

Technical Questionnaire

THE SCOTT ALLWAVE DELUXE

Hundreds of letters come to us asking Technical Questions about the New SCOTT ALLWAVE DELUXE RECEIVER. Below will be found our answers. They are arranged in this simple form to enable you to compare the specifications of the DELUXE RECEIVER with any other set that claims to compare with it, then form your own conclusions.

What is the basic circuit in SCOTT receiver?

Superhet. For over eight years we have specialized in the designing and building of nothing but superheterodyne receivers and have pioneered many outstanding features, a number of which are now incorporated in superheterodynes built by other manufacturers.

How many tubes does it use?

12 tubes.

How many tubes of each type are used?

4 58's, 3 56's, 2 45's, 1 57, 1 Wunderlich and 1 280 type tubes.

Does your receiver cover all wave lengths between 15 and 550 meters?

Yes.

What is the method used for changing short wave bands?

The Rotary coil changer used in the SCOTT ALLWAVE DELUXE RECEIVER has been proved to be more efficient, in actual reception tests, than either plug-in coils, tapped coils, or separate coils and selector switch, because this design enables the wiring to be arranged so that it goes practically direct to the tube contacts and eliminates the long leads required with other methods. See illustration on page 7 of Technical brochure.

Is it absolute one dial tuning, that is one knob, one dial, tuning on all wave bands?

The SCOTT ALLWAVE DELUXE is absolute single dial control. This is secured by a special circuit developed in our Laboratory which is protected by patents pending. This circuit keeps both the R. F. and oscillator circuits perfectly tracked with each other on all wave lengths.

Is tuning dial accurately calibrated in kilocycles for the broadcast band?

Yes.

Is each short wave band calibrated so that user of your receiver can quickly and accurately tell what part of the dial any particular short wave station can be found?

Yes. Some manufacturers provide a list of a few short wave stations and the APPROXIMATE DIAL SETTING at which they can be received. This must not be confused with the ACCURATE CALIBRATION of the WHOLE SCALE on ALL WAVE BANDS by which it is possible to tell the dial setting for any wave length.

Is receiver equipped with visual tuning?

Yes.

Is receiver equipped with full automatic volume control?

Yes.

Is receiver built to a precision laboratory standard by competent laboratory workmen who work on a straight salary basis?

Yes. SCOTT RECEIVERS are built as carefully as the finest precision instruments. Even although one may not be an engineer an examination of a SCOTT RECEIVER with any other radio receiver will quickly convince even the most skeptical of the high quality built into it. SCOTT RECEIVERS are built by experienced laboratory mechanics who are under no pressure to turn out a tremendous quantity of work nor is there any incentive for them to hurry through their work as in the case where a man is working on a piece work basis.

How many years have you been building superheterodyne receivers?

8 years.

Do you maintain your own fully equipped research laboratory complete with all necessary precision equipment to make scientific performance measurements, such as selectivity curves, fidelity curves, sensitivity curves, power overload curves, and complete precision laboratory equipment for making standard frequency measurements on both short and long wave lengths?

Yes. The E. H. SCOTT RADIO LABORATORIES is probably one of the most completely equipped Laboratories in the country and an invitation is extended to you to visit us, when we will be glad, not only to show you a SCOTT RECEIVER but also conduct you through the Laboratory and explain to you the very complete and up-to-date laboratory equipment we use in the developing of SCOTT RECEIVERS and the checking and calibrating of them before they leave the Laboratory. A brochure describing our Laboratory and showing a number of views will be gladly mailed on request.

What year did you start building and selling receiving equipment to tune in foreign stations on the short waves?

1928. In this year we started building the SCOTT SHIELD GRID NINE, the first receiver to make efficient use of the new screen grid tubes. This receiver by means of shielded plug-in coils covered the wave bands between 20 and 550 meters. The next year we introduced the SCOTT A.C. TEN and with it a short wave converter, by means of which short wave stations could be tuned in. In 1930 we introduced one of the first A.C. Allwave receivers. This receiver has made many remarkable records. Now comes the new SCOTT ALLWAVE DELUXE.

After sale is made do you keep your owners regularly supplied with up-to-date information advising them of the exact time of the day the different short wave stations can be heard on your receiver in America?

Yes. We are continually compiling data from information secured in our own tests on foreign stations and from that sent in by our owners who tell us the various times of the day they are tuning in foreign short wave stations on their SCOTT RECEIVERS. This information is tabulated from time to time and sent out to owners in the form of bulletins. We believe there is no other concern in the country that keeps in as close touch with their owners as the E. H. SCOTT RADIO LABORATORIES. We do this: First—Because we want every owner to get maximum pleasure and enjoyment from his receiver; Second—We believe the information we supply from time to time helps them to attain this end. The good will this policy has built up for us has been responsible for the fact that on an average of 40% of our sales each month are REPEAT sales, secured through SCOTT Owners recommending our receivers to their friends.

