

GATES STUDIO REVIEW

GATES RADIO COMPANY

QUINCY, ILLINOIS

OCTOBER, 1946

GATES COMPANY TO "NAB" CONVENTION

GATES RADIO COMPANY RECEIVES CP FOR EXPERIMENTAL FM STATION

The F.C.C. formally notified the Gates Company that its application for an experimental FM radio station had been approved to operate on a frequency of 95.9 channel 240 with call letters W9XLZ. This station which will be located at 123 Hampshire Street, the site of the Gates factory, is to be strictly experimental and no commercials will be heard. It will allow the actual operation and the observance of performance of FM transmitters with power from 250 to as high as 5000 watts under typical operating conditions.

A program of research and development of antenna structures, transmission lines and coupling methods, field intensity measuring equipment and practical operational techniques will be carried on. Attention will be given to construction of lightweight high gain antenna.



WLDS GOES TO 1 KW

One of the orders chalked up to the Quincy Office was that for a BC-1E for radio station WLDS at Jacksonville, Illinois. This station has been a consistent Gates user since its signal went on the air five years ago with a 250 watt transmitter. With a permit for an increase in power they again came back to Gates, this time for the super deluxe BC-1E 1 KW transmitter which is recognized as tops. This station which is now heard on 1180 KC daily is owned by Mr. E. J. Korsmeyer and Mr. M. Edge while the Chief Engineer is Mr. G. J. Cassens.



Football season: The only time of the year when a man can walk down the street with a blonde on one arm and a blanket on the other without encountering raised eyebrows.



MR. GUY RUNNION

ST. LOUIS COUNTY STATION GETS CP

The St. Louis County Broadcasting Company was granted a license by the F.C.C. to build and operate a 1000 watt radio station on 1320 kilocycles. The principal studios of the new station will be located in Clayton, Missouri, while the transmitter and the tower are to be erected in a less populated section of St. Louis County.

KXLW will be the call letters and from engineering data submitted the 1000 watt power will permit reception over an approximate seventy-five mile radius. This station will be completely Gates equipped with the very latest 1 KW transmitter and studio equipment. Mr. Guy Runnion, President of the Company, announced that plans are made to start broadcasting by December 1.

This new station will be on the air daytime only for the present but intends to formulate plans to enable twenty-four hour broadcasting.

Mr. Runnion prior to his work with radio station KXLW was news director at Radio Station KMOX, St. Louis, Mo. Previously he had worked for ten years as news commentator with several midwest radio stations.

The NAB Convention October 21-24 promises to be one of the most important and worthwhile conventions since the war. Equipment with all postwar innovations will be on display. In addition many items entirely new in the radio field will be introduced. Needless to say broadcasters, engineers, and radio men from all over the country will be on hand to inspect the displays.

Visit Room 838

The exhibition room on the fourth floor will be utilized by the manufacturers of heavy equipment for their exhibits. Included in this display will be one of the Gates FM transmitters, while on the eighth floor in room 838 other items of AM and FM studio equipment may be seen.

Among the Gates personnel attending will be P. S. Gates, President and General Manager, F. J. Pippen-ger, Sales Manager, F. O. Grimwood, Chief Engineer, H. G. Alexander, Midwest Sales Engineer, O. J. McReynolds, Engineer in charge of the New York Office, and Walter Read of the West Coast.



"WTOM STATION WITH ATOM RESULTS"

Another order of special interest was received from Radio Station WTOM at Bloomington, Indiana, which will install a 250C-1 transmitter and associated equipment. This station received its final construction permit last month after long litigation.

The station owner is Fred Grimwood, formerly the owner of Radio Station KLCN, Blytheville, Arkansas, and now Gates Radio Company's Chief Engineer. This station will operate on 1490 kilocycles, full-time.

Catchy slogan of "W-T-O-M station with A-T-O-M results" has been adopted.

Gates Presents . . . Francis Wentura



One of Gates' most popular and widely traveled executives is Francis W. Wentura, Assistant Chief Engineer whose connection with Gates dates back prior to war production.

Wentura came to Gates from Radio Station WTAD at Quincy, where he was employed as Chief Engineer. Before that he had been with the Illinois State Police and had sailed the ocean blue as a shipboard radio operator.

St. Louis, Missouri was his original home at which point he maintains numerous contacts and widespread acquaintances. However, Francis is now another of Gates' solid Quincy citizens residing at 1000 Monroe Street, with attractive wife Alice and very active young sons, Dickie and David.

Francis is one of the midwest's most active radio men. Besides his work at Gates he is an ardent amateur (W9AEX) and is Secretary and Treasurer of Radio Station WFAA a

new local channel station authorized for Quincy.

At Gates, Francis is generally responsible for engineering throughout the entire equipment line, but is particularly interested and active in the manufacture of 1000 watt transmitters. The BC-1E Transmitter and the 1D units are his pride and joy and he insists on checking each one personally prior to its delivery. This is by no means a small responsibility as seen by the consistent trouble-free performance being rendered by these units in the field.

After his usual day at some branch of radio, Wentura still has time to be one of Quincy's best bowlers. He is also an outdoor enthusiast owning a beautiful summer camp and farm near Quincy, better known as "Far-away Lodge."

SORRY — — —

In the September issue, the statement, "The Texas Broadcasting Company of Houston, Texas, with a station reportedly at New Orleans had received a grant for 5 kilowatt" was in error.

BIRTHDAYS AT GATES SEPTEMBER THRU OCTOBER

Francis Wentura	October 42
Alvina Anders	October 42
A. S. Petzoldt	September 43
L. I. McEwen	September 44
T. Ryan	September 44
Jim Havermale	September 44
H. G. Alexander	September 45
John Anderson	September 45
Howard Young	October 45
Wally Freye	October 45
James Rhodes	October 45



250 WATT TO ALPINE BROADCASTING COMPANY, ALPINE, TEXAS

With the final granting of the construction permit on September 5 Houston Radio Supply Company telegraphed confirmation of the contingent order for The Big Bend Broadcasters of Alpine, Texas, of which Mr. Barney Hubbs is the majority stockholder. This station will be heard over 1490 KC, 250 watts full-time. It will install a Gates 250C-1 transmitter complete with studio equipment and speech apparatus, including the new metal cabinet console and dynamote.



"CATTLE RUSTLERS JOHNNIE"

Very early one morning
While Johnnie's still in bed
Came Farmer "Jones" all bothered
With his temper seeming red,
"Where's my cow, Anderson
You can't get by with that
You bring her back by sun-up
Or I'll bury you in your hat."
Poor Johnnie swore he had no cow
But his tears were of no avail
Because that vim and vigor that he's
got
Bespeaks another tale.
P.S. Johnnie, where is the cow?

Al, the ice cream man, at 5 minute afternoon recess.

Section of the Main Office.

10:00 o'clock coffee time in the recreation parlor



STATIC

Strolling along the river, now and then leaning over the sea wall and gazing into the water, thinking of the World Series, dreaming of the lazy Indian Summer ahead, the many things that happen day by day to make life and work interesting. How dull each day would be if it were always the same, always along the same course, under the same bridges, hemmed in by the same walls like this majestic river . . . that variety is what keeps us on our toes . . . just like the little things around the plant that keeps the boys abuzzin' . . . how Flotkoetter keeps that chair of his oiled so well that as soon as you think about sitting in it, it automatically falls back and your feet go up on the desk . . . or how Ida and husband Russ each take care of making their side of the bed, Ida usually has to finish the job . . . or how will Ivan keep warm living in his trailer this winter . . . or the "pickup" power Ray's new '39 Hudson has for that steep Hampshire Street hill . . . just how soon Clint will make himself a little shoe shine kit and make the rounds each morning . . . how Bob Schutte will figure out a way to cut a 3-16 inch bolt to 1-4 inches long . . . or how Shady Lady will look in a 1960 Bathing Suit which she would like to wear at the NAB convention . . . or how hard Nellie has been looking for a place to live, hope she finds a place soon. This all changes the common place things to give it a different slant, or color . . . like Elma's husband who is an accomplished and very good Body and Fender Man, Mr. Mac that's what you need for your jalopy . . . like the World Series, so close only 120 miles down that river, who will win . . . "Brooklyn???" or Boston, beg pardon, we mean "Cards." (E. N. The "Cards" won) . . . or how many squirrels you'll get next time you go hunting, eh Bangert . . . while Hudnut takes time to catch those fish so plentiful these days . . . Stockhecke can strut with pride because of the new grandchild she has, Sandra Sue . . . or why Emily so enjoys making blue prints if nothing

will "Jimmy" up the works . . . what was really behind Hamann the morning he put his sport shirt on with the pocket to the back . . . what might have happened to that ear of corn taken down to Bill Parker for his transmitter, it was still corn next morning.

Walking along down as far as the new bridge with its high steel structure and clean silver sides its up-sweep to the sky . . . sweep . . . back go our thoughts to that little fellow with the broom who we all greet with "Hello Henry" and who has a smile for all, who provides us with our rolls each morning from the bakery; good old Henry . . . Yes,



Henry Moritz, one of the oldest employees in the plant who keeps things cleaned and on the up and up . . . up and at 'em was P. S. trying to get World Series tickets at St. Louis that last day before the game . . . monoto-

nous, not with Petz behind the "Wheel", driving the suppliers to get us our materials, begging, pleading, crying for steel, tubes, wire . . . wire where is that wire, that is what a certain party was going to be strung up with for getting Francis to work in his good suit, so he could get his picture "Took", even if we did have to use the wire to hold him down. How invigorating it is here . . . from the sunshine, not food; food, that is what Roger is gaining from tho, he says his new wife is a super duper cook . . . chicken, dumplings, hm! . . . my aching back . . . ouch, bowling again tonight . . . that 16 lb. ball about hauls Alvera down the alley with it, although it has floored Dorothy a time or two also . . . Ivan thought he had acquired a new machinist but found out Lib was only fixing the catalogues in the Engineers room and cutting holes for the notebook covers . . . have you seen the "Grey Dragon" lately, it really keeps Pete, Dusty and Phil Stevens, even Lindsay stepping . . . why the fence between the machine shop and the sheet metal department, ask Ray . . . time, heavens above, a whole noon hour gone . . . up that hill two blocks, if we only had Gladys' car, it really is a speed-king, back up to work . . . monotonous . . . never.



