephone and wire services were utilized to bring



The above Power Distribution Board was designed to distribute 48 volts DC to the vast number of relays and signals lamps used in the system.

about the fastest handling of orders and shipping information.

The production department set up schedules extending from June 1954 to May 1955. Expert wiremen and experienced technicians formed the nucleus of the assembly group. New people were brought in and trained in sufficient numbers to form a compact production team. Assembly workers, welders, sheet metal men, machinists, painters, engravers, clerical workers, stock clerks, routing and shipping personnel teamed up to meet the challenge.

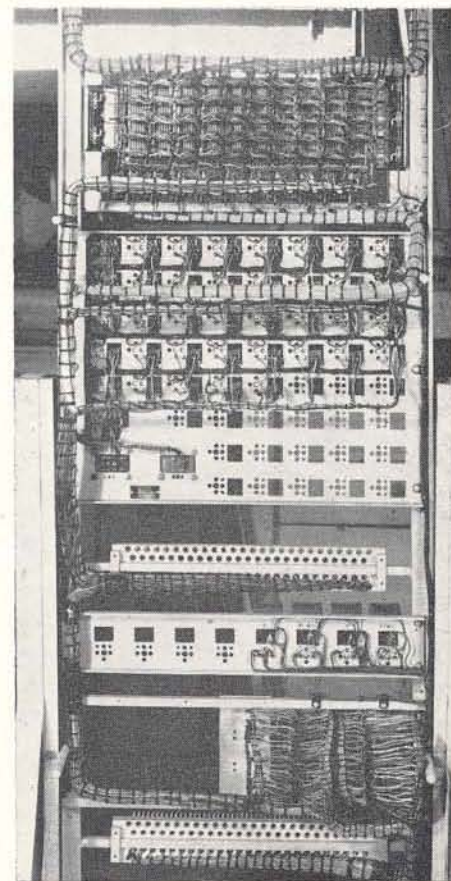
First units were unloaded at the

Voice studio in Washington, D. C. 3 days ahead of schedule and the Gates team kept truck loads of finished equipment moving ahead of schedule throughout the fall, winter and spring of 1954-55.

#### Unusual Features Of Project

All of the controls, wall-mounted cabinets, rack cabinets and switching rack frames were built and painted in our sheet metal, welding and paint departments. To do this job, a total of 46 tons of sheet steel, sheet aluminum and castings were used. There were 650 gallons of paint and primer used on the various items.

Since practically all of the wall mounted cabinets and consoles were designed with ball or rounded corners, methods had to be designed to fabricate all of these parts with the available equipment. This was done because the quantities did not merit special tools and dies. As a result, we found many new methods and ideas which have proven to be



