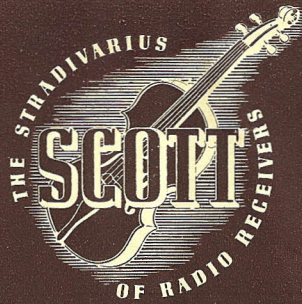


SCOTT



NEWS

NEWS OF LATEST DEVELOPMENTS IN THE SCOTT RESEARCH LABORATORIES

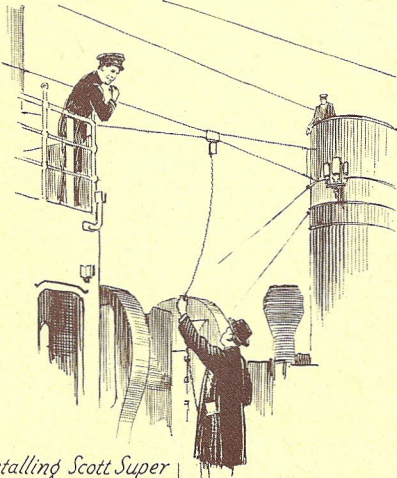
VOL. II

NEW YORK

CHICAGO

LOS ANGELES

No. 3



Installing Scott Super Double-Doublet Antenna on Queen of Bermuda

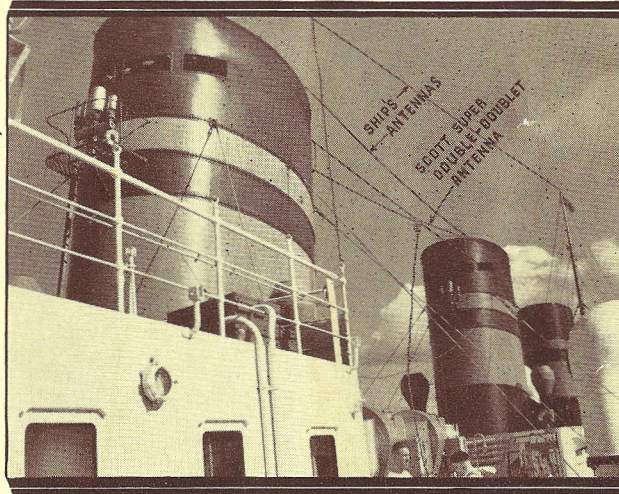
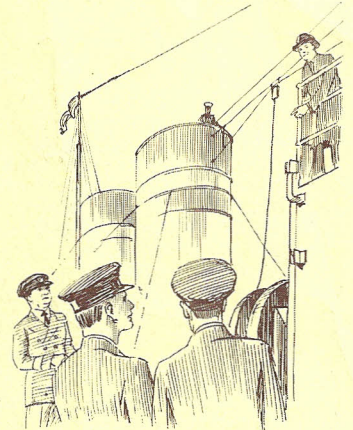


Photo Knudsen

Position of Scott Super Double-Doublet Antenna on Queen of Bermuda



Ships Officers are Interested Spectators

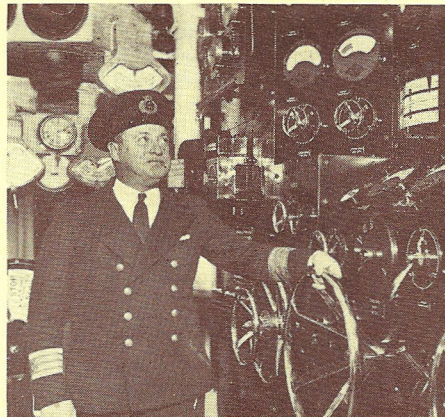
New Scott Receivers Create a Sensation on Ocean Liner Tests

SECURE REMARKABLE RECEPTION UNDER EXTREMELY DIFFICULT RECEIVING CONDITIONS

DURING the past few years my travels have carried me four times around the globe, studying radio reception in many countries. If I were asked to name what I considered the finest location in the world for radio reception, I would name a spot on a hill overlooking the sea in Nelson, New Zealand, with acres of open space to erect any kind of antenna desired, and not a single electric motor or other piece of electrical apparatus that could create any kind of radio interference within a radius of 10 miles. It is the kind of location every enthusiastic DX'er dreams about.

Then if I were asked to name the most difficult location in which to secure satisfactory radio reception, I would name one of our large ocean liners, with its great mass of steel which absorbs so much of the signal before it even has a chance to reach the antenna; its huge dynamos that generate enough electricity to satisfy the current requirements of a small city; its hundreds of ventilating fans and other pieces of electrical equipment too numerous to mention—all concentrated in a comparatively limited space. With such strong potential sources of "man-made" static or

electrical interference, satisfactory reception of distant stations is often impossible on the ordinary radio receiver. The photograph showing Chief Engineer Melroy at the controls



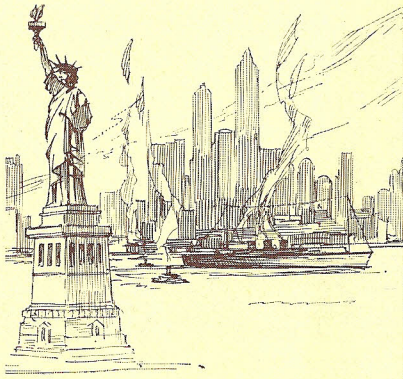
Chief Engineer Melroy at Control Switchboard of Queen of Bermuda

of the switchboard on the luxurious Queen of Bermuda, will give some slight idea of the amount of electrical equipment used in just one section of a modern ocean liner.

To provide accurate data on the kind of reception our new Scott Phantom and Scott Super XII receivers would give under the most difficult conditions, arrangements were made recently with the Furness Bermuda Steamship Lines to carry out reception tests on their liners, the Queen of Bermuda, and the Monarch of Bermuda.

A Difficult Antenna Installation

If the reader had been in the vicinity of Pier No. 49 one chilly morning in December and had looked up at the upper deck on the Queen of Bermuda, he would have seen two young men and the writer trying to find a location for the Scott Super Double-Doublet Antenna. Ultimately, as the photograph will show, it was strung up between two huge funnels about 15 feet below the ship's main transmitting antenna, with a number of massive electric ventilating fans directly below it. This was not, I am sure you'll agree, the most



Leaving New York

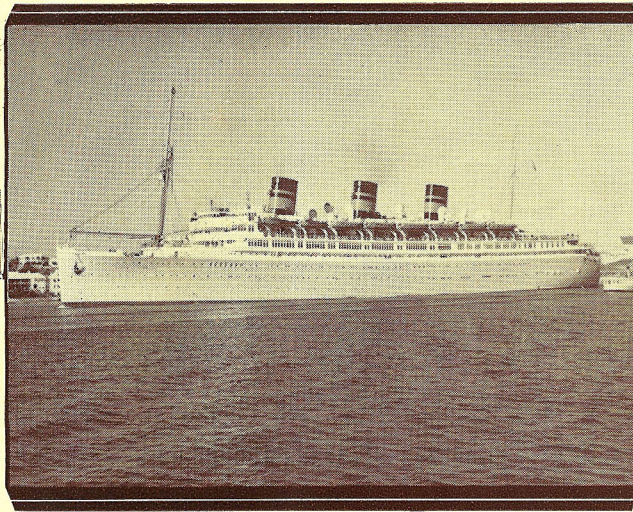
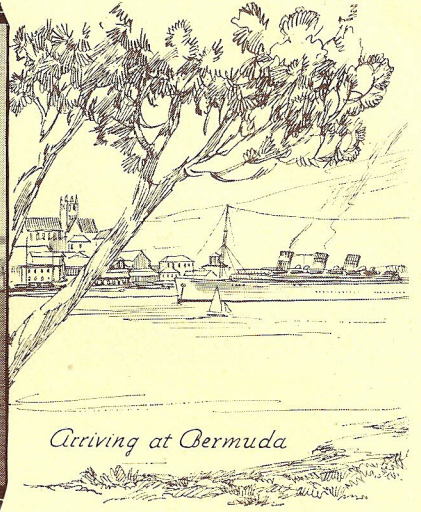


Photo Knudsen

The Queen of Bermuda on Which Tests Were Made



Arriving at Bermuda

ideal location for an antenna that was required to bring in distant stations.