HIGH POINT RECEIVED CP

After several months delay High Point Enterprise, High Point, North Carolina, received the final O.K. for a one kilowatt station which will be heard on 1070 kilocycles. The entire setup will be Gates equipped from the BC-1E transmitter, transcription tables, console, down to the smallest microphone.

Mr. R. B. Terry is the President and Manager of the station.



The longest word in the English language is the one following the phrase: "And now a word from our sponsor."

*Monthly Editorial***A Well Balanced Diet Often Results In Long Life**

As the fellows in the Services learned, especially those in the Pacific, a diet of all pork, all soup or all something else soon caused ill-health and the many diseases that we heard so much about during the war.

How frightfully true this is in business, also. If a grocer had nothing but tomatoes he would soon be out of business and likewise if a department store was only stocked with neckties, it too would be closing its doors. Getting down to radio, if a broadcaster specialized in Bing Crosby, as good as he is, from sun up to sun down the station would eventually be off the air. All of this holds true because we like a well balanced diet in what we do, what we eat, and that which we see; proper variety you can probably say, is the very essence of enjoyable living.

In business today we find many enterprises sadly out of balance. This is not of our own making in most cases. Henry Ford would no doubt tell you without hesitation that the reason the automobile manufacturers output is not higher is again caused by an unbalanced inventory condition. One may have an abundance of head lights, plenty of seats, enough motors, but steel for bodies and lead for batteries may be short and many similar conditions may exist which result definitely in an unbalanced diet.

How does this apply to radio broadcasting equipment about which this paper is primarily interested and published? Well, engineers of existing stations and planners of new stations may do a great deal to help the management of the new outlet by not calling the rush signal for a 90 yard run around left end to get on the air 10 days after the construction permit is granted. The experienced fellow who has gone through this is saying, "How true, how true." Yet the pattern repeats itself every day. A telegram arrives almost concurrently with the granting of a new permit, "can you deliver a new transmitter in ten days?" and probably the same telegram is sent to all leading manufacturers. The reliable one will quote a true date of expected delivery, but lately it seems to have turned into a dog race to see who can make the best promise and not the best delivery.

Recently we had a customer in the East who wanted a 5 kilowatt. We quoted 120 days delivery. Another company heard about this and quoted 60 days delivery. Our New York Office called the factory and after contacting other customers with earlier orders and finding one who would not be able to use his transmitter for three months, quoted a 35 day delivery. This other company then came back and quoted 15 days delivery. In this case deliveries were not actually being quoted by one company. Moreover our promise was based on facts and cooperation between our sales engineer and our production department and not on blind promises to beat the other manufacturer. Generally though it is simply a race between two sales people who sometimes take the attitude of beating competition and letting the factory get out of the hole of promise the best way possible after having the customers signature on the dotted line.

Ambition is fine! We all know sitting in an easy chair will not put a new radio station on the air, but let's get back to the balanced diet. What good is a transmitter delivered in 30 days when the tower, ground wire, turntable or speech equipment is missing. What good is a speech rack with all the gadgets thinkable thereon without a transmitter. The smart business man will not look at a super promise on one item of the installation but will look for the promise that gives him the best overall plan for his station.

A well balanced diet in equipment planning and buying will actually put new radio stations on the air quicker and at much less cost and inconvenience.

— P. S. Gates.



Return Your
Replaced
Parts

Broadcasting equipment like other machinery requires a replacement part occasionally. Also once in a while there is transportation breakage on equipment, a part hits the floor while making an installation or a defective part develops but in each case a new part is required.

The pattern usually is a wire: "A certain part has konked out, send us a new one PDQ." The order is promptly filled but the replaced item gathers dust on the shelf or near the point it hits the dust so it seems.

In the hustle and bustle to get the station on the air or to keep the old one going the return of the part is overlooked unintentionally and does not come back as often as one would expect.

Why is the return important? Parts are still SCARCE. About 90% of replaced parts have minor defects and are quickly serviceable. Even a burned out transformer has value as laminations are tough and these can be used again. So . . . returning a defective part quickly may make it possible for some other station to be taken care of, which might not otherwise be serviced. We, at Gates are service minded. We want all of our customers to realize that the after service is as good as the handshake when we get the order. Help to keep us from having red faces . . . if you will! Thanks.



A beautiful girl was being tried for killing her husband. The jurors had retired, they knew she was guilty, but they didn't want to sentence her because of her beauty — yet they feared to face their wives if they didn't.

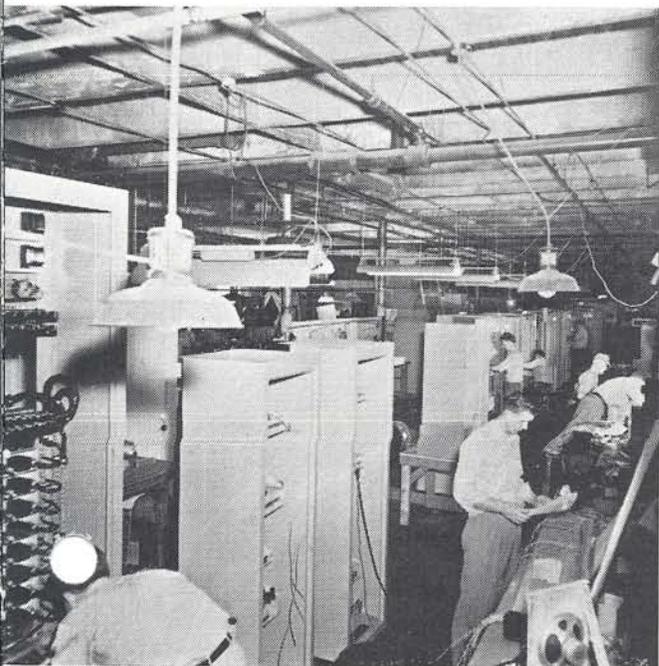
Finally one of them happened to remember that the dead man had been an Elk. The problem was solved. They passed this sentence: Twenty dollars fine for killing an Elk out of season.



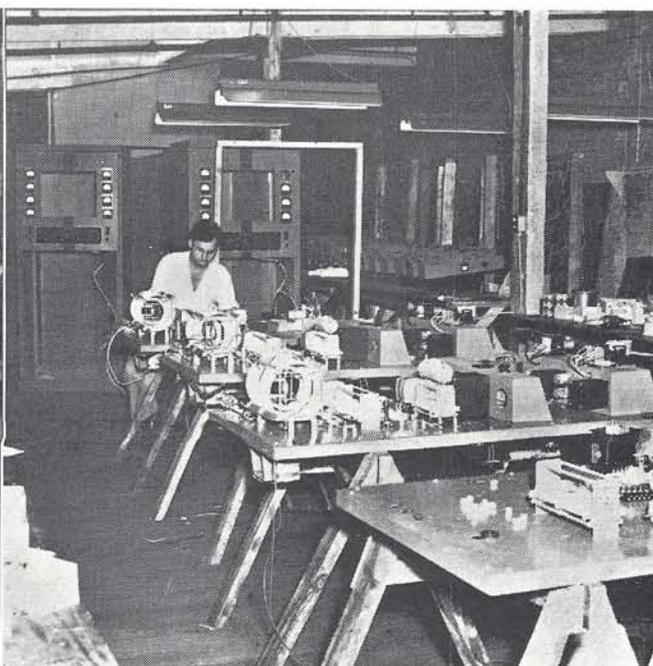
Bill Parker testing an FM transmitter. (Left)



Completed Console being slipped into cabinet by Glen Foster. (Right)



One of the assembly lines of speech cabinets and 1 KW transmitters. (Left)



Johnnie Lewis wiring components on vertical chassis of 250C-1. (Right)

W. R. FRIER HEADS ANOTHER GATES EQUIPPED STATION

Specialty Distributing Company forwarded the confirmation order for Enterprise Publishing Company of Douglas, Georgia, whose owner W. R. Frier heads the station at Cartersville, Georgia, another completely Gates equipped unit. This station will be heard on 1940 kilocycles with 250 watts. The equipment order includes complete studio accessories in addition to a 250C-1 transmitter.



An inmate at an asylum approached a painter who was hard at work painting the ceiling.

"Have you got a good hold on that brush?"

"Sure. Why?"

"Well, hang on tight. I'm gonna move this ladder."

PENSACOLA TO HAVE NEW RADIO STATION

Mr. L. O. Seibert and Mr. J. T. Carroll received their CP on September 30 for a new radio station at Pensacola, Florida, to be operated under the tradename of Gulfport Broadcasting Company.

Mr. Carroll was in the armed forces at Headquarters Building, Washington, D. C., while Mr. Seibert was formerly station manager at Radio Station KGKL of San Angelo, Texas.

This station will be Gates equipped with a 250C-1 transmitter, CB-4 Desk, Console and associate equipment.



Question of the month — Just why are all the "guys" smoking pipes — what aroma? What???????

UTICA, NEW YORK ON 1100 KC

Mr. Eric Williams of Radio Station WNOC Norwich, Connecticut, received the authorization from the F.C.C. for the construction of a new station at Utica, New York.

This station a 250 watter will be heard on 1100 KC and will be one hundred percent Gates equipped. The company is known as the Central Broadcasting Company.



The guy who burns me up is he
Who gives his horn a blast
And nearly crowds you off the road
While he goes dashing past.
Then when he's gone about a block
This makes me mad as hops
He swings in sharply to the right
Pulls up to the curb and stops.

How Do I Start a New Radio Station?

A Few Questions and Answers For the Fellow Wanting To Get In the Business.