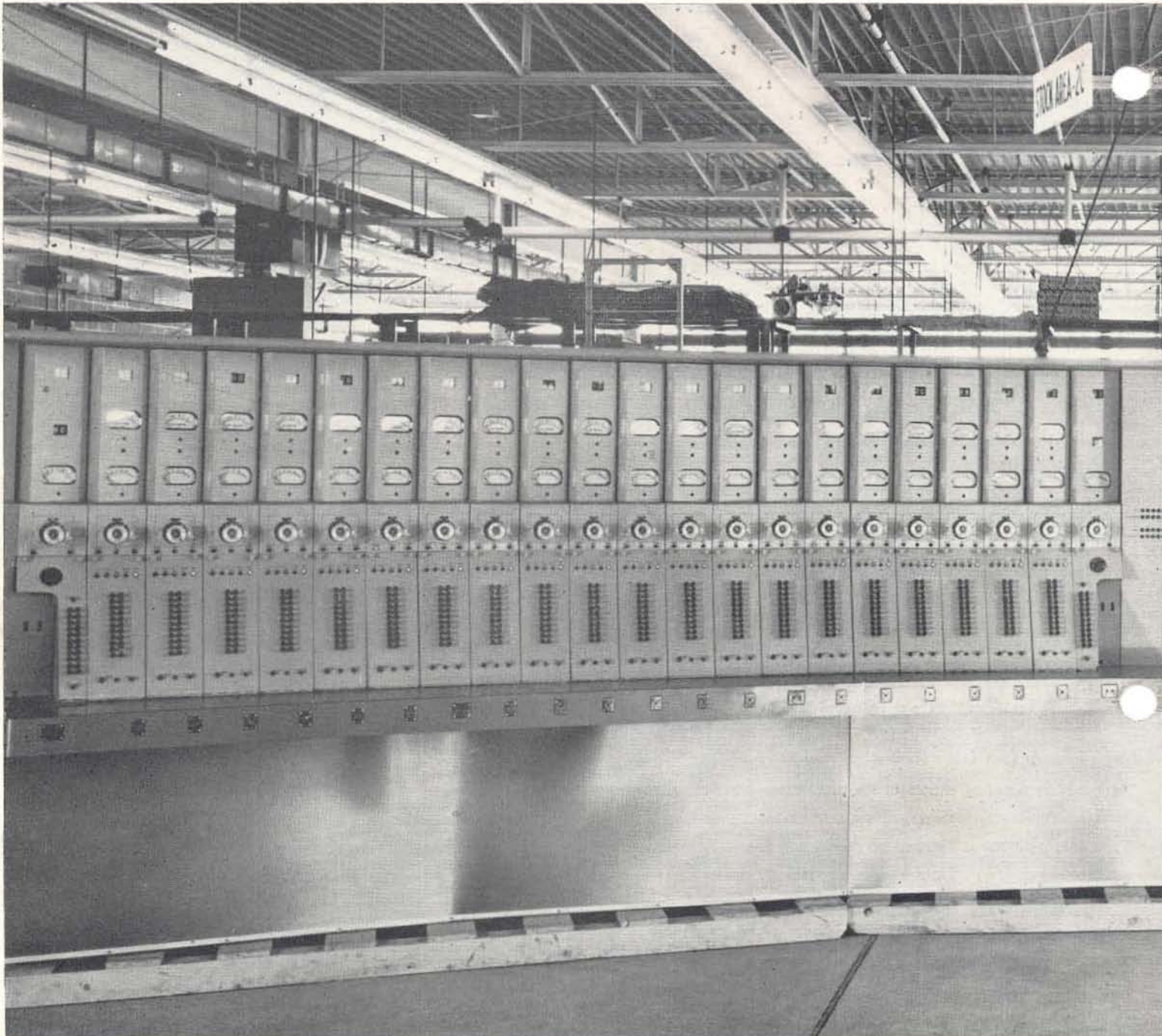
The above switching rack, one of 74, was built like the type of equipment used in a modern automatic telephone exchange. The racks were designed so that any one of 100 separate program sources could be selected by the master control console or the recording control console.

extremely useful in our everyday operations. Many accomplishments appeared to be impossible in the beginning.

Engraving the panels was a major  
(Continued on next page)



# Completion of huge recording console



**A** LARGE portion of the 24-hours a day activity of the V. O. A. Studios centers around the recording facilities. This console, along with the 65 racks of equipment with which it is interconnected, makes it possible to record on disk or tape, up to 40 different programs at one time. These recordings are used to repeat programs

part of the job—as an example—the master control supervisory panel had approximately 1,200 characters engraved on it.

We have referred to the 60 pounds of blue prints and specifications which covered this job, and in many cases we had to do additional drafting to place it in a form suitable for our use. About 60% of these drawings were in an assembly form and had to be broken down into individual parts for our use.

One of the most amazing things was how this job was processed through our plant along with our standard line of products. Even though this complete production ran for 9 months, and required 60,000 man hours, the regular line of products continued to move through the plant at the regular pace.