The erection of the antenna was made doubly interesting by the presence of a "gallery" composed of Staff Captain Burns, Chief Engineer Melroy, the boatswain and several of his men, who were curious to know what I expected to accomplish. When told I was making a test to prove that we could secure satisfactory reception, practically free from the noise usually experienced with radio receivers on board ship, all were as helpful as they could possibly be, but at the same time I know felt a little sorry for me, for their many months and years of experience with radio receivers on board ship had convinced them that what I expected to accomplish was "impossible."

At last the antenna installation was completed, the lead-in brought down one of the huge ventilating shafts, connected to the Scott Phantom, and the current turned on. Needless to say, the same interested audience I had when erecting the antenna, assembled in Chief Melroy's cabin to see what would happen. To their amazement in came station after station, *with practically no noise*. American stations on the broadcast band as well as shortwave stations from South America and Europe, were tuned in one after the other.

However, as the boat was still tied up to the pier in New York harbor, and only a part of the electrical equipment on the ship was operating, the real test would come when the liner put out to sea and all of its electrical equipment was in operation.

Bermuda Bound

Up on deck there was the usual hurry and bustle of departure. Then came the unforgettable thrill of the call echoing thru the ship's corridors, "All visitors ashore," and the deep boomy whistle blows for the last time. The heavy hawsers are cast off, there is a whirl of motors, the slow pulse of engines in motion is heard, the big ship stirs from its moorings, and glides away from the pier with its cheering thousands waving goodbye. Soon the magnificent panorama of New York's skyline recedes; the big ship slowly glides down the bay, the skyline vanishes, and we are steaming out to sea toward Bermuda, the island of sunny skies with its coral reefs, tropical flowers, and clear blue waters that are a joy to swim, fish, and sail on.

But as we moved down the bay I thought of none of these things, for the efficiency of our new antenna system and the Scott Phantom was yet to have its first real test with all of the machinery of the ship in operation.

Why Radio Is Important at Sea

So, promptly at 5:00 P. M., the Phantom was again switched on before an extremely interested audience, for the officers and men that sail the seas rely principally on radio after their hours of duty, to provide them with the latest news of the world, music, and entertainment.

Again, station after station was tuned in on the Phantom, clear and free from noise of the "man-made" static created by the ship's electrical equipment. To check just what had been actually accomplished, Chief Melroy switched on his receiver to compare its reception with that of the Phantom. This was a new receiver that had been installed less than one month before, and had been finally selected after trying out about six different sets during the past year, and was generally considered the best radio on the Queen. *Much to the astonishment of my audience, many stations were brought in clearly on the Phantom that could not even be heard at all on the other receiver*, and after a few minutes it was switched off.

The daylight reception test was passed with flying colors, but the Phantom still had another test—nighttime reception, and this was arranged for 10:30 P. M.

On the Queen of Bermuda each night at

11:00 P. M. the "Press Club" meets in Chief Melroy's cabin. This is quite an exclusive organization composed mainly of the officers of the ship off duty at this hour who gather to hear the news of the day from stations in the United States and London. Tonight there is a full audience to hear Chief Melroy's new radio, for the news of an instrument which it was reported just about performed miracles had spread thru the ship.

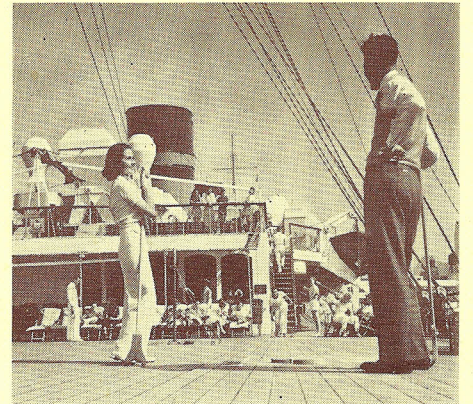
Tonal Quality of Phantom Arouses Enthusiasm of Officers

So at 10:30 P. M. the Phantom was once again switched on, and not only did it bring in American and European stations with hardly a trace of noise, but it brought them in with a tonal quality that immediately aroused the enthusiasm of the members of the club. Just how enthusiastic they were about the reception we learned the following evening, when Mrs. Scott and I were welcomed as full-fledged members of the "Press Club."

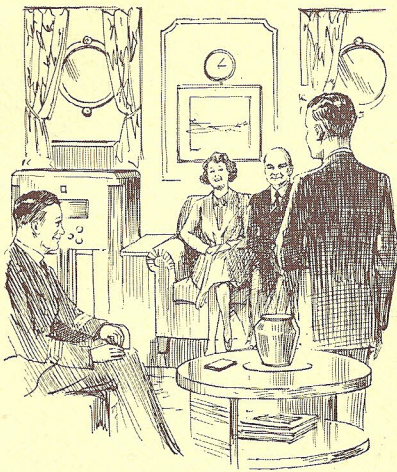
Next morning the sea was calm as a mill pond, so everyone is up on deck bright and early. Some take life easy in a comfortable deck chair enjoying a book or magazine, and their morning tea at 11:00 A. M. The more energetic play deck tennis and shuffle board, or try their hands at deck quoits, then a plunge in the swimming pool before lunch. Life is very pleasant on a modern ocean liner like the Queen of Bermuda, and the time passes all too quickly. But ever so often I slipped down to the Phantom, switched it on and tuned in many different stations. I might as well have been tuning it in Chicago, for stations rolled in as if they were locals, instead of stations hundreds of miles distant.



The Two Newest Members of the "Press Club," Mr. and Mrs. E. H. Scott



The Sports Deck



The Press Club meets in Chief Melroy's Cabin

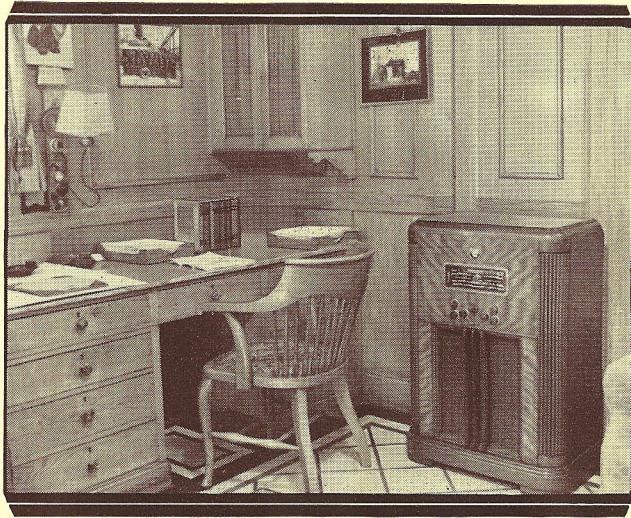
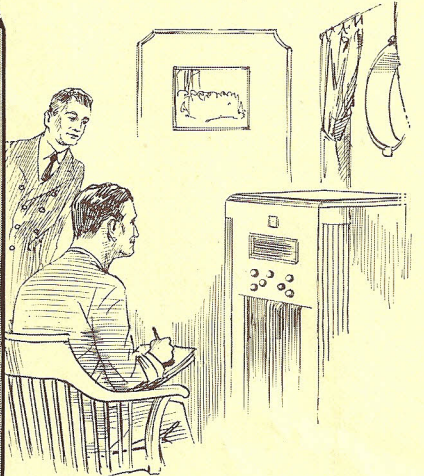


Photo Knudsen

The Scott Phantom Installed in Chief Melroy's Cabin



Checking Reception in the Atlantic "Dead Spot" with the Scott Phantom

The Final Reception Test on the Queen of Bermuda

The final test was made in the evening, again with a full attendance of the "Press Club" who were curious to see how the Phantom would perform on American stations 500 to 1,000 miles or so distant, and European shortwave stations, 4,000 to 5,000 miles away. So once again the Phantom performed its magic, and proved beyond all question that it could provide satisfactory reception in one of the most difficult radio locations in the world.