Every day Gates Sales Department receives letters requesting information on the procedure to start a radio station, beginning with the usual paper work. This column will probably be repetitious information to old timers, but to the many new entries in the broadcasters' field it may be of value. However, many of the old timers, to save time, may just pass this page on to those interested as it will answer questions. Based on requests to us the information is prepared in question and answer form for your convenience.

Q. I have F.C.C. Forms 301 on hand. I can fill out all information except about the equipment. Can you help us at this point?

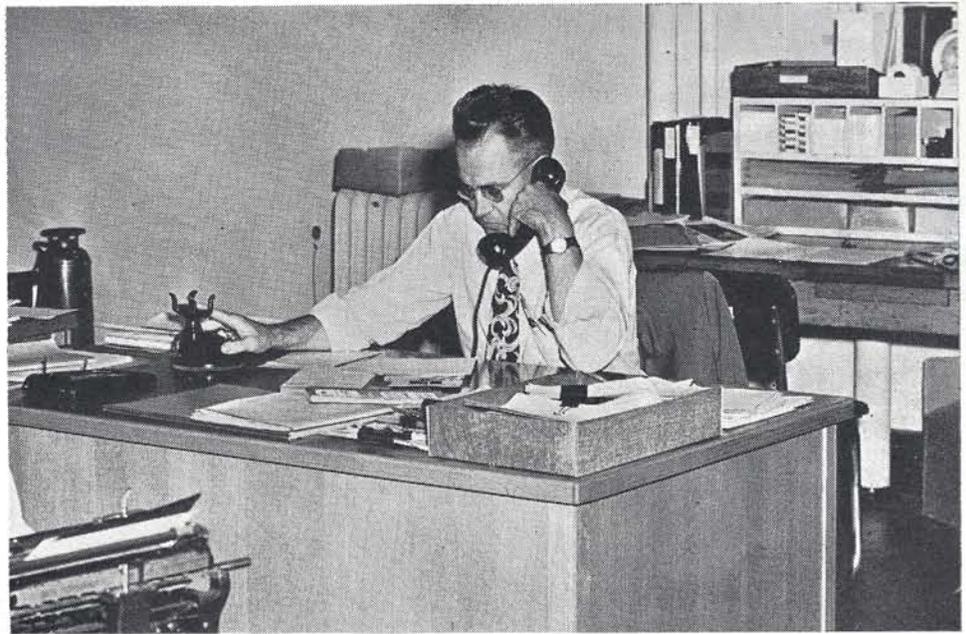
A. Actually the equipment is the simplest of all but unless you have help we doubt if you can process a Form 301 to satisfy the Commission.

Q. Who helps me?

A. It is usual practice to employ a consulting engineer and an attorney. The fee for each is not excessive because these engineers and attorneys do this sort of thing every day and know the short cuts; thus they really save you time, money, and trouble.

Q. How do I find out whom to engage for this work?

A. You will find many consulting engineers listed under the profes-



Art Myers "Uncle Dudley" has worked at Gates plant since he left business school. Upon his return from 18 months overseas in the ETO he was placed in charge of the Production Department. Needless to say that is no small task today in this era of shortages.

sional column in Broadcasting Magazine. There are, of course, many others who operate regionally and the best procedure is to ask the chief engineer of a nearby reliable radio station. As to attorneys, the legal profession does not advertise as we well know, so you should check with your local attorney for one recommended for radio and practice before the F.C.C.; or the engineer you engage will gladly make suggestions to you. Like engineers, there are many good radio attorneys to choose from, and as the engineer and legal professions are of the highest type, you will seldom find any prejudices.

Q. How much money is required to start a station?

A. This is a legal, engineering and management question. Generally you must have capital to build the station and operate it for a year. However, this is not a firm requirement but a practical suggestion. Radio stations definitely should not be started on a shoe string and F.C.C. has no trouble picking out applications not backed by adequate finances.

Q. What is the preliminary expense?

A. We assume you mean before granting of permit. This covers a lot of ground, quite like asking a doctor how much is an operation. It depends on each individual case. First, if the station is a local or non-directional daytime station, both engineering and legal fees would be lower in cost because the work is not so extensive. If it is a directional and above 250 watts (non-directionals excluded) then the costs would be higher, especially for engineering. If the permit necessitates a hearing, i.e., some other radio station objects, the expense will be greater. Stating a specific example let's take a 250 watt local full time station where no hearing or special engineering is involved, we estimate that the costs would not be less than \$750.00 nor more than \$2000.00. The spread is caused by the fact that each case varies in work and time involved.

(Further questions will be answered next month.)



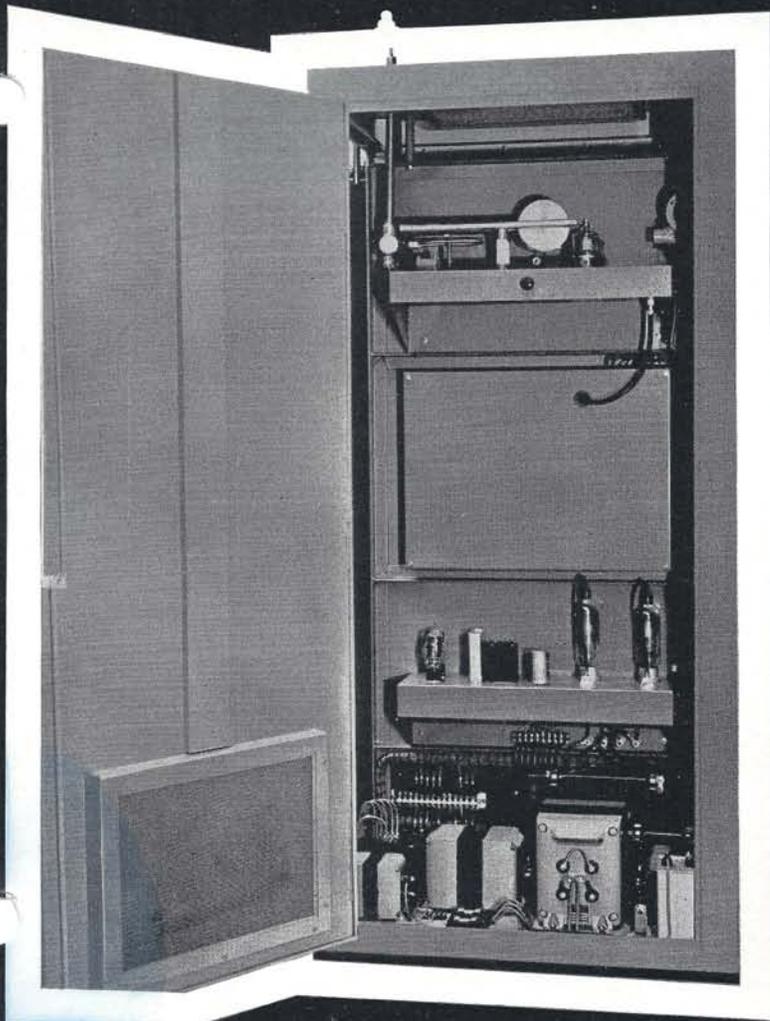
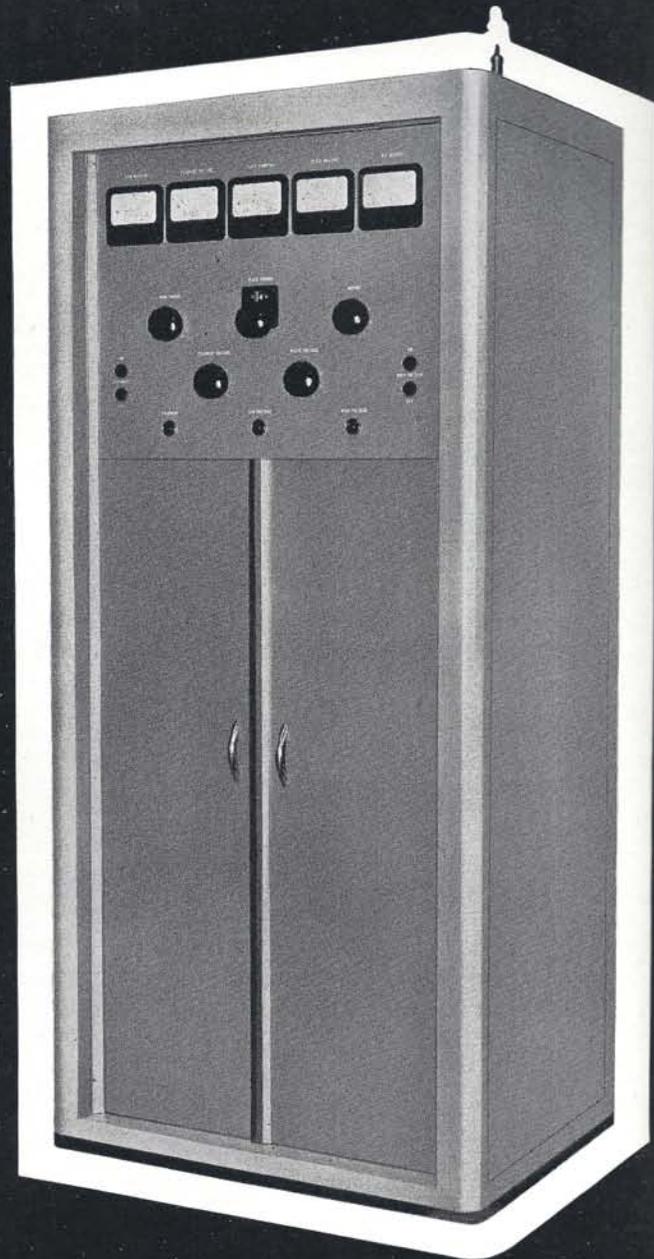
HELLO . . . TO BILL PENROSE, JR. who is now in the stockroom working under Johnnie Bowers. Formerly with the Engineers in Uncle Sam's Army.



