



NEW HOME OF THE N. B. C.

*Circled in the center foreground is the N. B. C. studio section of Radio City. The executive offices are in the tower building*

THE world's largest and most modern broadcasting studios will be opened for their inaugural broadcast on the evening of November 15, 1933, when the National Broadcasting Company officially enters the elaborate studio suite in Radio City, New York's huge realty development devoted to entertainment.

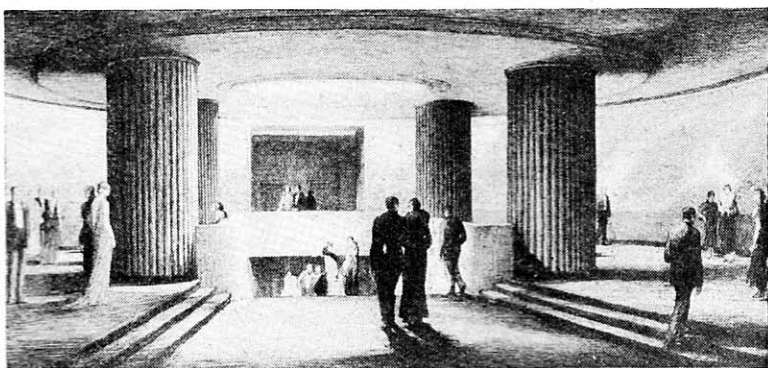
Covering some 400,000 square feet of floor space, in an 11-story wing of the RCA skyscraper, the new NBC studios embody most up-to-date broadcasting ideas. The entire world was combed by network engineers and research men for innovations that would help improve the gigantic radio headquarters from technical, decorative and practical angles.

The new studio layout far surpasses the facilities of any radio station or network in the world. Even the model Broadcasting House of the British Broadcasting Corporation in London, long considered the best studio center in the world by radio experts, is outdated in the New York project.

Until Merlin Hall Aylesworth, president of NBC and Radio-Keith-Orpheum recently took New York radio editors and columnists on a tour of the nearly completed studios, a veil of secrecy surrounded the enterprise. O. B. Hanson, NBC Manager of Plant Operation and Engineering, once delivered a paper on the studio planning before the Institute of Radio Engineers, but the finished studios were far ahead of all advance ballyhoo.

Of the thirty-five studios in the Radio City plans, sixteen will be functioning by the opening night. The remaining nineteen will be opened at later dates. The studios range in size from intimate speakers' chambers of small dimensions to a huge auditorium measuring 78 by 132 feet and three stories in height. The large studio will contain a semi-circular stage capable of accommodating a 100-piece orchestra. About 1000 guests will be able to watch the proceedings from the main floor while 250 more will be accommodated in the second floor-level balcony, which faces the stage.

The second largest studio will be used for dramatic programs. It is two stories in height and measures 50 by 89 feet. The stage utilizes a glass-curtain similar to the one introduced in the



ARTIST'S SKETCH OF THE GREAT RECEPTION ROTUNDA

## INTERESTING PREVIEWS BROADCAST

*As this article is going to press the National the first broadcasts from its new and palatial largest and most modern project of its kind of this new center are*

NBC Times Square studios atop the New Amsterdam Theatre Building. When the curtain is lowered, studio visitors will hear the program over amplifiers while viewing the actors through the huge glass window. Eight additional studios are two stories in height. Two have floor measurements of 50 by 80 feet, two 25 by 40 feet, and four 30 by 50 feet. Side galleries are provided for guests who may view the programs through glass windows. Special galleries of smaller sizes are provided for clients who wish to view broadcasts, auditions or rehearsals.

**By Samuel**

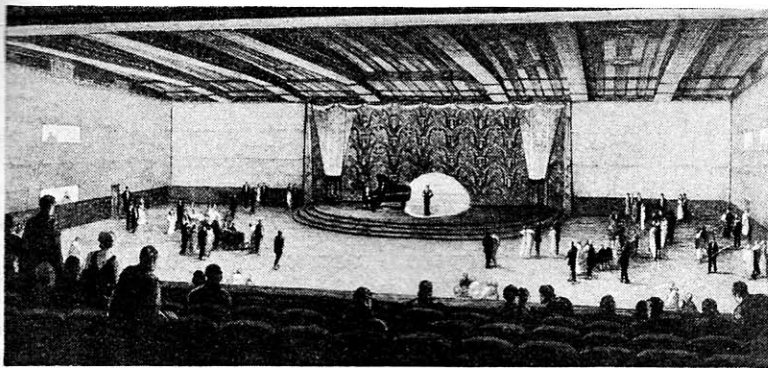
One of the unusual features of the Radio City undertaking is a group of four studios built around one central control room of circular design. The control room floor consists of a giant turntable so that the equipment may be swung about mechanically to face any of the four studios.