#### Tribute To Our People

Without intelligent planning, tenacious adherence to schedules, superior supervision and excellent co-

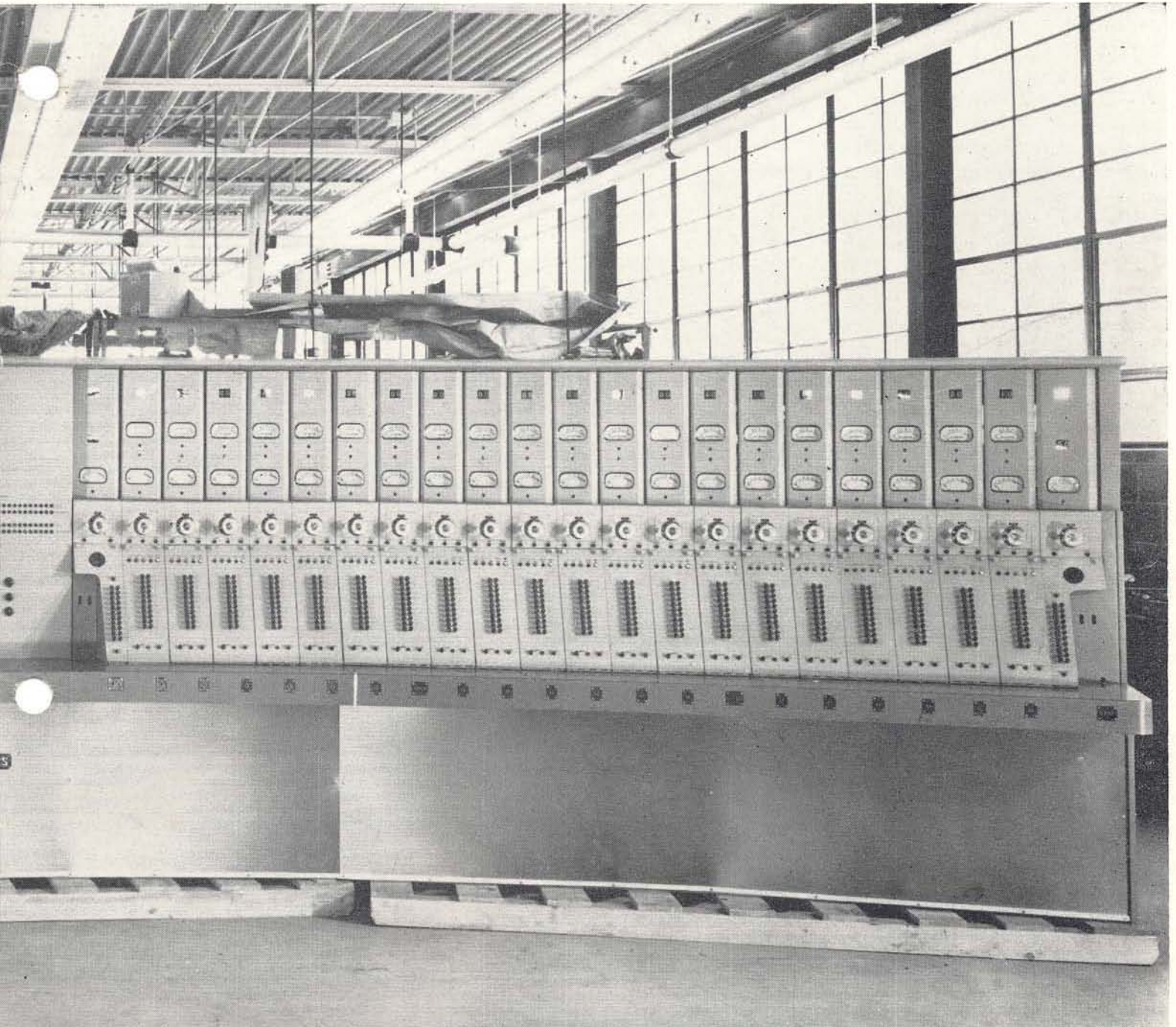
operation between all departments and individuals, U.S.I.A. Contract No. IA-W-215 could not possibly have been successfully completed. One of the most valuable byproducts of an endeavor such as this is the knowledge that the people at Gates possess an invaluable will to accomplish, exhibited by few if any companies of comparable size.

The success of this contract was due not to the super-human efforts of a few, but the above average efforts

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# ings project to close...ahead of schedule



for countries in different time zones, and are also shipped to overseas transmitters. Rows of lamps on the center panel indicate the status of office-type recording machines which are employed to make a continuous permanent record of every program fed to transmitters through the master control.

of many. All personnel of all departments may savor that wonderful feeling of pride and accomplishment which follows the successful conclusion of a project such as U.S.I.A. Contract No. IA-W-215.