Courtesy of Radio Craft Magazine

SPECIFICATIONS

POWER OUTPUT—Maximum 350 watts.
FREQUENCY RANGE—88-108 megacycles.
FREQUENCY STABILITY—Plus or minus 500 cycles.
RF OUTPUT IMPEDANCE—40-80 ohms.
POWER INPUT—1375 watts, approximately.
POWER SUPPLY—220/115 volts 60 cycle single phase.
AF INPUT LEVEL— + 3 vu. for ± 75 kc. swing.
FREQUENCY RESPONSE—Within $1\frac{1}{2}$ Db. of standard 75 microsecond pre-emphasis curve.
DISTORTION—Maximum $1\frac{1}{2}\%$ 50-100 cycles, less the 1% above 100 cycles.
NOISE LEVEL—60 Db. below 100% modulation FM.
50 Db. below 100% modulation AM.
TUBE COMPLEMENT—Two 4-125A Final Amplifiers; one 815 Intermediate Power Amplifier; one 815 Frequency Multiplier; one 6V6 Frequency Multiplier; nine 6SJ7 Frequency Multipliers and Amplifiers; one GL2H21 Modulator; one 6SJ7 Buffer Amplifier; one 6SJ7 Oscillator; two 6SN7 Audio Amplifiers; two 8008 Rectifiers; one 5Z3 Rectifiers.



The Best Start For Your
FM Station . . .

The BF-250A

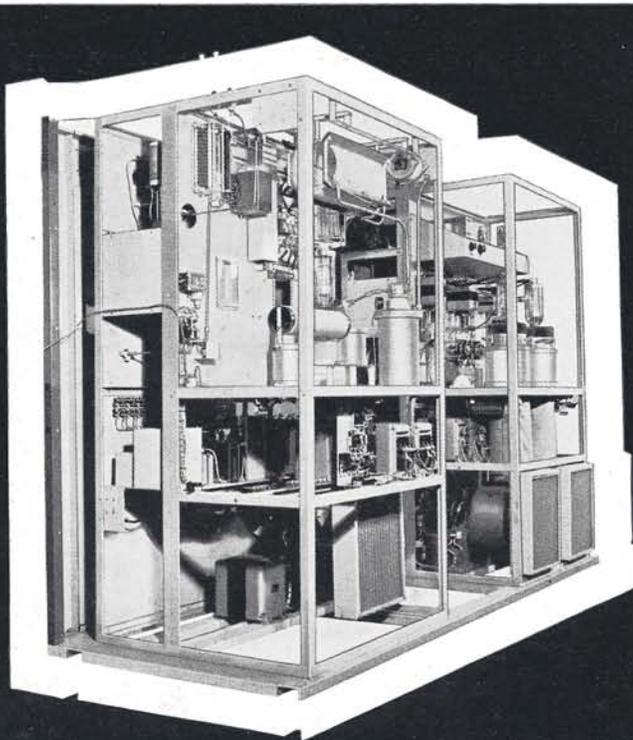
Yes, the BF-250A is the ideal transmitter for a 250 watt FM station or one that is going to higher power. It will drive the Gates one kilowatt or three kilowatt FM power amplifiers or with an intermediate one kilowatt stage will drive the Gates ten kilowatt amplifier.

The BF-250A is now in production. Orders placed now will receive preferred shipment when production is completed.



The BC-5A and BC-10A...For 5 and 10 Kw Stations

When you buy a 5 or 10 kilowatt transmitter from Gates you get the satisfaction of having a fine piece of equipment plus our personal interest in your station and its "well being." This is important. It assures you of "backing" by a supplier not just interested in selling you something but giving you service then and in the future. Before you make this important investment get the facts about the Gates BC-5A and BC-10A transmitters.



SPECIFICATIONS

The Gates BC-5A and BC-10A Radio Transmitting Equipments are designed for high fidelity broadcast operation in the standard 530-1600 Kcs band. The normal characteristics of these transmitter units when properly installed and adjusted, are as follows:

CARRIER POWER OUTPUT—
5,000 watts (BC-5A)
10,000 watts (BC-10A)

CARRIER FREQUENCY RANGE —
530-1600 Kcs (to customer's selection).

CARRIER FREQUENCY STABILITY
—Within 10 cycles.

MODULATION CAPABILITY—100%.

AUDIO FREQUENCY RESPONSE—
Plus or minus 1 Db 30-10,000 cycles.

CARRIER AND HUM LEVEL—
Approximately 60 Db. below 100% modulation.

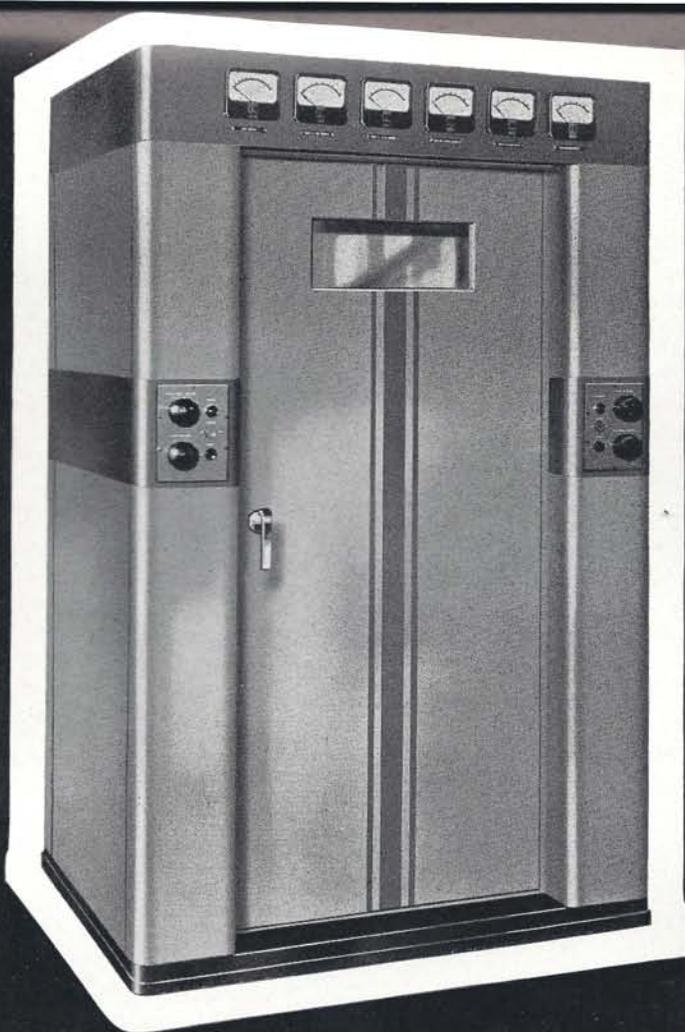
TOTAL RMS DISTORTION AT 90% MODULATION—100-4000 cycles approximately 2% or less; 50-100 and 4000-7500 cycles approximately 3%.

OUTPUT IMPEDANCE—50-300 ohms (to customer's specifications).

AUDIO INPUT—0-DBM for average program modulation—600 ohms.

POWER SUPPLY—220 volt, 3 phase, 50/60 cps.

POWER FACTOR—92% approx.



The Best 1 Kw Broadcast Station

The BC-1E one thousand watt transmitter is new . . . but it is also time tested. Many stations have been using this model for several months and its success record attests to the fine quality claims made for it.

All components are generously designed, power tubes are air cooled and mechanical arrangement made to assure the best construction and ease of maintenance.

You should have a BC-1E in your 1000 watt station. It will assure you of the finest equipment and the most reliability.

SPECIFICATIONS

POWER OUTPUT—1000 watts.

FREQUENCY RANGE — Any frequency from 530 to 1600 KC. (To be specified by customer.)

FREQUENCY STABILITY — Plus or minus 10 cycles maximum.

TYPE OF MODULATION—High level Class "B".

A. F. INPUT LEVEL — For 100% modulation, plus 6 vu.; at average program level plus 3 vu.

FREQUENCY RESPONSE — Within 1½db. from 30 to 10,000 cycles.

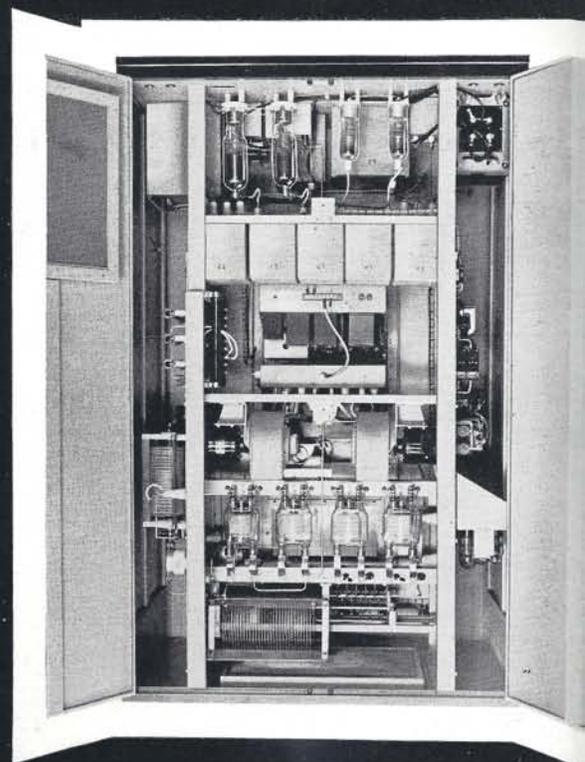
DISTORTION — Approximately 3% from 50 to 7500 cycles. 0-95% mod.

NOISE LEVEL—60 db. below 100% modulation unweighted.

R. F. HARMONICS—Less than .03%.

TUBE COMPLEMENT—

1—802 Oscillator	} In 25-A Frequency Control Unit
1—45 Buffer	
1—802 I. P. A.	
1—813 I. P. A.	
2—833-A Power Amplifiers	
2—6B4-G Speech Amplifiers.	
2—845 Audio Drivers	
2—833-A Modulators	
2—575-A Rectifiers	
2—8008 Rectifiers	
1—5Z3 Rectifier	



SPECIFICATIONS

CARRIER POWER—250 watts.