Scott Phantom Brings in Stations in "Dead Spot"

While on the trip over to Bermuda, Chief Melroy told me that for years there was a certain part of the Atlantic between Bermuda and Nassau that was considered a "dead spot," where radio reception just faded out on all of the receivers they had tried so far. As I knew our receivers had for years been able to give reception in many locations where others had failed, I was particularly anxious to see how the Phantom would perform in this area. As I was disembarking at Bermuda, I left the Phantom on board in charge of Chief Melroy, who agreed to check its performance in this area and report results. *I have just received word from him that the Phantom was the only receiver on the ship that was able to bring in broadcast band and short-wave stations in this area.*

The return voyage was made on the Monarch of Bermuda, sister ship to the Queen, and on this trip a test was made with the new Scott Super XII installed in the cabin of Chief Engineer Hardy. A Scott Super Dou-

ble-Doublet Antenna was installed in the same position on the Monarch as it was on the Queen, that is, between the two funnels. On this trip the extreme efficiency of the Scott Super Double-Doublet Antenna System was very convincingly demonstrated.

Officers Amazed at Reception

As on the Queen, the officers of the Monarch were all deeply interested in the tests I was making. When the liner put out to sea, headed for New York, Captain A. R. Francis, Staff Captain L. S. Banyard, Chief Engineer Hardy, and the writer gathered in the Chief's cabin to see what reception could be secured on the Scott Super XII. As station after station came pounding in, beautifully and clearly, the amazed officers were unanimous in declaring that it was by far the finest reception they had ever heard at that distance from the American coast. None had believed it was possible to bring in distant stations on board ship as quietly and clearly as they were hearing them on the Scott.

As an experiment, I disconnected one side of the Scott Super Double-Doublet Antenna so that it acted as an ordinary single wire antenna. *Immediately the change was made, the program coming in was obliterated by interference created by the ship's electrical equipment. In fact, the noise was so strong, the dial on the receiver could be moved back and forth at the point where the station had been coming in, and the carrier of the station could not even be heard, and it was actually impossible to tell there was a station coming in on that part of the dial at all.* However, immediately the two lead-in wires of the antenna were connected, the noise disappeared and in came the station, thus proving beyond all question that noise picked up on the lead-in of an ordinary antenna is *not* picked up on the lead-in of the Scott Super Double-Doublet Antenna, and that only the signal picked up on the flat top of the antenna is fed into the receiver.

The Scott Double-Doublet Antenna System

The new Scott Super Double-Doublet Antenna System is the result of over a year's intensive research into antenna design to perfect an antenna that would not only be efficient at one or two certain frequencies, *but on all the principal shortwave and broadcast bands,* and that would at the same time reduce the effects or eliminate "man-made" static or electrical interference.

This has been accomplished by designing a flat top consisting of a double-doublet, connected at the center into a self-selecting filter

containing a series of coils and condensers, which automatically broadly tunes each of the principal broadcast and shortwave bands. If it were possible for you to sit at the flat top of your antenna, as you sit before the dial of your receiver, and tune it to the frequency of each wave band, you know the strength of the signal sent down the lead-in would be strengthened many times. The self-selecting filter located at the center of the flat top performs this function for you. From this filter the signal is brought to your receiver thru a balanced pair lead-in whose impedance is carefully matched to the antenna input of the receiver. *It is this greatly increased signal sent down the lead-in from the flat top of the antenna to the balanced pair of lead-in wires that is the first link in the chain to reduce or eliminate electrical interference.*

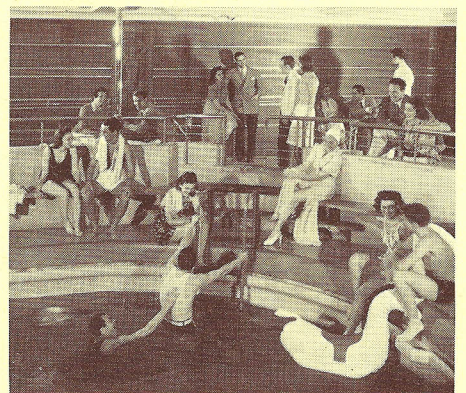
Every Scott Perfectly Shielded

Finally, every coil and circuit of each Scott receiver is completely shielded; every tube has its individual shield; the gang of variable condensers is completely enclosed in a heavy steel shield; the bottom of the chassis, instead of being open and exposed, is covered with a steel bottom plate. Shielding is so complete that it is impossible for any interference to reach the receiver thru any exposed wiring or coils.

A study of the many highly developed and advanced engineering features incorporated in a Scott receiver, will show why it is so generally regarded in all parts of the globe as the "World's Finest Radio Receiver," and why it was able to provide satisfactory reception on the Queen of Bermuda and the Monarch of Bermuda under conditions that made reception unsatisfactory or impossible on other radio receivers.



The Dance Deck



The Swimming Pool



Lotte Lehmann

Distinguished contemporary operatic soprano, in 1925 sang Christine in the Vienna premiere of Strauss's "Intermezzo," and the same year sang "Fidelio" with such success was repeated in Paris, London, and Stockholm. In 1928 sang the Marschallin and Leonore in "Fidelio" at the Salzburg Festival, made her debut at the Metropolitan in 1933 as Sieglinde, and in the same year sang the title role in Strauss's "Arabella."



December 13, 1938

Mr. E. H. Scott, President
E. H. Scott Radio Laboratories Inc.
4450 Ravenswood Avenue
Chicago, Illinois

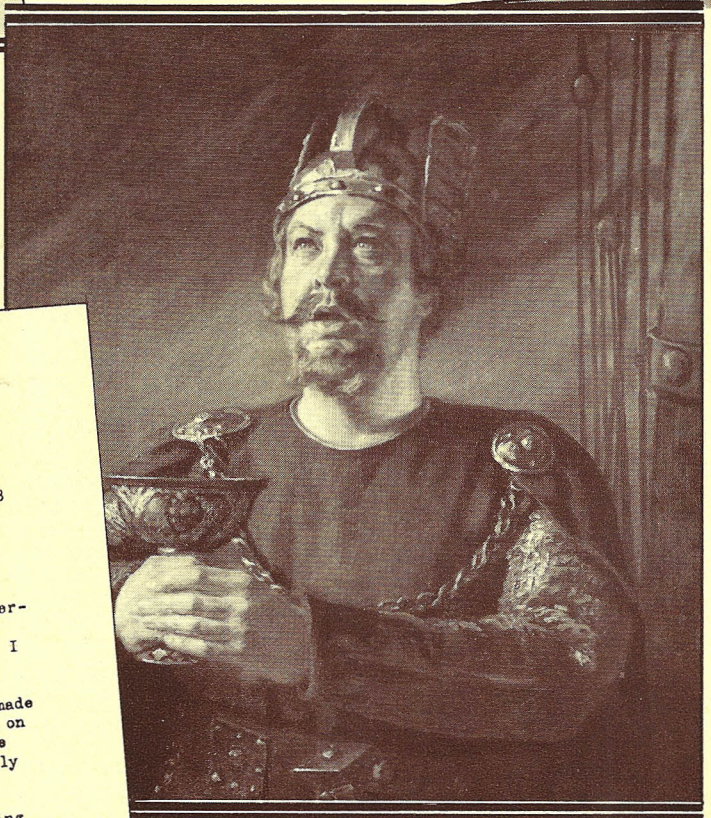
Dear Mr. Scott:

I am enjoying my Scott Phantom more every day, and it is amazing what you have accomplished in reproducing so naturally every overtone of the human voice.

This radio actually reproduces every instrument with its own characteristic tone clearly and distinctly, or the full timbre of a voice with complete naturalness. The lover of fine music has a real musical instrument in the Scott Phantom.