Bob Strode was the assistant foreman on this job and some unknown liter of questionable distinction paid a tribute to him by placing the following on the bulletin board during the last few days of this tremendous project.

Strode is my foreman;  
I shall not goof.  
He maketh me to stoop down in large jack fields;  
He leadeth me beside the tall switch-racks.

He restoreth my tips;  
He leadeth me through a maze of running sheets 'til my head aches.  
Yea, though we're given an impossible delivery,  
I fear no penalty; for Young doth prod him;

Jochem and his staff, they comfort him.  
He prepareth the way for overtime in the presence of its enemies;  
He anointest my card with midnight oil;

My wallet runneth over.  
Surely, production 628 has plagued him for 9 long months;  
He has earned a rest at Plant No. 1 forever!

Anon E. Mus



It was a difficult choice, but somehow we picked one of the hottest July days of the year for the annual Gates Family Picnic. In spite of the torrid temperatures, everyone entered into the spirit of the affair and soon the heat was forgotten.

Once again the ladies of the Paloma Methodist Church were on hand with a good portion of the chickens from Adams County. They had also added all the necessary trimmings that usually go with a chicken dinner. By 6:45 p.m. everyone was ready to sit back and relax after a fine dinner.

Before dinner there was a great deal of interest in the corn guessing handled by Ruth Richards of the Personnel Department and Peggy Maddox of the Printing Department. There was much speculation as to the number of kernels in the jar—much shaking, rattling, and rolling—but when the job was done, we found Ken Ballow came up with the closest guess—just 20 from the actual number. The next closest guess was turned in by Ken's dad, Elvin Ballow, and Mrs. Frank Schnier came up with the third closest guess. Prizes of Gem baseball tickets were presented to the winners.

During the past several months we have had a growing interest in ping pong and this was certainly displayed in full with the lines waiting to play at each table. Of course, the challengers felt they could come up with the right cut or twist on the ball to do the job, but many times they found it wasn't quite enough. No definite champions were named, but some of the old hands proved they still had the right twist on the ball, and a considerable amount of new talent was uncovered, too. General arrangements for ping pong were handled by John Beckgerd.

The children didn't take long to start making use of the free ride tickets that had been attached to each child's identification badge. In fact, all children completely disappeared as soon as dinner was finished and were never seen again except when it was necessary to come back for more tickets. It could be that a few parents had a long wait while all the tickets were being used.

Harold Laws, our company softball manager, had all of the softball equipment ready for a good hot contest, and this was the point that proved it was a really hot night. A few of the die-hards apparently tried an inning or two, but before long they all reappeared on the picnic grounds saying it was simply too hot to play ball. This is the first time in the history of a Gates picnic that we didn't have a softball game.

## 600 Attend Gates Annual



1. Didn't anyone tell Haley the object of the game?
2. Move along, Frank, the line is getting longer.
3. One of the most popular spots.

4. How did the Eliasons, Pat, Jeanette and Barb get at the head of the line?
5. The dinner lines seem to get longer.
6. All I need is time.

### Credit Union Furnishes Balloons

Another happy time for the children was when the officers of the Employees Credit Union announced that they had free balloons for all the children. Of course they didn't tell them that each balloon had this question printed on it—"Is your Mom or Pop a member of the Gates Employees Credit Union?" By the way, if you don't belong, the Employees Credit Union is run by and for our people, so check into it. It's most worthwhile.

One of the busiest fellows during the evening was our company photographer Bob Fisher, who took all the adjoining pictures.

Probably the biggest attraction of the picnic was the annual free bingo game. Since it doesn't require much physical exertion, we had several new

participants who didn't care to do much more than that in the excessive heat. The committee helping with bingo included Cecilia Fisk, Art Brown, John Maxwell, Loren Bohannan, Pat Masters, Jeanette Blake, Pat Taylor, Barb Campen, Stella Cuyler, Daphne Dingle, Clara Taylor, Alvina Rice, Marg Atkinson, Fern Foster, Gail Moore, and Esther Kattelman.