FREQUENCY RANGE—530 to 1600 Kc.

POWER SUPPLY—Normally supplied for 230 volts, 60 cycles. Single phase 115 volts on special order.

FREQUENCY STABILITY— + or - 10 cycles.

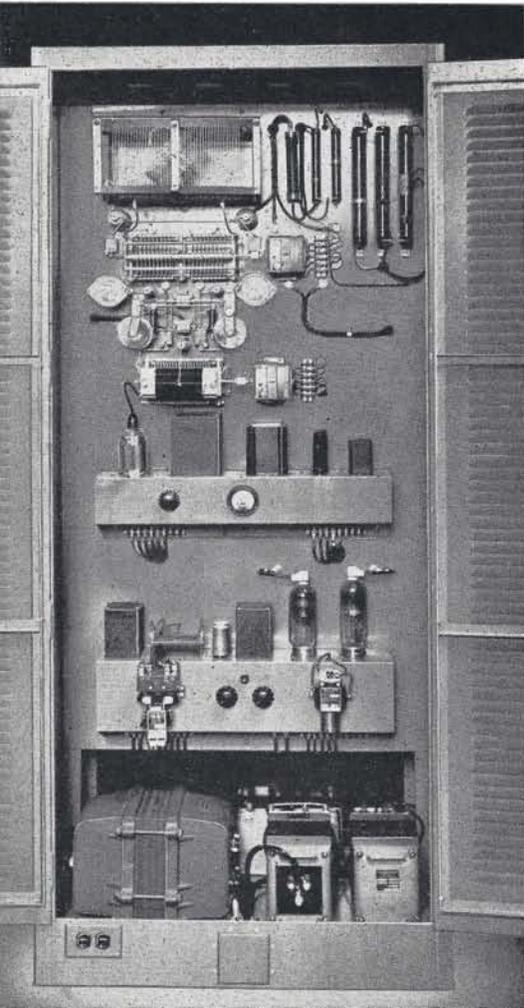
RADIO FREQUENCY HARMONICS—Below .05%.

AUDIO FREQUENCY RESPONSE—+ or -1½ decibels, 30 to 10,000 cycles.

AUDIO DISTORTION — 3% for 50 to 7,500 cycles, 0—90% modulation.

NOISE LEVEL—Better than 60 Db. below 100% modulation unweighted.

TUBE COMPLEMENT—One 802 Oscillator, one 45 Intermediate Power Amplifier, one 802 Intermediate Power Amplifier, one 813 Intermediate Power Amplifier, two 810 Final Power Amplifier, two 1622 First Audio Amplifier, two 810 Modulators, two 872A Rectifiers, one 5Z3 Rectifier.



The 250C-1 Transmitter Favorite of 250 Watt Broadcasters

Indeed, a favorite transmitter in 250 watt stations is the 250C-1. Its high quality was proved in the many installations that served through the war both at home and abroad. The many new users that have bought it since the war are proof of its continuing satisfaction.

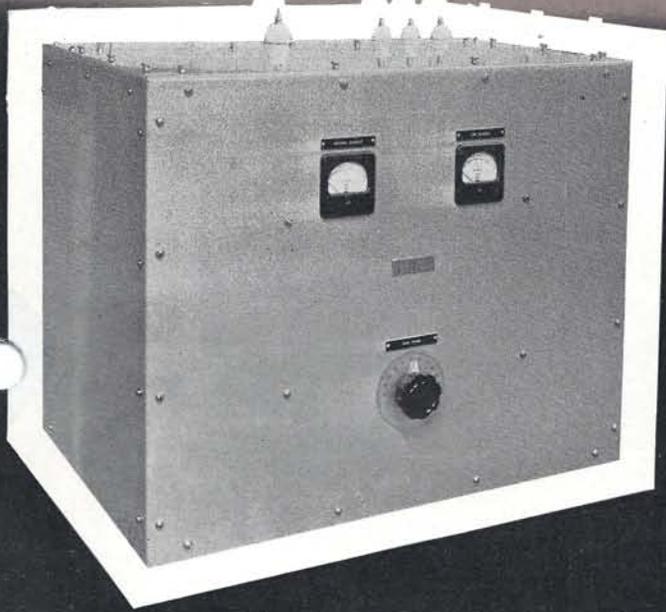
Quality and reliability in the 250C-1 are so apparent that users of it that raise to higher power put in a larger Gates transmitter because the quality of the line was so well demonstrated in the 250C-1. Put in the 250C-1 and be off to a safe start.

Antenna Tuning and Lighting Equipment

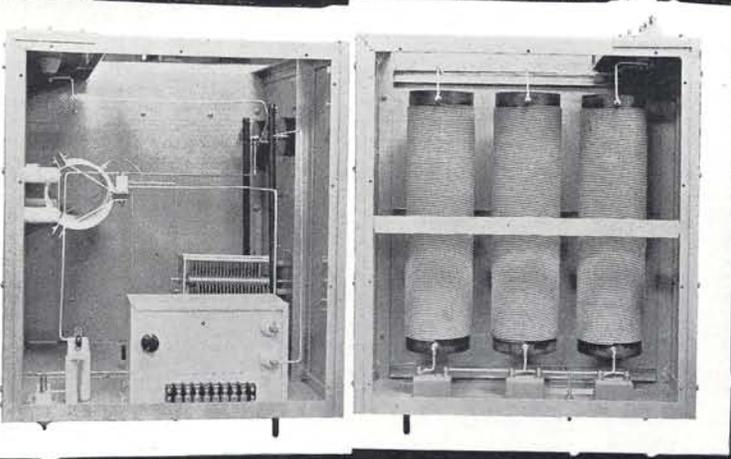
Model 46-A

Here is a new unit that contains both antenna tuning equipment and the chokes for the tower lighting circuit. The MO-2765A diode rectifier is provided for remote antenna current indications and line and antenna current meters are also included.

The 46-A is rated for installations having a maximum power of 1000 watts with ordinary two section stationary lights and a flashing beacon at the top of the tower. Dimensions are 44 inches high, 28 inches wide, and 20 inches deep.



At the top is the front view of the 46-A Antenna Tuning and Lighting Equipment. Directly above on the left is the antenna tuning section and at the right the three section tower lighting choke section.



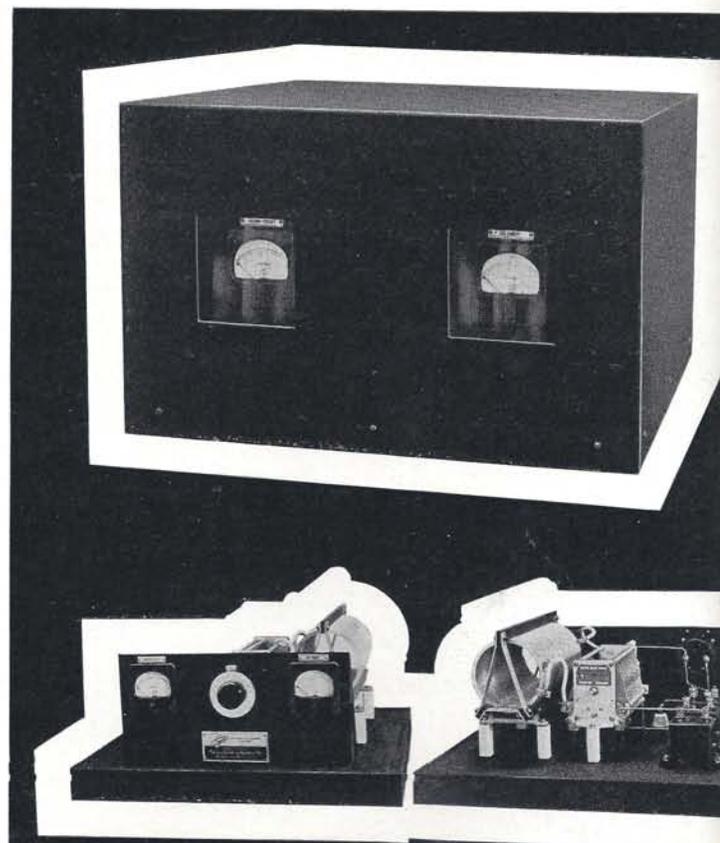
Directly below is the 21 Series Antenna Tuning Unit. At the bottom are front and rear views with the cover removed.