Very sincerely yours,

Lotte Lehmann



Lauritz Melchior

The world's greatest heroic tenor, made his first appearance in 1925 in the Wagner festival at Bayreuth as Siegfried, and his American debut as Tannhäuser at the Metropolitan Opera House in New York in 1926. On February 12th, 1938, Mr. Melchior sang Siegfried at the Metropolitan for the 100th time. His Wagnerian repertoire includes Siegmund, the two Siegfrieds, Tristan, Parsifal, Tannhäuser, and Lohengrin.



April 17, 1938

My dear Mr. Scott,

I wish to express to you the degree of pleasure that ownership of my Philharmonic radio and phonograph combination has brought me, for it is the only instrument from which I have heard perfectly natural reproduction.

Particularly is this true in the playing of recordings made by myself and my fellow artists. Only when I play them on your instrument do I hear them reproduced exactly as the artist's voice sounds originally. It makes them actually stand in my room, and sing.

Permit me to extend to you my congratulations on creating this Stradivarius of Radio Receivers.

Sincerely yours,



The Chippendale Grande

WORLD'S FINEST DELUXE CUSTOM BUILT RADIO PHONOGRAPH COMBINATION

FOR nearly 16 years in the field of radio the name SCOTT has stood for the "World's Finest". We have designed radio receivers and radio phonograph combinations that are today in use in some of the finest homes in 153 foreign countries. You will find them in palaces and castles, in the homes of the business and social leaders of Europe and America, and the treasured possession of leaders in the world of music, screen and radio.

If you had recently commissioned me to design for you the finest radio phonograph combination that advanced radio and acoustical engineering could produce—irrespective of price—the new Chippendale Grande shown

above is the instrument I would have designed.

The top door on the left drops to expose the dial of the 30 tube Scott Philharmonic, while on the right is housed the Scott Automatic Record Changer. The two center doors open to expose the very beautiful speaker grille, behind which are the three speakers. Behind the two doors at either side is space for over 100 records. Months of acoustical tests have evolved a remarkable sound chamber, which in combination with the Scott Philharmonic and Scott Automatic Record Changer has resulted in a luxurious radio-phonograph combination that is unequalled in the world today as a reproducer of radio broadcasts and recordings.

A minimum of six weeks is required to build to special order in either Mahogany or Walnut.

On the following pages are illustrated eight other distinctive Scott Consoles. Their design and quality will appeal particularly to those who prefer fine things in the home, for they are not merely a housing for the radio, but a really fine piece of furniture that will add distinction to any room. Each Scott Console is correct in every detail for the period to which it belongs, and as each one is individually HAND MADE by skilled craftsmen who have spent their lives fashioning fine things. All have that elegance, charm and distinctiveness that is associated with a fine custom made article.

SCOTT *custom* CONS



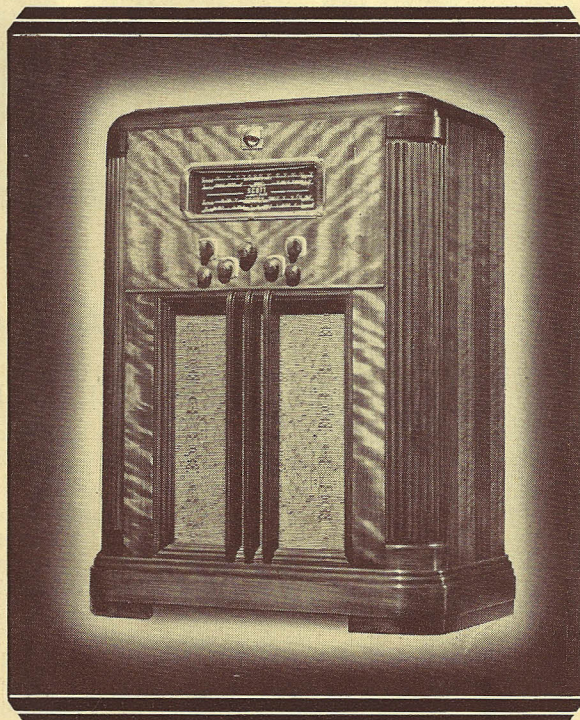
Devonshire



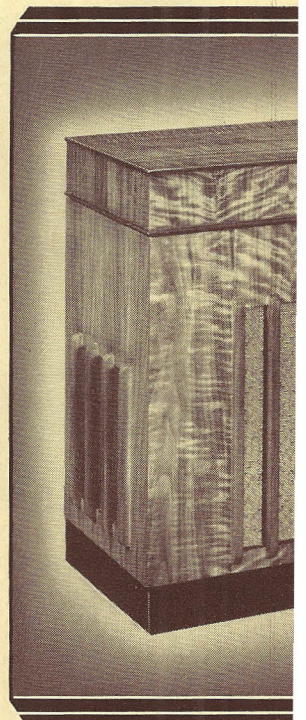
Acoustic



Acousticraft



Braemar

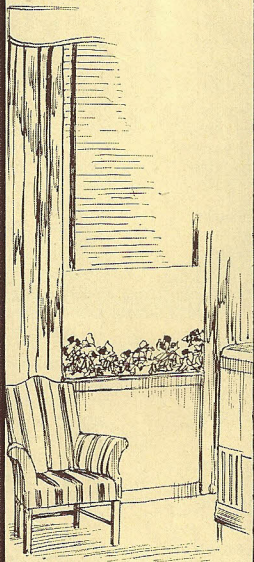


Lincoln

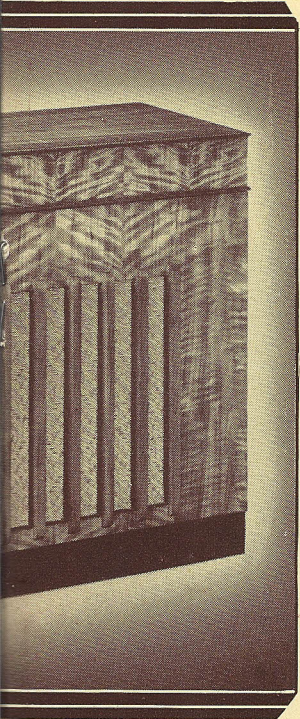
OTT n-built OLES



dam



Buckingham



den

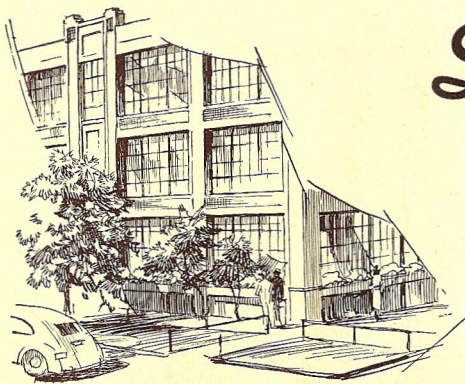


Gothic Grande



Waverly Grande

Scott Custom-Built Radio



ALWAYS ONE TO FOUR YEARS AHEAD IN ADVANCED
DESIGN AND PRECISION ENGINEERING

A Laboratory Built Instrument

SCOTT Radio Receivers are custom-built to order by highly skilled laboratory technicians—in what is generally recognized as one of the most completely equipped radio laboratories in the world. A custombuilt Scott is the *precision* instrument of radio. It is the hand made product of the micrometer and oscillograph, calibrated and tested by the most accurate measuring devices known to science, so that it will be as perfect as skilled human hands can make it—an instrument that will be a proud possession for many years.

Why does a Scott give results which the average owner of even a high-priced factory radio would believe impossible—until he has actually heard a Scott in operation? When we refer to a *custom-built* Scott, just what does it imply—in just what way is it different from the regular commercial type?

- (1) It implies an instrument built from such high quality parts that they are guaranteed against defects or breakdown for FIVE FULL YEARS—instead of the usual 90 days.
- (2) It implies an instrument which carries a money-back guarantee that it will outperform any other radio on the market. The features of design which make possible the finest in radio can be carried out only in

an instrument built in limited numbers by highly skilled technicians with years of specialized experience in building fine laboratory instruments.