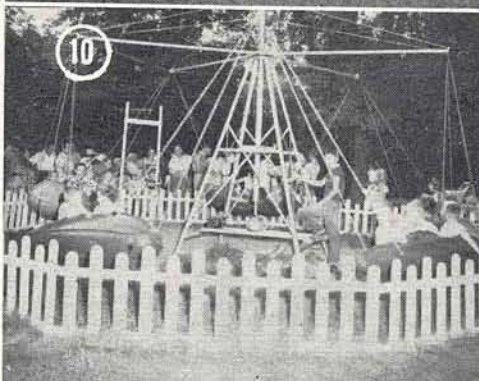
In addition to the many fine prizes given away, a new gift of Gem baseball tickets were used in cases of more than one winner.

Jim Havermale was responsible for providing the sound equipment for the bingo calling, special announcements, and musical entertainment during the evening.

The most popular spots during the evening proved to be the free soda and ice cream stands. It was reported



# Family Picnic On July 28th



- 7. A character study of Mac . . . right out of Esquire, Harvey; and John Bowers.
- 8. Credit Union balloons for all the kids.
- 9. Are the Larimores or their youngsters waiting to get on the next ride?

- 10. Fasten your seat belts.
- 11. Whats the matter, Urlin, are you out of tickets?
- 12. Another door prize for some lucky person. Everyone check the number on their badge.

that almost 100 dozen ice cream bars and 1500 bottles of soda disappeared before the evening was over.

Certainly there is always a great deal of work behind the scenes for an affair this large and much credit goes to the park committee headed by Mel Arns. Mel was assisted by Bob Hickerson, Turk Hill, Fred Rourke, Wayne Kropf, Ed Lowary, Kyle Snowhill, Mel Tucker, and Pat Kipping.

Just before darkness everyone gathered back around the general picnic area for the drawing of special door prizes for both the children and adults. The winners for the children's door prizes were Ted Masterson, nephew and guest of Stella Cuyler; and Eletta Turner, daughter of Claude and Ki Turner.

The first winner for the adult door

prizes was Fred Havermale, son of Joe Havermale, and "lo-and-behold" the next number drawn from the hat for the same kind of prize was for Joe himself. The Havermale family really got fixed up with two nice plastic coolers. The final door prize was won by Mrs. Frank Hickerson.

About 9 p.m. the last order of business, before saying good night, was another attempt to beat the heat with a soda or ice cream bar for the road. General committee arrangements were handled by the Personnel Department.

- File: "Where Things Are Lost Systematically"
- Fear of High Prices: "Cashtrophobia"
- Hangover: "Toot Ache"
- Bank: "Your Financial Filling Station"

## Hardin G. Stratman Promoted To Position of Senior Engineer

Hardin G. Stratman, who joined our company on April 1, 1946, as a wireman was recently promoted to the position of Senior Engineer.

Strat is a fine example of how hard work and concentrated effort will pay off. Strat has constantly studied and furthered his education and experience, and has advanced through the ranks as a wireman, technician, junior engineer and now, senior engineer. He has written many articles for technical trade magazines, is a Ham Operator and holds a First Class Radio Telephone License.



Besides his many activities in the radio-television field, Strat is one of the regular members of our Gates Men's Bowling League, where he carries an enviable average. He also can be found on the golf course from time to time. We haven't heard so much about how many pars and birdies he shoots; we will let Strat tell you that.

The Stratman family lives at 2815 Hampshire Street, and consists of Mrs. Stratman, Bernice, their two sons, Terry age 8 and Curt age 5, and Peepers the parakett.

Congratulations, Strat, on your latest promotion. We're sure your program of self-improvement and growth is an inspiration to many.

A great philosopher once said: "A work well done never needs doing over." Wonder if he ever tried weeding his garden.

### SYMPATHY

We wish to express our sincere sympathy to Bob Koettters and family on the death of his father; to Clara Taylor and family on the death of her father; to Edna Mason and family on the death of her father; to Forrest Fuller and family on the death of her mother; to Bill Hopper and family on the death of his sister; to Bob Bangert and family on the death of his grandmother; to Rosie Mitchell and family on the death of her grandfather; to John Anderson and family on the death of Mrs. Anderson's father; and to Harry Heidebreder and family on the death of his father.