"It is possible," Mr. Aylesworth said, in speaking of the unique studio arrangement, "that this may be of great use in the future for television broadcasting, since all that would be necessary to shift scenes would be to swing from one studio to another. For the present, it will be useful in certain types of programs, where an orchestra may be put in one studio, a speaker in another, and so forth."

### PREVIEW OF THE WORLD'S LARGEST STUDIO

*The huge auditorium studio as it nears completion. It is three stories in height, 132 feet long and 78 feet across. The huge balcony on the far side will allow visitors to watch and hear the programs as they are broadcast*





HUGE AUDITORIUM STUDIO OF RADIO CITY

## OF THE WORLD'S GREATEST METROPOLIS

*Broadcasting Company plans to inaugurate broadcast center at Radio City, which is the in the world. Some of the interesting features described in this article*

### Kaufman

A special children's studio will be used for juvenile broadcasts. A separate lounge room for the youngsters adjoins the studio and both rooms are appropriately decorated.

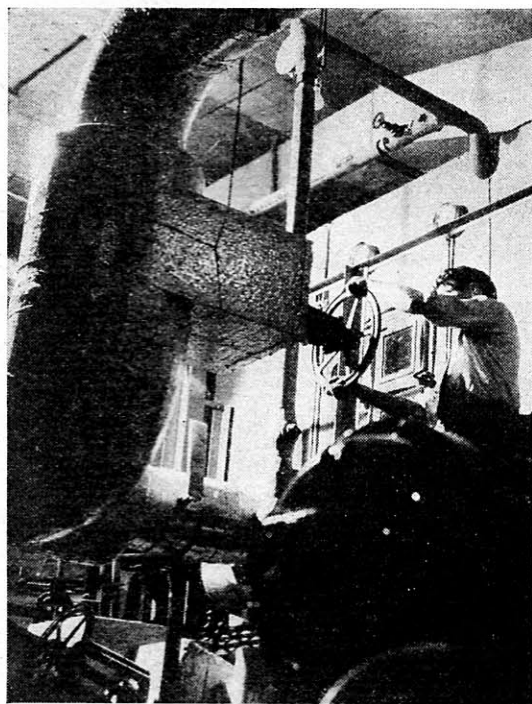
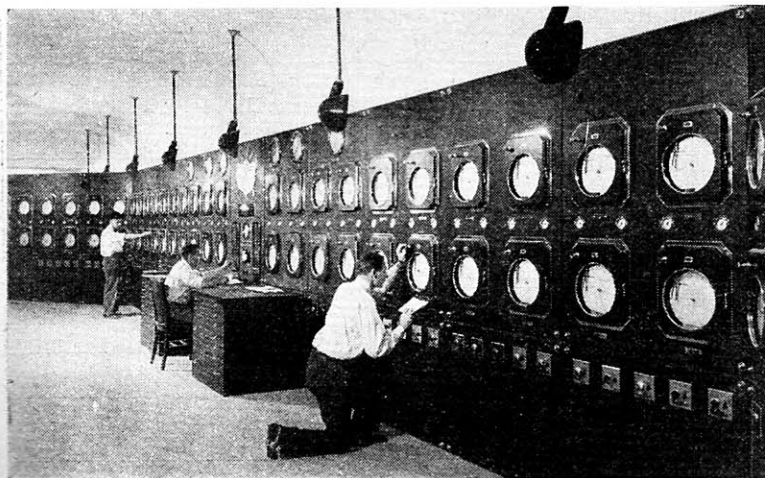
Two of the most important engineering problems to cope with in the studios' design were air-conditioning and soundproofing. The absence of windows or direct natural ventilation in the studios necessitated the installation of the largest air-conditioning plant in the world for the NBC's use.

The air-conditioning plant occupies the greater part of the tenth floor in the NBC wing, while the refrigerators for cooling the air are in the basement. The air conditioning control board, a panel of sixty-four giant dials shows a continual graphic record of temperature in every section of the building. The operators can keep the air condition constant by observing and correcting variations due to the number of persons in the studios and other causes. At the operator's will, the air can be circulated, washed, humidified or de-humidified.