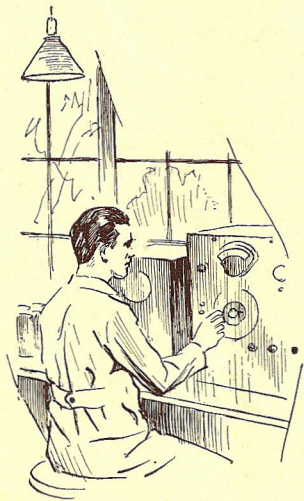
- (3) It implies an instrument that affords the listener at least *twice* the tonal range he has been accustomed to hearing on radio broadcasts or recordings as reproduced by the ordinary production-type radio.
- (4) It implies an instrument which reproduces your selection of recorded music through the loudspeaker system with a naturalness which in every way equals that of a fine High Fidelity studio broadcast from a nearby station.
- (5) It implies an instrument that can be adjusted for the purchaser's own location characteristics within certain broad limits, instead of being manufactured for just average locations, as is the case with radio receivers sold as stock merchandise.
- (6) It implies an instrument so designed that electrical interference and static can be reduced, compensated for, or often almost entirely eliminated.
- (7) It implies an instrument incorporating auxiliary controls which enable the operator to improve the quality of many records or radio transmissions, to adjust the tone of the receiver until the balance of high, medium, and low tones suits his standard of taste and the acoustical properties of the room in which the radio is located.
- (8) It implies an instrument which is approximately from two to three times as selective as the average radio receiver known to the general public.
- (9) It implies an instrument incorporating such high sensitivity that it brings in distant foreign stations which are often beyond the receiving range of ordinary radio receivers available at the present time.
- (10) It implies an instrument so accurately calibrated, adjusted and tested that it is widely

used by leading universities, broadcasting stations, and scientific laboratories for various kinds of experimental and research work where extreme precision is imperative.

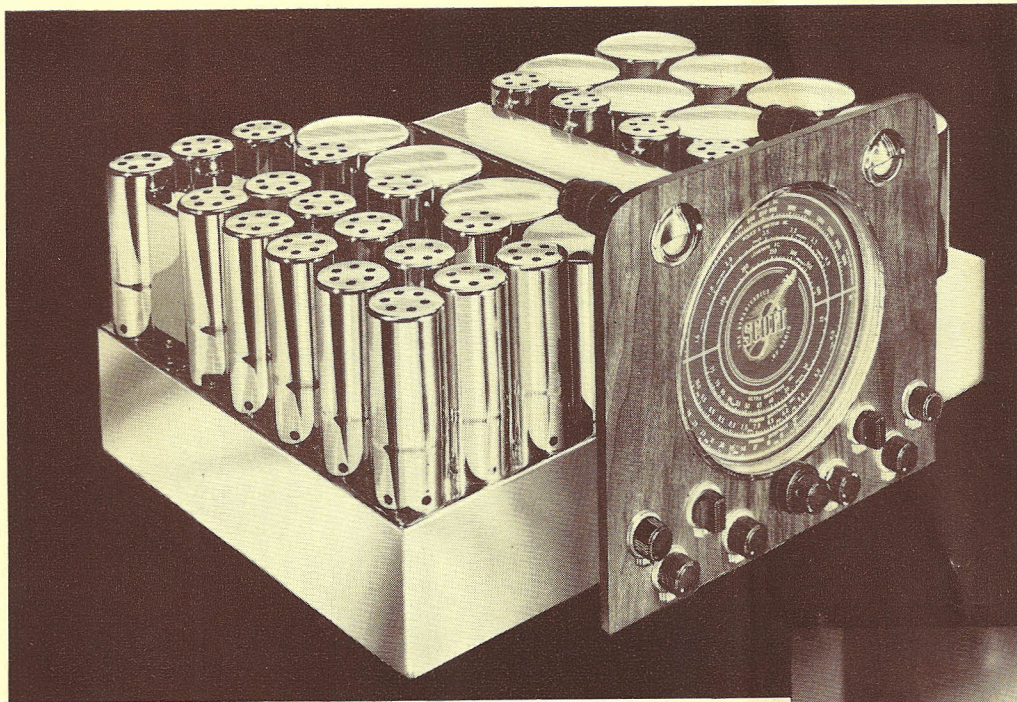
- (11) It implies an instrument that incorporates the modern improvements used in fine radio PLUS several patented features of our own research laboratories not found in home-type receivers on the market today—an instrument of such advanced design that we believe it will be up-to-date many years after it was built.
- (12) It implies an instrument which is actually built in the laboratories of its designer, under his own personal supervision, and sold direct to the purchaser.
- (13) It implies an instrument backed by an organization having over 600 specialized expert service and installation engineers located in nearly every part of the United States. For a nominal charge, our local Service Engineer, after surveying your location, will erect the proper type of antenna, install the equipment, give you expert tuning instructions, and take care of any service that may be required.

Scott Custom Built Receivers Are Not Expensive

The modest price for which a Scott will be custom built for you is as surprising as the performance of the receiver itself, for by selling direct from the laboratories to you (they are not sold through stores) you save the dealer's profit, and pay no more than is asked for many ordinary radio receivers produced by high speed mass-production methods.

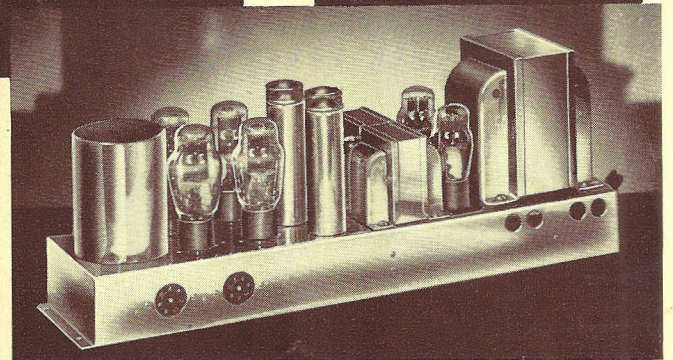


The Modern Daylight Laboratory Where Scott Receivers are Custom Built

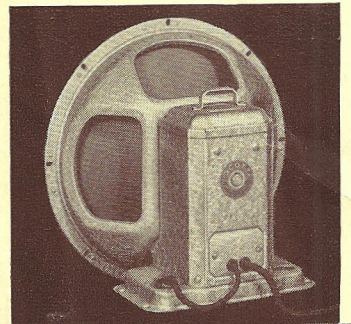
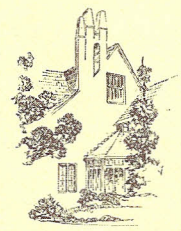