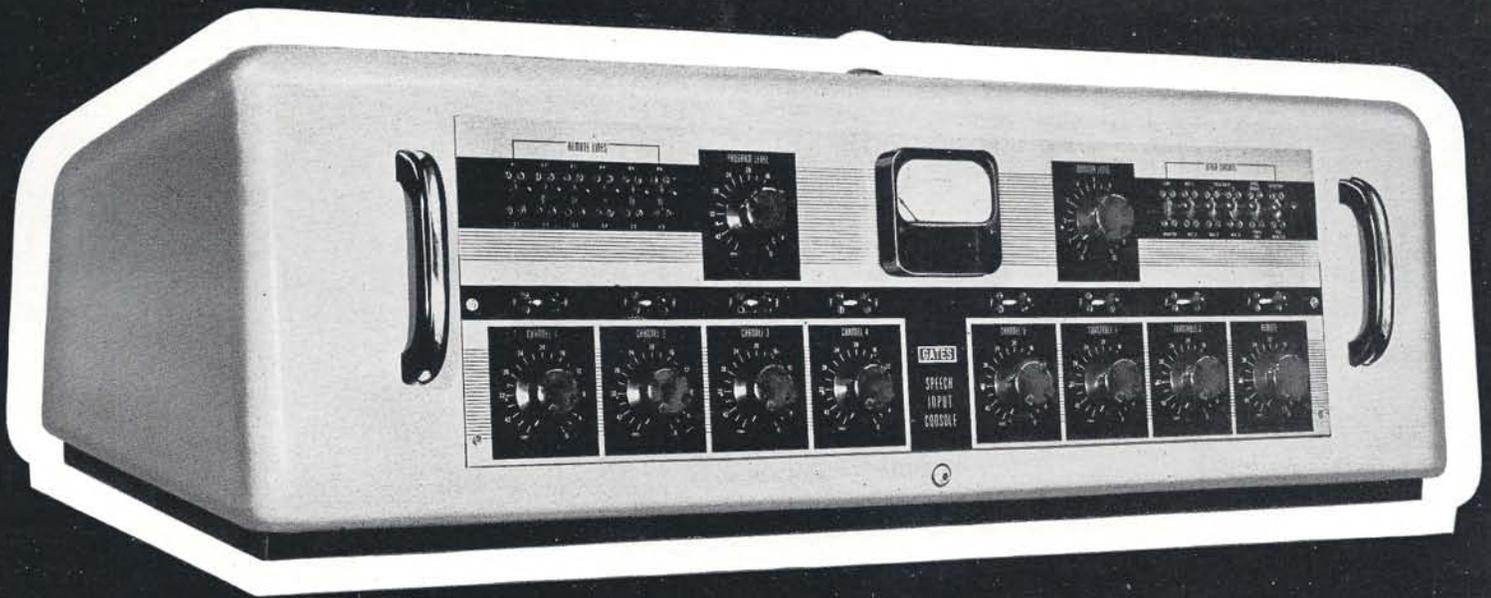
Antenna Tuning Units

Models 21-A and 21-B

The 21-A and 21-B antenna tuning units are identical except for power rating; the 21-A for 250 watt stations and the 21-B for powers of 500 or 1000 watts. Both contain the elements necessary to tune the usual type of vertical antenna used in modern broadcast installations.

Construction is of steel finished to resist adverse climatic conditions. The housing, which may be removed when inspection or adjustment is necessary, is weatherproof. Antenna and line current meters may be viewed through windows in the front. Mounting may be made to the standard pipe flange provided on the bottom of the unit. Dimensions are 11 inches high, 16 inches deep, and 20 inches wide.



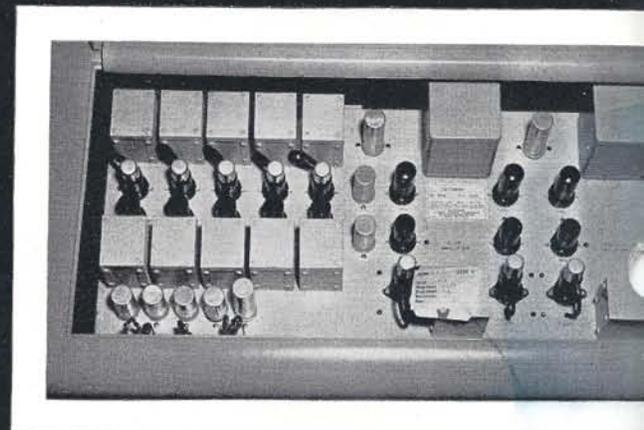
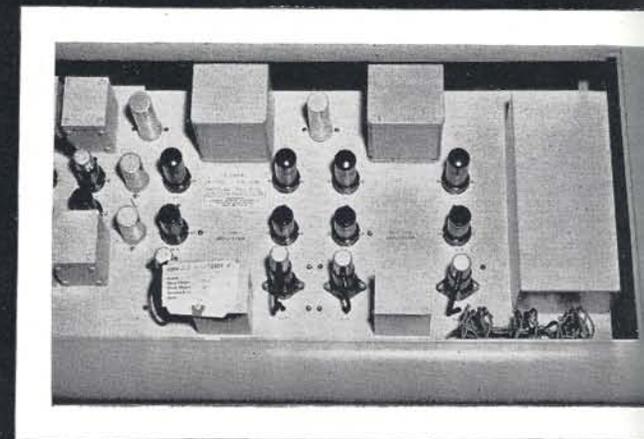
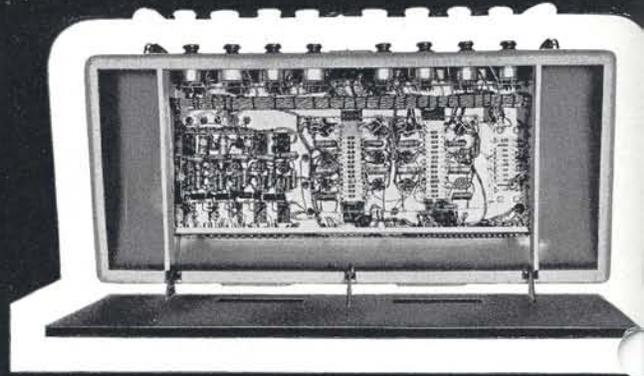


Model 31-B Console

Latest Styling and Best Studio Efficiency

The 31-B is the latest model in a long line of successful Gates consoles. Improvements are many, the most important of which are two stages in each preamplifier, special network line provisions, positive action keys and an over all gain of 105 decibels or better from microphone input to line amplifier output.

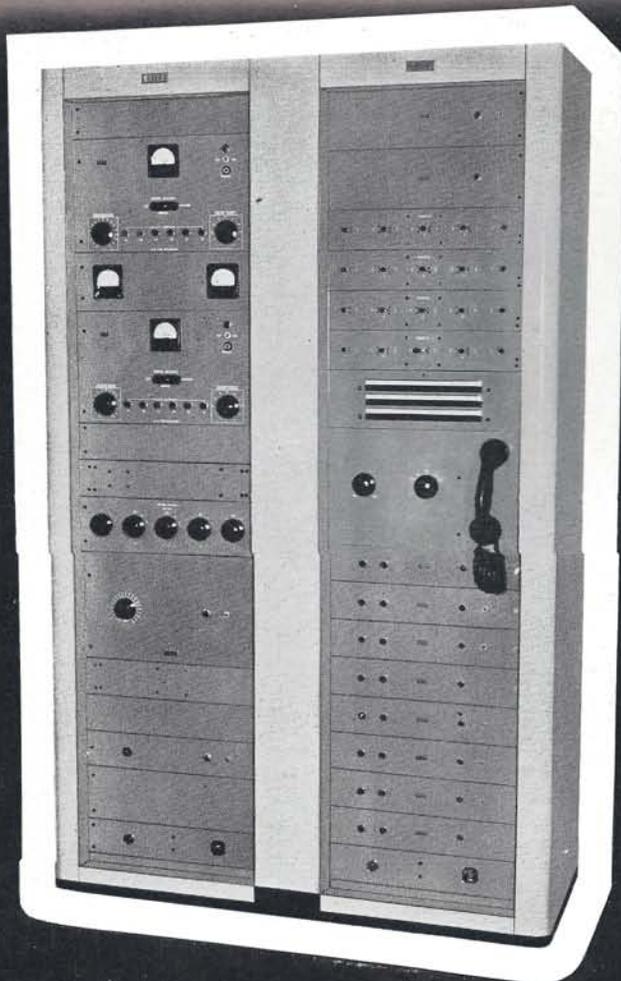
Appearance has also had attention. The new metal cabinet adds to the 31-B's attractiveness and due to its "lift up" feature enables servicing and installation to be done with ease. The inside views show the neat arrangement of the components and their accessibility.



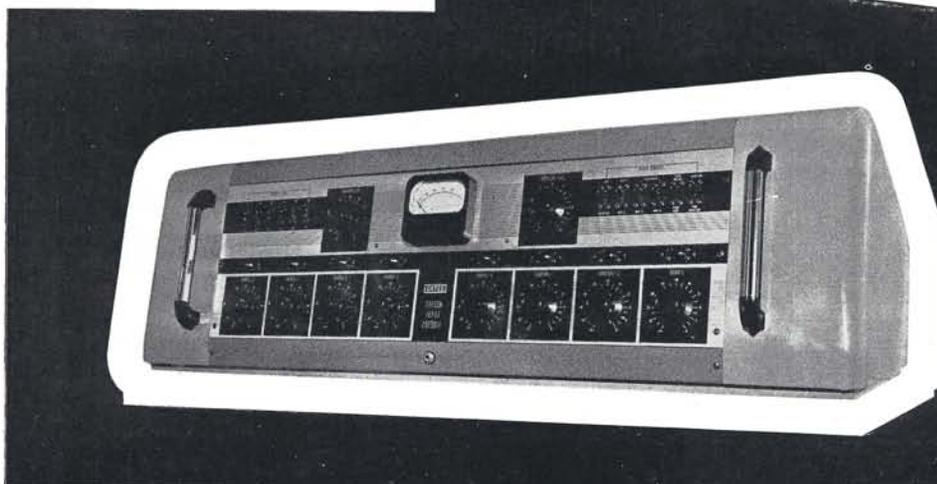
5M AUDIO EQUIPMENT

A wide variety of facilities are offered in the 5M Audio Equipment. Two program amplifiers, a monitoring amplifier, nine pre-amplifiers, flexible patching facilities, remote line selection by means of switches and centralized control on the console are all provided. The equipment is wired so that a wide selection of inter-wiring circuits may be made to accommodate practically any desired set-up.

Characteristics are suitable for the finest quality AM or FM installation.



The control console at the right is supplied as part of the 5M Audio Equipment.

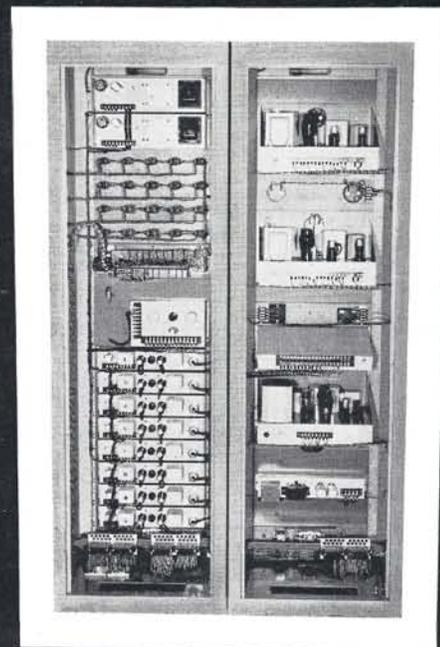


Above is the front view of the 5M Audio Equipment racks. Below is rear view.