Mr. Hanson and Mr. Aylesworth explained that all of the studios, through the special soundproofing are virtually "floating" free from the building. All of the studio floors, walls and ceilings are separated and insulated from the building framework. Each studio is sur-

### CONTROL ROOM FOR AIR-CONDITIONING PLANT

*The studios will have the largest air-conditioning system in the world. Below is the control panel for regulation of temperatures in all studios and other parts of the building*



WASHING AIR FOR ARTISTS

*A small section of the air-purifying system for the new studio building*

rounded by tons of Rockwool, Transite and textiles. Pads of heavy felt are placed at all points of contact between the studio and the building, with enough slack to take up possible vibrations in the steel framework. A perforated composition acoustic material is used either visibly or behind decorative cloth in the studios.

Some studios have sliding-wall panels, which are operated mechanically from the control rooms to vary acoustical effects by altering the extent of hard surface exposed.

Mr. Aylesworth said that in most modern broadcasting studios, it has been the practice to place the main control room in the horizontal center and have it surrounded by the studios. Because this was not practical in a building of this sort, the principle was retained in the vertical plane with the master control located on the fifth floor and the studios laid out on lower and higher floors. In addition to the master control, the floor contains the main equipment room, power and battery rooms, technical laboratory, maintenance and operations shops, telegraph rooms and switching booths. Visitors' observation galleries run through the technical departments as well as the studios, the NBC officials believing that listeners are interested in the backstage scenes as well as the studio settings.

For special news broadcasts, where parts of programs come from such remote points as air-planes, ships, pack-transmitters on the backs of announcers, or from foreign countries, a specially designed control room has been erected to handle the setting-up of the multi-point productions. Thus, the program director can keep in touch with as many as ten different pick-up points either by wire or short waves, and to switch to any of the desired sources momentarily. The apparatus also enables the director to talk back to any or all points of program origin.

Mr. Aylesworth is of the opinion that studio decoration is especially important because of the effect it has on radio performers and speakers. As a rule, he pointed out, interior decorators are hampered when executing studio assignments on account of acoustical requirements. The chief decorative materials, due to these acoustical needs, are textiles. A long period was spent in going over specimens of wools, (Continued on page 365)



This folder describes the midget radio manufactured by the Fordson Radio Mfg. Corp.

49. *Portable and Home Type Receivers.* This folder gives descriptions and prices of the line of receivers, chassis, amplifiers and radio parts made by the International Radio and Electric Co. The list of receivers ranges from the most inexpensive midget sets to the higher cost console models.

52. *The Servicer.* A monthly house organ published by the International Resistance Co. It contains information to help the serviceman do better work and make more money doing it.

53. *Practical Training for Radio Servicemen.* This book, prepared by the Radio Training Association of America, gives an outline of their course of instruction for radio servicemen—a course that is endorsed and recommended by more than thirty leading radio manufacturers and trade associations. This book shows how to qualify for a big radio future.

54. *Public-Address Systems, Transmitting, and Short-Wave Receivers and Accessories.* This catalog, issued by the Wholesale Radio Service, covers the entire requirements of men engaged or interested in these fields for amplifiers, loudspeakers, microphones and other special and standard equipment required for such work.

56. *Servicing and Testing Instruments.* A folder containing descriptions of a new line of Supreme low-priced analyzers, set testers, tube testers, ohmmeters, capacity testers, oscillators and universal meters. Complete information is also given on the new Supreme model 55 tube tester and the new Supreme Master diagnetometer which employs the "free reference point system of analysis."

57. *How to Build a High-Quality Condenser Microphone.* This circular describes a condenser microphone kit and instruction sheets with which it is possible to build, quickly and easily, a high-quality condenser microphone. The kit is made by the Bruno division of the Amperite Corp.

## New Broadcast Metropolis

(Continued from page 333)

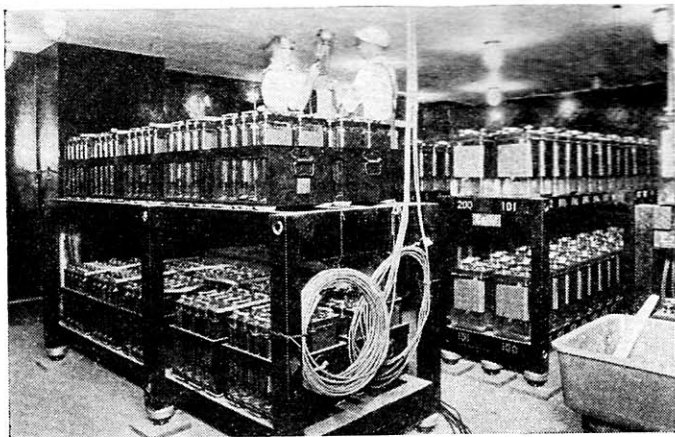
linens and silks for the studio decorations. Cloth has taken the place of even paint and paper in the decorative scheme. Woven linen was found to be best for studio ceilings, backed by acoustical materials.