The Custom Built Scott Philharmonic Chassis

30 tube SCOTT PHILHARMONIC



The Power Amplifier and High Fidelity Speaker



WORLD'S FINEST HIGH FIDELITY RADIO RECEIVER

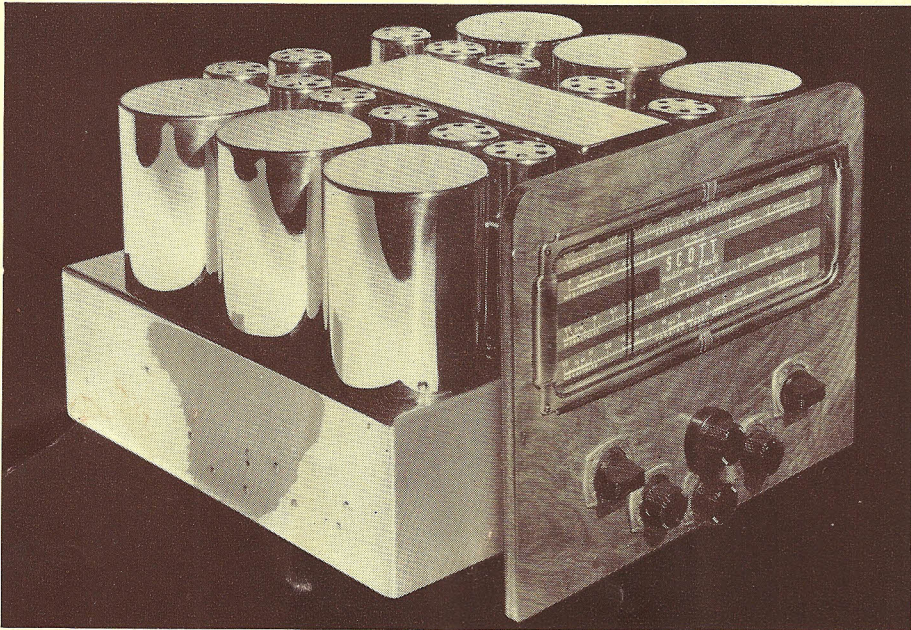
THE New 30 Tube SCOTT PHILHARMONIC is the finest instrument known to radio engineering, with performance standards which, I believe, are not even remotely approached by any other radio receiver in the world today. Incorporated in the design of this new SCOTT are many patented developments of our Research Laboratories which are used exclusively in Scott receivers. All of the specialized knowledge gained in nearly 16 years of continual advanced research and building of hand-made, super-powerful super heterodyne receivers for scientists, musicians, and critical laymen listeners in all parts of the world, has been incorporated into this custom-built precision instrument.

The 30 Tube SCOTT PHILHARMONIC is designed primarily for those who want the finest de luxe receiving equipment that money can buy, and in the limited space below will be found a few of the many advanced and highly developed features incorporated in this amazing instrument.

- Six wavebands covering all wavelengths from 4.7 to 2,000 meters
- Overall Fidelity practically flat from 30 to 16,000 cycles, approximately four times the tonal range of average production-type receiver
- Built-in Distortionless Push-Pull Program Volume Range Expander, which restores the dramatic depth lacking in orchestral music when

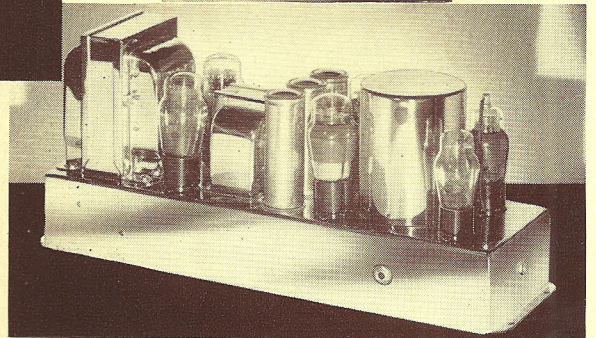
- heard over the average radio or electric phonograph
- Cathode Ray Volume Range Expander Indicator
- Five Noise Reducing systems, operative on both electrical interference and atmospheric static
- Two Tuned Band-Passed R.F. stages on all tuning bands
- Four highly developed Litzendrath air tuned stages of I.F. Amplification
- Automatic Needle Scratch Suppressor which eliminates annoying needle scratch from records when reproduced at low volume without affecting the Fidelity at normal volumes
- Perfected Inverse Feed-Back system which smooths out "dips" and "peaks" in loud speaker response, giving richer and more natural bass
- Undistorted Class "A" Power output 40 watts (60 watts peak), approximately seven times that of most production type radios
- Reproduces any degree of volume from the slightest whisper to full auditorium volume without distortion or fuzziness
- Continuously Variable Selectivity from 2 to 16 Kc., approximately five times the Selectivity range of most production-type radios
- Continuously Variable Sensitivity from .5 microvolts to 20 microvolts (approximately six times more sensitive than the average production-type radio). Sensitivity can be instantly adjusted to exact degree required for difficult locations and reception conditions
- Separate Continuously Variable Bass and Treble Controls for (1) improving Fidelity of poorly transmitted broadcasts and low-fidelity records, (2) for adjusting the tonal response of

- the Philharmonic to your individual ear-sensitivity, and (3) for matching the receiver to the acoustical properties of the room in which it is located
- Special heavy duty 15" High Fidelity Loud Speaker
- Two Separate Automatic Gain Control systems acting on both R.F. and I.F. Amplifiers (instead of single Automatic Volume Control on I.F. Amplifier ordinarily used for control of fading signals)
- Scott Supershield Antenna Coupling system
- Tone Balanced Volume Control automatically strengthens and emphasizes bass or treble overtones that usually drop out of hearing when the average radio is played at low volume
- Stabilized Oscillator
- New Laboratory-type Tuning Dial incorporating all the precision, legibility, and dependability found in expensive scientific meters
- Dial Calibration accurate to within .2 of 1%
- Two separate Tuning Speeds
- Silent tuning between stations
- Improved Cathode Ray Tuning Indicator
- Terminals for instantly attaching record player (automatic or manual)
- All exterior parts heavily chromium plated
- All coils and transformers impregnated and sealed against climatic and atmospheric extremes
- 30 latest type tubes used on all wavebands
- Connections provided for extension speakers
- 30 Day Home Trial to prove absolute superiority over any other radio receiver available today
- Guaranteed Five Years against defects (except tubes) instead of the 90 day guarantee given with production-type radio receivers.



The Custom Built Scott Phantom Chassis

19-tube SCOTT Phantom



The Power Amplifier and Speaker

THE New SCOTT PHANTOM is a super-efficient, Custom Built 19 tube receiver, built with the precision of a fine watch and with the same quality of parts used in the finest laboratory precision equipment. We believe there is no other receiver in the world today (excepting only the 30 tube SCOTT PHILHARMONIC) which will even approach its distance getting properties, its ability to separate stations and its tonal perfection.

Incorporated in the design of the SCOTT PHANTOM and the Scott Super Double-Doublet Antenna System are several new principles that so greatly reduce the effects of "man-made" static such as interference from automobile ignition systems, vacuum cleaners, oil heaters, and other types of electrical interference, that distant American and foreign programs which are often completely blotted out or badly marred by this interference and noise on the average radio, can be brought in on the SCOTT PHANTOM with the noise and interference so greatly reduced that the programs can be enjoyed.

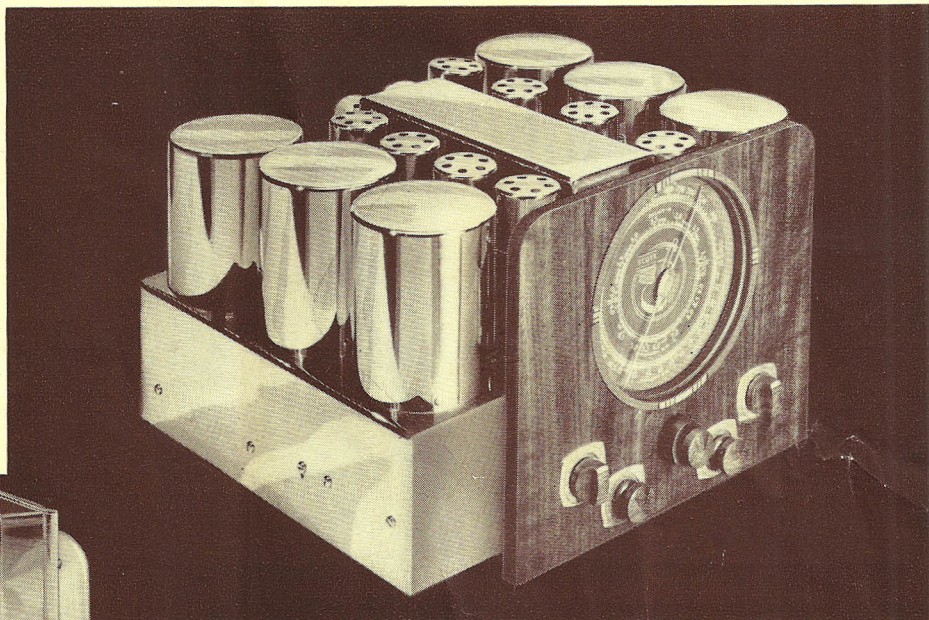
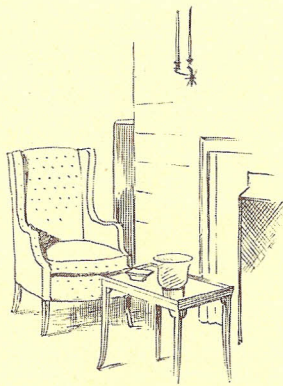
The new Custom Built SCOTT PHANTOM has only been made possible by the fact that in our Reserach Laboratories all work is carried on *with the sole purpose of securing greater efficiency and better performance*, for Scott radio receivers are designed and built to order in very limited numbers for those who want something better, and are not satisfied with the results secured on the ordinary mass production type radio receiver.