The control console is provided as a part of the 5M Audio Equipment. It contains all the volume level and switching controls necessary to handle eight audio circuits at one time.

Special accommodations may readily be incorporated in the 5M Equipment.

Just tell our engineering department what you want to do and the proper units can be incorporated to accomplish the purpose.





THE CB-4 DESK . . .

Your Studio Equipment In a Package

This assembly is most widely selected for use in the two studio station.

Standard equipment consists of the 31-B Console, two CB-11 Turntable Chassis and your selection of lateral or universal pickups mounted on a handsomely proportioned desk made of selected woods. Pre-amplifiers and five position filters for the turntable channels are mounted in each side compartment and are completely wired. Every control is within easy reach of the operator.

The CB-4 gives your station that professional appearance and at the same time combines the studio facilities into a well integrated unit that will give lasting satisfaction and excellent performance.



Amplifiers For Every Purpose

Model MO-2696

This is a brand new amplifier that has quality and eye appeal. Ample output is available to drive many speakers at average room volume, to record, audition or serve as a general purpose amplifier.. Its characteristics are suitable for AM or FM.

Model MO-2694

The MO-2694 amplifier is primarily used as a line or program amplifier. Accordingly a wide selection of input impedances are available on the terminal strip in the rear with output connections for 250 or 500 ohms. Audio characteristics exceed those required for FM installations. Power supply is self-contained as is the case for all amplifiers on this page.

Model 28-CO

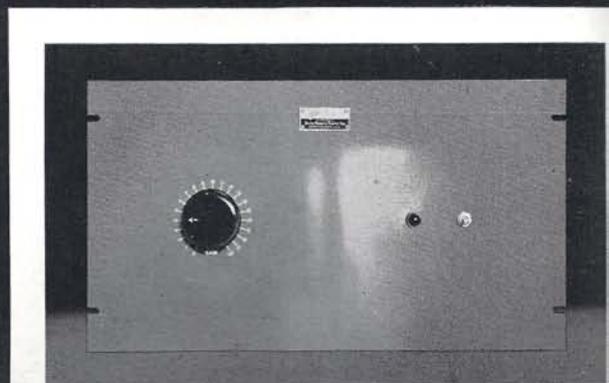
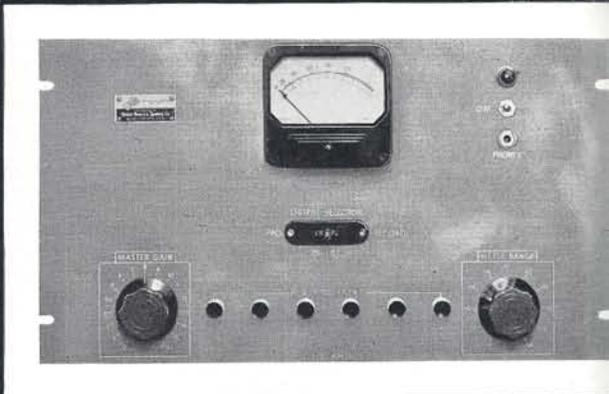
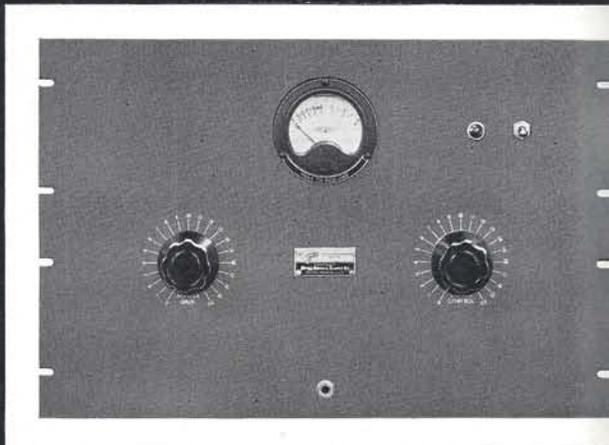
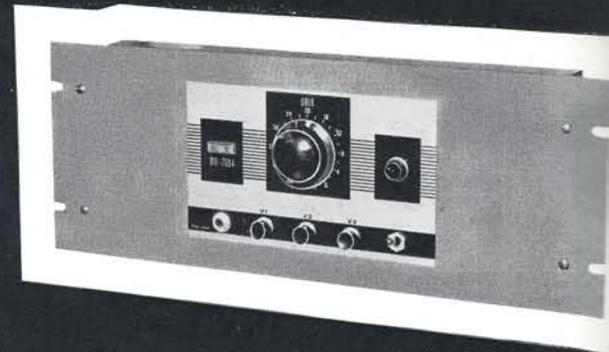
New and improved over preceding models the 28-CO is gaining popularity rapidly. It has a dual limiter circuit, low distortion even at relatively high compression, excellent fidelity and low noise level.

Model 6-C

This is the most versatile amplifier in the Gates line. High output (+42 VU), low noise and high fidelity are featured. Input impedances of 50, 250, or 500 ohms and output impedance of 500 ohms are available on the rear terminal strip. Output may be switched to three separate lines and the VU meter can be used separately. An excellent amplifier for the program line, monitoring, or recording.

Model 51

The 51 amplifier is a well known unit in many radio stations and has been chosen as a good general purpose unit that will fit many applications. It has three push-pull stages providing 60 decibels gain, output level of +40 VU with low distortion and good fidelity.



Recording Equipment...

Model 100-R Recording Cabinet

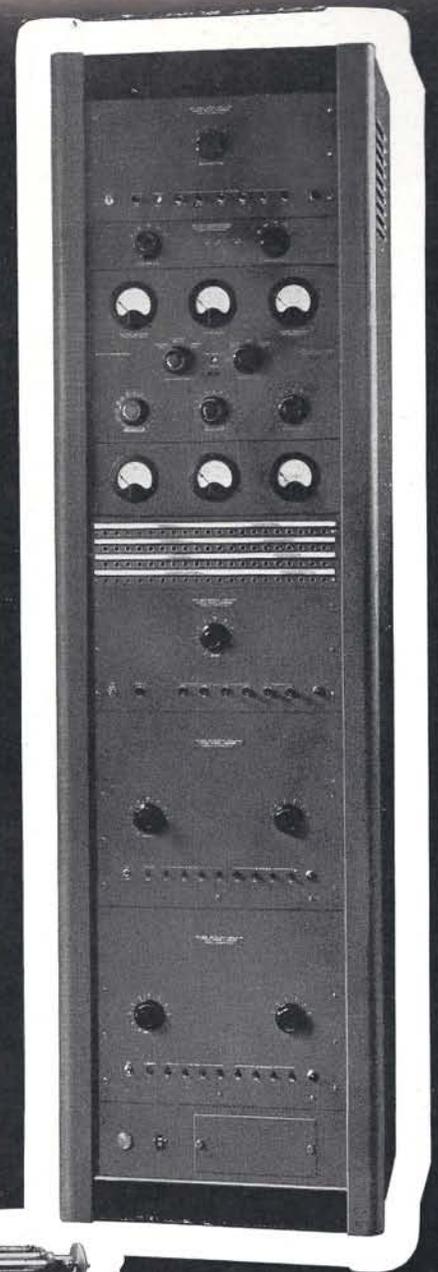
Model CB-8R Recorder

Model RA-10 Recording Amplifier

For the station that needs the best in recording amplifier and control facilities the 100-R rack has no parallel. Two of the RA-10 amplifiers, a limiting amplifier, a monitoring amplifier, control panel, and a metering panel are the major items. When used with the CB-8R recorder, recordings can be made on both tables at once or separately and may be played back at the same time. Controls are available for setting levels in each recording channel and a jack panel provides complete patching facilities for incoming lines and at various points in each recording circuit.

Equalization is accomplished by combining the functions of a high frequency cut-off filter in the 100-R and a variable adjustment in the CB-8R recorder that works in conjunction with the travel of the cutting head on the recorder. Standard and orthocoustic curves are supplied in the RA-10 amplifier and may be selected by a control on the front panel.

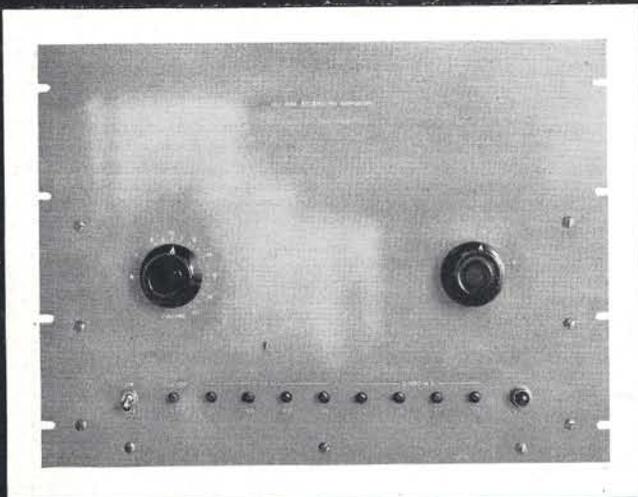
The 100-R, CB-8R, and RA-10 equipments may be purchased together as a combination unit or separately if desired.



Below is the RA-10 Recording Amplifier. 50 watts of power with very low distortion provide audio quality needed for the finest transcriptions.



Above is the 100-R Recording Cabinet which has every amplifying and control facilities needed for recording. At the left is the CB-8R Recorder to furnish the smooth power necessary even under varying loads.



Model CB-10 Transcription Turntable

Long term service and excellent reproduction are just part of the features offered in the CB-10 transcription turntable. The plus features are self-contained level control, two position output (one for cueing and one for "air"), and self-contained pre-amplification.

The chassis used is the CB-11 now in use for many months in many stations, and widely acclaimed as a very fine and reliable unit.

Reproducer equipment on the CB-10 may be either lateral or universal. Five filter positions are available to compensate for the popular types of transcriptions and recordings now in use in broadcast stations.