The studios are of conservative modern design. Color, either harmonizing or contrasting, is the basic decorative scheme of each studio.

Four "speakers" studios utilize distinctive wood design. The scheme of one speaker studio is English tudor with oak panels and a fireplace. Another studio is of Georgian style, a third of early American and the

Studios are laid out to accommodate the largest possible number of visitors with minimum confusion. When the guests enter, through a large mezzanine rotunda, they will take special elevators to the second floor lobby where they will be greeted by hostesses. There are several lounge and smoking rooms, opening out on terraces. Audition studios and sponsors' and artists' lounge rooms are also on this floor. Special elevators from the reception floor take guests to the visitors' galleries of the various studios.

NBC will move into the new studios gradually so that broadcasting will not have to be interrupted. The transfer from the old headquarters at 711 Fifth Avenue to Radio City has been under way for several past weeks. Although broadcasts may originate from the new site before November 15,



A RESERVE POWER PLANT

*A battery room where sufficient battery power is reserved to continue operation for seven days should a natural catastrophe or bombing raid disable the regular power plant. This reserve situated in bomb-proof chambers would continue operation*

fourth modernistic.

Wood-panelling and fireplaces are also noted in the main reception lobby, sponsors' rooms and guest rooms.

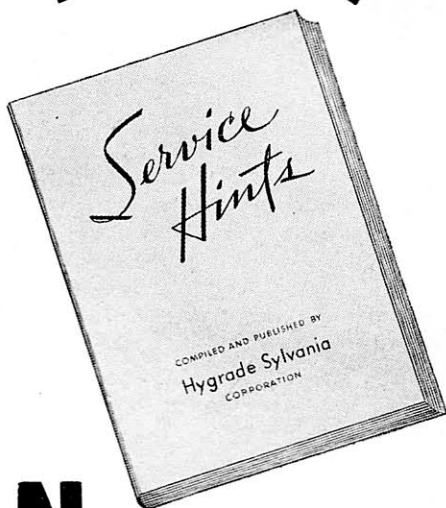
The growing demand from radio listeners for permission to attend broadcasts and observe favorite stars in action at the microphone is the reason for elaborate provisions to accommodate guests at the Radio City studios. It has been rumored that a small admission fee may be charged, but it is understood that there are many obstacles in the way of this plan, as such a move might bring the studios under a theatrical rather than a broadcasting classification.

it will be on that day—the seventh anniversary of the chain—that the official opening program will go on the air.

In another part of Radio City—the huge Music Hall theatre—there is another completely equipped broadcasting studio which has been used by S. L. Rothafel (Roxy) for his Sunday afternoon Roxy Gang programs over the NBC.

American broadcasting, on the whole, benefits by the gigantic radio development in Radio City. Long the leader in the field of broadcast entertainment, America makes still greater strides forward in world radio pioneering.

# FREE!



## New 64-PAGE HANDBOOK of Servicing facts and Short-cuts!

HERE'S a new free booklet every service man will find invaluable!

Contains practical information and servicing tips that service men all over the country have sent to us. Shows how to solve many tough problems . . . saves you time and money. Mail the coupon today and get your copy. We'll also put your name on the mailing list for Sylvania's free monthly Service Bulletin. It gives additional service tips each month . . . and tells how you can earn free tubes for your own suggestions!

## HYGRADE SYLVANIA CORPORATION

MAKERS OF  
Sylvania Tube:  
Hygrade  
Lamps  
Electronic  
Devices



FACTORIES  
Emporium, Pa.  
St. Marys, Pa.  
Salem, Mass.  
Clifton, N. J.

# Sylvania

THE SET-TESTED RADIO TUBE

Hygrade Sylvania Corporation  
500 Fifth Avenue, New York, N. Y.

A-5

Please send me your free booklet "Service Hints" and your free monthly Service Bulletin.

Name .....

Name of Firm .....

Address .....

City ..... State .....