A comparison of the outstanding features of the SCOTT PHANTOM shown below with those of any other radio will quickly show why Scott Custom Built Radio receivers are

used in every part of the world where reception conditions are difficult, or where a high standard of Fidelity is desired.

- Four wavebands covering all wavelengths from 13.6 to 540 meters
- Can be equipped with new ultra high frequency television band from 25 to 62 megs at small extra charge
- Overall Fidelity practically flat from 30 to 8,500 cycles, approximately twice the overall fidelity range of most production-type radios.
- Four Static and Electrical Interference Reducing systems
- Special R.F. Amplifier on all wavebands giving efficiency of two stage R.F. Amplifier used on ordinary radio receivers
- Three Litzendrath air tuned stages of I.F. Amplification
- Automatic Needle Scratch Suppressor eliminates needle scratch from records without affecting Fidelity at normal volume
- Inverse Feed-Back system improves loudspeaker response, resulting in finer Bass reproduction
- Undistorted Class "A" Power Output 13 watts (16 watts peak), approximately three times the undistorted output of average radio
- Three degrees of Selectivity provide razor-sharp selectivity for reception of distant foreign stations (3.5 Kc.), with normal Selectivity for medium distance reception (8 Kc.), and 12.5 Kc. for High Fidelity reproduction from local or nearby stations
- Two degrees of Sensitivity, .6 microvolts for reception of extremely distant stations and 10 microvolts for nearby or local reception
- Separate Continuously Variable Bass Control incorporating new full range high "Q" Bass Bi-Resonator system
- Separate Continuously Variable Treble Control by means of which low-Fidelity broadcasts and ponential high frequency cone to secure per-

- fect distribution of the higher frequencies to all parts of the room
- Two separate Automatic Gain Control systems (operating on both R.F. and I.F.) holds volume from "fading" stations at even level
- Scott Supershield Antenna Coupling system reduces electrical interference picked upon antenna lead-in and increases efficiency of receiver-antenna combination by a factor of approximately 100 to 1
- Tone Balanced Volume Control automatically strengthens and emphasizes the extremely low and high overtones that drop out of hearing when the average radio is played at low volume
- Stabilized Oscillator
- European type slide-rule edge-lighted dial with large easily read figures
- Dial Calibration accurate within .2 of 1%
- Two tuning speeds
- Silent tuning between stations
- Improved Cathode Ray Tuning Indicator
- Terminals for instantly attaching record player (automatic or manual)
- Economical Operating cost—uses less than 1/4 the electricity consumed by your electric iron
- Non-critical to antennas—may be used with any type, but maximum efficiency secured with new Scott Super Double-Doublet Antenna system
- All exterior parts heavily chromium plated
- All coils and transformers impregnated and sealed against climatic or atmospheric extremes
- 19 latest type tubes used on all wavebands
- Connections provided for extension speaker
- 30 Day Home Trial to prove absolute superiority of new SCOTT PHANTOM. If it does not outperform any receiver you test against it, side by side—and you are to be the sole judge—you have the privilege of returning it at any time within 30 days after delivery and purchase price will be refunded
- All parts (except tubes) guaranteed Five Years against defects.



The Scott High Fidelity Speaker Used with Scott Super XII

The Super XII Power Unit

The Custom Built Scott Super XII Chassis

The New SCOTT Super XII

THE new SCOTT SUPER XII is an extremely efficient, compact, Custom Built, 12 tube receiver designed for those who do not have the space to install a large radio and who do not desire many of the special features incorporated in the larger 30 tube Philharmonic and the 19 tube PHANTOM. Nothing has been sacrificed in efficiency, for it is hand-made by the same skilled technicians who build the PHILHARMONIC and PHANTOM models—and from the same high quality parts, proved by the fact that it is sold with the same Five Year Guarantee.

The SCOTT SUPER XII, although modest in price and compact in size, will give you the same remarkable DX performance and High Fidelity reproduction that has made a SCOTT generally recognized all over the globe as the "World's Finest Radio." Below are a few of the features incorporated in this hand-made receiver, many of which will not be found in any other radio receiver being sold today.

- Four wavebands covering all wavelengths from 13.6 to 540 meters
- Can be equipped with new ultra high frequency television band from 25 to 62 megs. at small extra charge
- Overall Fidelity 30 to 7,500 cycles, approximately twice the fidelity range of most production-type radios
- Three Noise Reducing systems operating on both electrical interference and atmospheric static
- Special R.F. Amplifier used on all wave bands
- Two stage Litzendrath I.F. Amplifier
- Undistorted Class "A" Power Output of 9 watts with a peak output of 12 watts (approximately twice the undistorted volume obtained from the average radio)
- New Expander and Contractor Selectivity system provides two degrees of Selectivity, 5 Kc. for DX reception and 12.5 Kc. for High Fidelity reproduction
- Sensitivity under 1 microvolt, approximately four times the Sensitivity of most production-type re-

- ceivers
- Separate Continuously Variable Bass Control incorporating full range high "Q" Bass Bi-Resonator system, enables you to amplify bass tones up to 15 db. (approximately five times) without affecting the original natural bass quality
- Variable Treble control combined with Selectivity control provides higher Fidelity reproduction on both radio broadcasts and record reproduction
- Special 12" High Fidelity loudspeaker
- Highly developed Automatic Gain control on both R.F. and I.F. amplifiers to keep programs from distant stations at even volume level
- Scott Supershield Antenna Coupling system which reduces electrical interference picked up on antenna lead-in, and increases efficiency of receiver-antenna combination by factor of approximately 100 to 1
- Tone Balanced Volume Control which, when you are listening at low volumes, automatically strengthens or emphasizes the extremely low or high overtones that usually drop out of hearing on ordinary radio receivers
- Stabilized Oscillator to eliminate the distortion or "twisting" of weak distant short-wave broadcasts
- Precision calibrated, extremely legible, edge-lighted dial
- Improved Cathode Ray Tuning Indicator
- Terminals for instantly attaching record player (automatic or manual)
- Economical operating cost—uses less than 1/5 the electricity consumed by your electric iron
- Non-critical to antenna, may be used with any type, but extremely efficient when used with new Scott Super Double-Doublet Antenna
- Chromium plated
- All coils and transformers impregnated and sealed against climatic or atmospheric extremes
- 12 latest type tubes used on all wavebands
- Connections provided for extension speaker
- 30 Day Home Trial to prove superiority over any other make of radio receiver available today
- All parts (except tubes) guaranteed Five Years against defects.

New Scott Super Double-Doublet Antenna System

Few owners of radio receivers fully realize the very important part the antenna plays in securing the strongest and quietest reception from distant "hard-to-get" stations. To most people, the antenna is simply a piece of wire strung over the roof or around the rafters in the attic, and probably not more than one in a thousand actually realize that it is possible, simply by substituting a modern efficient antenna system for the standard "L" type antenna, used with most receivers, to hear stations with good loud speaker volume, which at present cannot be received at all, or are so weak that they can barely be heard.