## Welcome To Gates

Here's a list of our newest employees. Some of these people have now been here for a few months and you are probably well acquainted with them. However, if you don't know them as yet, make a special effort to get acquainted and to make them feel at home. We're glad to have each of you aboard!

### Plant

Oland Kraft	Herb Zimmerman
Carlyle Riggs	Joanne Bonness
Royllyn Wilson	Robert Zellerman
Doris Cheney	George Cribb
Bessie Epping	Barbara Whitaker
Frank Hickerson	Jess Young
Patricia Parsons	Harvey Skirvin
Joanne Thomas	

### Office and Engineering

Ralph Meador	Roxie Kasparie
Barbara Campen	Annette Limkeman
Bernice Boesing	Paul Timpe

### Los Angles Store

Jon Potet

## Katie Kahs and Wilfred T. Altgilbers Wed

Katie Kahs, our PBX Operator and receptionist, became the bride of Wilfred T. Altgilbers on Saturday morning, June 11, at the St. John's Catholic Church.



After a honeymoon trip to the Missouri Ozarks, the Altgilbers returned to their apartment at 833½ North 6th.

Katie is back on her job, continuing her good work in greeting our many visitors by phone and in person. Will is employed by the Gardner Denver Company and is located in the billing department.

Congratulations and best wishes for a long, happy married life, Katie and Will.

## Gates Employees'



## Financial Statement

June 30, 1955

	Debits	Credits
Cash .....	\$ 1,653.02	\$
Loans .....	16,714.52	
Expenses .....	424.36	
Shares .....		16,662.36
Entrance Fees .....		8.00
Reserve Fund .....		967.94
Undivided Earnings .....		316.55
Interest .....		837.05
	<hr/>	<hr/>
	\$18,791.90	\$18,791.90

Members, 188; Depositors, 173; Borrowers, 75.

The above financial statement indicates your Credit Union is on solid ground. First of all, our cash balance is sufficient to take care of all loans and requests for withdrawals. This account is replenished each week under our payroll deduction plan. Our loan and share account balances are practically equal, which indicates that people are saving their money, and that people are also borrowing money when it is needed. Actually, the loan account balance is extremely important to us. The interest earned on loans provides our only source of income, and the only source we have to pay expenses, and to keep our reserve and undivided earnings funds at a proper level.

Your Credit Union is growing. We hope each member will take a personal interest in the Credit Union and its progress. If each of our 188 members would take this personal interest, our Credit Union would continue to grow steadily and would be able to

provide more services as the years roll by. Take an interest in your Credit Union . . . take an interest in your money and how it is being handled.

## Pat Kipping Returns to Gates

It is good to have Pat Kipping with us again. Pat originally joined our company on June 21, 1949 in the stock department, and he left April 30, 1951 to serve his country in the Navy.



Pat returned to the stock department on July 11, 1955 after completing his tour of duty in the Navy. This naval tour found Pat in Jacksonville, Florida at Cecil Field, Memphis, Tennessee,

and at the Naval Air Station, Guantanamo Bay, Cuba. Pat came out with an AD/3 rating which he says means he was an Aviation Machinist's Mate.

Because of his absence, we were unable to present him with his 5-year service pin on his regular company anniversary. It is nice to be able to do this now, Pat, and we're looking forward to the time you can trade this one for a 10-year pin.

Once again, welcome home, Pat!

I wish I was a little egg, away up in a tree;  
I wish I was a little egg, as rotten as could be—  
And when some silly bonehead would start to shout at me,  
I'd drop my rotten little self, and splatter down on he.

### THE STAFF

Edited by the Personnel Department.  
News Reporters: Ruth Wilkey, Virgil Hall, Alvino Rice, Elva Watts, Mary Ellen Rupp, Deloris Schoch, Esther Enlow, Dorothea Pusey, George Hanawalt and Doty Lahrman.  
Photographer: Bob Fisher.

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