Below is the CB-7B Transcription Turntable

Above is the CB-10 Transcription Turntable

Model CB-7B Transcription Turntable

This transcription turntable equipment also uses the famous CB-11 chassis and can be obtained with universal or lateral reproducers. Five positions of compensations are provided.

Hundreds of CB-7B turntables are giving many hours of fine service in broadcast stations all over the country.



Series A and B Patch Panels

The patch panel shown at the left is representative of our line of telephone type panels. They are available in single, double, or triple rows using open or closed circuit jacks.

Series C Patch Panels

This patch panel is furnished to customers desiring the double jack type and comes in double and single row models. Mats are available for gauging several strips.

Type D Patch Cords

Type D patch cords are for use with single jack type panels shown at the top of the page. The plug is of the ring, tip and sleeve type and may be used with open or closed circuit jacks.

Type E Patch Cords

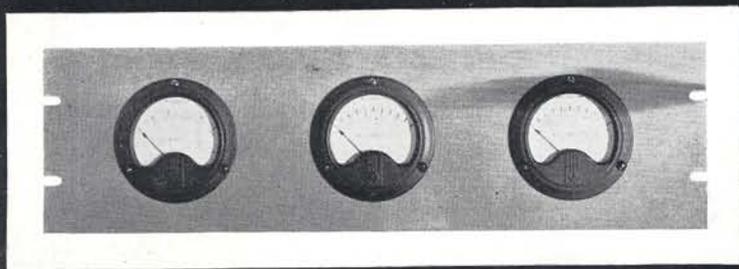
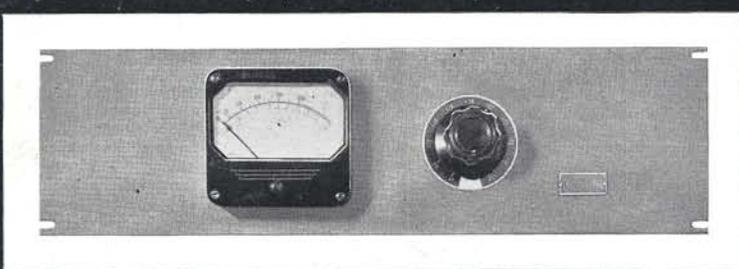
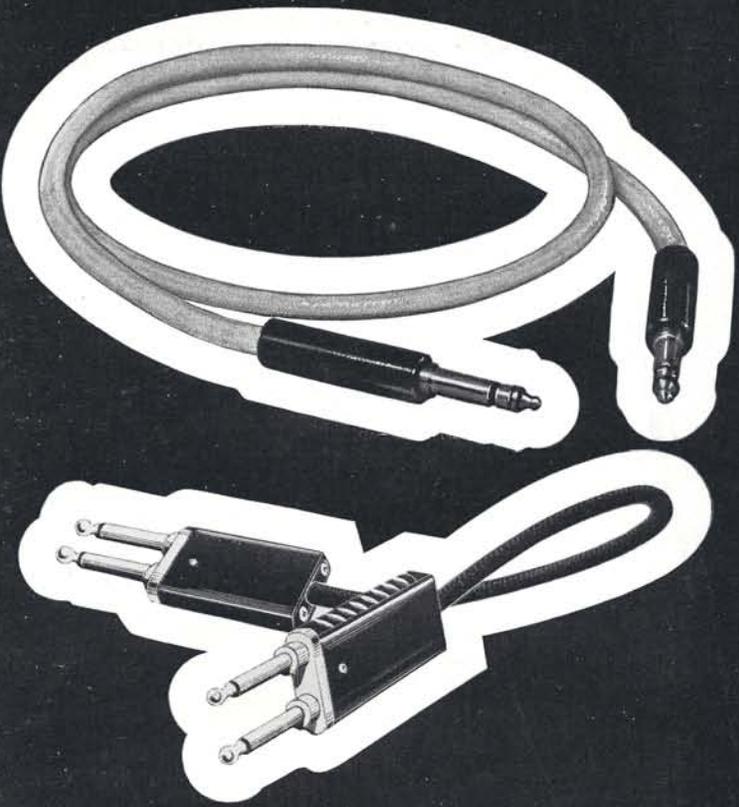
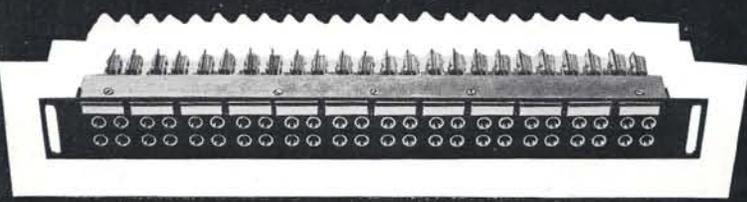
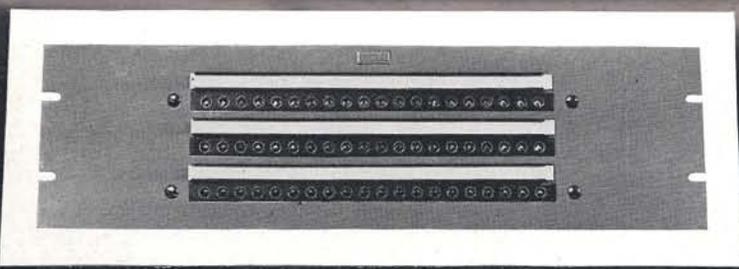
Double jack Series C patch panels use the Type E patch cord. It can be used with either open or closed circuit jacks and is supplied in lengths from 2 to 6 feet.

7 Series Volume Level Panels

The units in the 7 Series comprise panels arranged for indicating volume level in audio circuits and differ only in the number of steps and amount of attenuation per step. The VU meter is the standard 4 inch size using scale B.

M-100 and M-101 Meter Panels

This panel contains two DC milliammeter and one DC voltmeter. One milliammeter has a full scale range of 10 ma. and the other 100 ma. The voltmeter measures up to 500 volts and has a sensitivity of 1000 ohms per volt. Model M-100 uses round case meters while those on the M-101 are square.





REMOTE AMPLIFIER EQUIPMENT

GR-9091 Remote Foursome—GR-90 Remote Compact Dynamote Amplifier—Remote Conditioner

The unit shown at the top of the page is the Remote Foursome, the new Gates four channel remote. It has high gain, excellent fidelity, and will handle practically any remote job. GR-90, the main amplifier portion, can be used as a single channel remote if desired as the input receptacle will accommodate either the inter-unit connecting cable or a standard three prong microphone plug. When purchased separately it is designated as GR-90 Remote Compact and comes complete with carrying case and power supply. The Remote Foursome has the GR-91 four channel mixer in addition to the amplifier and also comes complete with carrying case.

In the lower right corner is the Dynamote amplifier. This unit has remained a very popular item and has

been successively improved to add constantly greater value for the customer. Three microphone channels are provided. The Dynamote with power supply comes in an attractive aeroplane type carrying case.

The lower left illustration shows the Remote Conditioner. This remote amplifier is one of the most successful remotes made that contains its own power supply on the same chassis as the amplifier. Characteristics are very fine and the demand for these units sustains the fine claims made for it.

Battery operation is possible on the Remote Foursome and the Dynamote. A battery box which matches the appearance of the equipment carrying case is readily available. Cannon connectors are standard input circuit equipment on all Gates remotes.





N E W S

Gates Team No. 1 of the Turner Hall league has been really hitting the wood lately and are now in the upper ten bracket. Pop Gerweler has the high average for the team.

The other Gates team from the factory, kegling at Don's Alleys, has

been most consistent in its bowling. Earl Sloan, Jr., has so far knocked down more pins than the others. James Havermale and Bill Penrose, Jr., are welcome additions to the team, since Howie Young had to forfeit his place for the season.

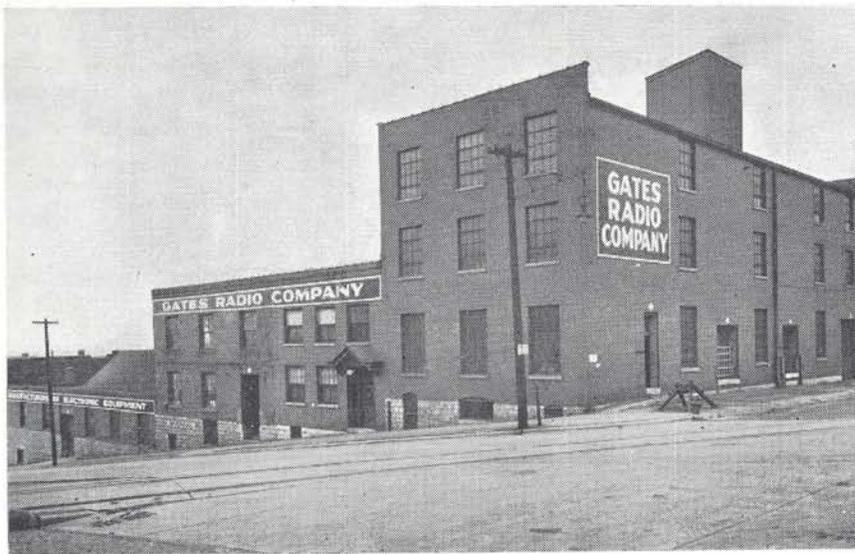
The girls team, although beginners, are about ready to take on a match with either of the other teams. Hushie with her never failing eye for pins, 'strikes' 'em dead each week. Won't be long till she has her average up to 180.

THE LUCKY STIFFS

It was one of those 'draw from the hat' deals and let the best man or "gal" win. Well, Bob Bangert, Howard Decker and Johnnie Anderson hit the jackpot and received three world series tickets for Sunday's game. They said the best team won . . . well the Cards did, anyway.

(E. N. And we did want to see the game. Didn't we Shade? Wonder if our names were in that hat????)

1922



1946

QUINCY, ILLINOIS

Here's

Your

Gates

Studio

Review

Sec. 562, P. L. & R.

U. S. POSTAGE

P A I D

QUINCY, ILL.

PERMIT No. 122