The new SCOTT SUPER DOUBLE-DOUBLET ANTENNA SYSTEM has incorporated in it a special self-selecting filter unit which automatically tunes the antenna to the principal shortwave and broadcast frequencies, effectively boosting the broadcast band signal sent down the antenna lead-in from 8 to 10 times over the conventional doublet. This antenna system, in combination with the Scott Supershield Antenna Coupling System built into the SCOTT PHILHARMONIC, PHANTOM, and SUPER XII receivers, represents, I believe, the finest DX and most efficient noise-reducing system available today. It not only assures maximum signal strength on all stations, both shortwave and broadcast band, but also quieter reception, especially in noisy locations. Although the SCOTT PHILHARMONIC, PHANTOM, and SUPER XII will provide satisfactory reception with any of the conventional antenna systems, it is strongly recommended that the new antenna system be used with these models.

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TELEVISION —

A Few Timely Facts About an Extremely Interesting Development

Last October following the announcement made by David Sarnoff, President of the Radio Corporation of America, that regular Television broadcasts from RCA's Television transmitter on top of the Empire State Building would start with the opening of the New York World's Fair, practically every newspaper in the country carried the heading—"Television When New York Fair Opens", or a similar headline. This announcement has given thousands of radio enthusiasts all over the country the impression that this spring they will be able to purchase a perfected Television receiver, with which they will be able to see and hear the artists on radio programs, as well as sporting or news events as they are happening. I believe this impression is a little optimistic. In this article I have only space to list one or two of the major problems that the Television research engineers still must solve before Television will be more than an interesting scientific novelty to the average radio enthusiast.

Television Transmission Range Very Limited

One of the biggest problems confronting Television engineers at present (outside the major problem of who is going to pay for putting a regular daily Television program on the air), is *how to obtain satisfactory reception over a wide area*. At present, Television waves are like light waves, and can only be picked up consistently about as far as the eye can see from the top of a high building on a clear day, that is, about 50 miles. While Television programs have been picked up occasionally at greater distances than 50 miles from the Television transmitter, the fact remains that *Television reception outside of the 50 mile radius is very uncertain*. It will be some time, probably several years, before anyone living outside the metropolitan area of a few of the larger cities will be able to pick up Television programs regularly, unless some startling new discovery is made which will increase the present transmission range of Television.

How "Man-Made Static" Interferes With Television

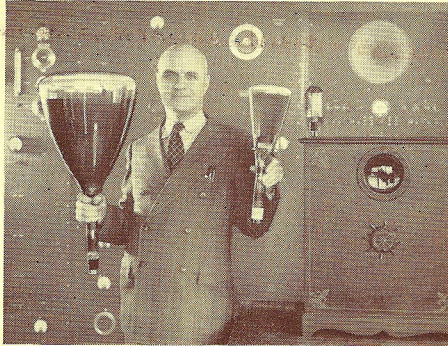
Another serious problem about which very little has been said in the newspapers, *but one which must be solved before Television will be completely satisfactory as a means of entertainment in the home*, is the elimination of the effects of "man-made" static, such as that created by the ignition systems of passing automobiles and trucks. Even if you are located within 50 miles of a Television transmitter, you must have an exceptionally good location, absolutely free from electrical interference to enjoy Television.

You will find when "looking in" at a Television broadcast that whenever an automobile or truck passes, or there is any kind of electrical interference, the scene will suddenly be obscured by a deluge of white flashes, as if you were looking at the picture in a blinding snow storm. Much has been done to eliminate the effects of this type of interference on sound broadcasts, but as far as I know, *no one has yet found any way to successfully reduce to any extent or eliminate this type of interference in Television*.

Television Pictures Small at Present

The Television pictures you will see in your home on the expensive Television receivers that will be introduced this spring, will be about the size of a business letterhead, eight by ten inches in size (see the February 20th issue of "Life"), while the more moderately priced sets will only show pictures $\frac{1}{3}$ or half this size. This means that scenes such as prize fights, plays, or close-ups of the actors on a program will be interesting, but Television pictures about eight by twelve inches or less of such events as football and baseball games you will find soon become very tiring to the eyes, for the figures are so small. I know this from personal experience, for I recently made two trips to England to study Television, and during this time had an opportunity of watching a special Television broadcast in London of the Wimbledon tennis matches.

Undoubtedly, a perfected Television picture projecting unit will be developed that can be sold at a reasonable price, that: (1) Will throw a Television picture on a screen two or three feet square. (2) Will be trouble-proof and easy for the average man to keep in perfect condition without expert assistance. (3) Will not be liable to become obsolete within a comparatively short period by new developments. **WHEN THIS ARRIVES, TELEVISION WILL PROVIDE REAL ENTERTAINMENT.**



The photograph above shows one of the "Television" receivers the public purchased in 1929—about 10 years ago when it "was just around the corner"—which showed a crude picture about 4" square. Compare the size of the cathode ray tube in my left hand with the small Kino tube shown next to it that was used in the old Television receiver to produce the same size picture. The very latest and largest Television Kinescope tube is shown in my right hand, and gives some idea of the size of tube required to obtain a picture eight inches by ten inches.

Television Stations Will Never Make Obsolete Our Present Sound Broadcasting Stations

Many do not know that Television will not be used on the broadcasting channels on which we now listen to regular programs due to the fact that the pictures transmitted from a Television station requires a band 600 Kc. wide, or as much space on the dial as is now used by the 371 stations on this part of the broadcasting band at the present time. I don't believe we want to put 371 broadcasting stations off the air to provide one Television station. *For this reason we will always require a radio receiver similar to those we now have to tune in the stations on the regular broadcast and shortwave bands*, but in addition in the larger cities we should now also have an extra band capable of tuning in the Ultra High Frequencies on which the Television sound broadcasts will be transmitted. Television will certainly

not make obsolete our present sound radio receivers as so many appear to believe, *but will simply add another wave band to it.*

Scott Owners—Present and Future—Can Have Their Receivers Equipped Now For Television Sound

To enable Scott owners in the vicinity of Television transmitters an opportunity to listen to Television broadcasts, as well as to the amateurs, experimental, and the two-way police broadcasts that can also be heard on this band, I can equip the Scott Super XII, and the Scott Phantom with a special Television Sound and Ultra High Frequency Band at a small extra cost. The Scott Philharmonic has, of course, always had this Ultra High Frequency Band incorporated in its design.

In line with my usual policy of incorporating any new improvements in our previous models whenever possible, I am glad to announce that present owners of the Scott Super XII, and Scott Phantom can send their receivers back to the laboratory and have them equipped with this special Television sound band at a charge of only \$19.50, so bringing them right up to date.

Scott Television Unit Available in April

Although the r.f., osc., and 1st det. are common, a Television set is actually a combination of two receivers, one to tune in the sound which is heard thru the loudspeaker, the other to tune in the picture which is seen on the face of the Kinescope. Any radio receiver that covers the Ultra High Frequency Band (about $7\frac{1}{2}$ meters) will reproduce the sound, and *this part of Television presents no new problems whatsoever*. In April I will have available for Scott owners a complete Television Unit to receive the Television picture transmissions. This Television Unit will be the best that Television engineering knows how to build at present, but it is only fair to warn, that as no one can tell what new developments in both the transmission and reception of Television pictures will take place within the next few months or years, the best Television Unit we know how to build now may be obsolete within a comparatively short time.

However, if you live in a city within 50 miles of a powerful Television transmitter, have thoroughly considered the present limitations of the art, and still wish to enjoy the novelty of seeing and hearing Television broadcasts, then I would strongly recommend that you purchase your new receiver equipped with the Ultra High Frequency Television band for receiving the sound, but purchase a separate Television Unit to "look in". In this way it will only be necessary to replace the Television Unit, instead of a complete expensive sight and sound receiver, when new developments come along in picture transmission. This editorial on Television has been prepared to answer the hundreds of requests I have received asking for information on this new development, and represents the facts as we see them. Through our London Laboratories, and our licensing agreements with the R. C. A. and Hazeltine Laboratories, we are keeping in close touch with all of the new developments in Television, and Scott owners can be assured that in the future, as in the past, *every worthwhile development will be immediately incorporated in our receivers as soon as it has passed the experimental stage.*

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