What distance range do you guarantee I will get on your receiver in my home on the broadcast band?

Our guarantee is probably the broadest given by any radio manufacturer. We guarantee that a SCOTT ALLWAVE DELUXE RECEIVER will bring in stations, either during day or night, with more volume, clarity, better tone, and from a greater distance than any other receiver, regardless of price, that can be tested against it. This guarantee means you are assured that a SCOTT RECEIVER will give you better results at a greater distance range than any other receiver you can buy today.

Do you give a definite money back guarantee that I will get foreign station reception regularly with loud speaker volume in my home?

Yes. In separate folders you will see the report of reception tests carried out with SCOTT RECEIVERS in which it is proved they can bring in, with loud speaker volume, every

week of every month of the year, foreign stations over 9000 miles distant. Between January 1, and June 30th, 1932, SCOTT Owners sent in over 19,000 detailed logs of programs they have received on their SCOTT RECEIVERS from broadcasting stations located in 46 foreign countries.

Do you supply a selectivity curve made by a recognized independent laboratory?

Yes. The broad statement that a receiver has absolute 10 K. C. selectivity means nothing because the poorest receiver can claim 10 K. C. selectivity under certain conditions. For example: Two stations of equal field strength at the receiving point, each 10 K. C. apart, can be absolutely separated even on the cheapest receiver. The selectivity of a receiver or its ability to separate stations is determined by the relative field strength of the stations at the receiving point. An analysis of the Selectivity Curve of the SCOTT ALLWAVE DELUXE will be found on page 10 of the Technical brochure.

Do you supply sensitivity curve of your receiver made by a recognized independent testing laboratory?

Yes. A curve showing the sensitivity of the SCOTT ALLWAVE DELUXE at frequencies from 1400 K. C. to 550 will be found on page 10 of the Technical brochure.

What is the percentage of noise to signal strength with receiver adjusted to sensitivity of 1/4 microvolt per meter at 1000 kilocycles?

5%. Extreme sensitivity is of little use unless it can be used. The limiting factor in sensitivity is the ratio of noise to signal strength. The percentage of noise to signal can be measured absolutely on laboratory instruments and is the best guide. The noise level of a receiver can be roughly tested in the following manner:

Disconnect antenna and ground, turn volume control on full. If the natural noise level of the receiver is low, practically no sound will be heard coming from the speaker. If you hear a loud sound as if a steam pipe had burst, you are listening to the noise generated in the receiver itself. It will be noted that although the sensitivity of the SCOTT ALLWAVE DELUXE is higher than has ever before been secured in any other radio receiver, the noise level is actually from 30% to 80% lower than that of receivers which do not have a fraction of the sensitivity of this new model.

Do you supply fidelity curves made by a recognized independent laboratory?

Yes.

Do you use tone control on your receiver?

No. The reason we do not use tone control on our SCOTT ALLWAVE DELUXE can best be answered by asking another question: Do you believe a gadget could be clamped in the mouth of John McCormack that would improve his voice? There is no more necessity for tone control in a properly designed receiver to improve the tone, than there is for a gadget to clamp in John McCormack's mouth to improve his voice.

What is the AC hum in the output stage in microwatts with audio volume control turned full on?

Less than One Microwatt

Do you take any special precautions to protect parts in humid climates?

Yes. SCOTT RECEIVERS are designed to operate under the severest climatic conditions. There are many parts of the world where they are the ONLY receivers that will continue to give satisfactory operation after they have been in use a short time. While this extreme care is an absolute necessity in climates where weather conditions are unfavorable, it is a tremendous advantage to have a receiver so constructed that weather conditions do not affect it in any locality. It means that you are assured of uninterrupted service for many years to come.

Are the I. F. amplifier units specially impregnated and treated to insure that they will retain their original characteristics under extreme climatic conditions?

Yes.

Is the adjustment of the I. F. coupling units so stable and permanent that they are adjusted on sensitive instruments and sealed and are guaranteed to retain their calibration indefinitely?

Yes. In the SCOTT ALLWAVE DELUXE the I. F. coupling units used are radically different in design to that employed in any other receiver and are a product of our Research Laboratory. Each I. F. stage consists of a highly developed tuned impedance coupling circuit in which each stage is perfectly shielded from each other and from the other circuits in the receiver. This design enables us to make use of the full amplification of the new triple screen grid tubes. This has, heretofore, been considered impossible of accomplishment owing to the high noise level or tube hiss encountered with other methods of I. F. amplification. Their design and the special treatment given is such that they will retain their original calibration indefinitely.

Is there a variable adjustment on I. F. coupling units permitting the calibration of the unit to be altered by others outside your laboratory?

No. The design and climate proofing treatment given each I. F. stage is such that once they are properly adjusted they will hold this adjustment permanently. This is a comparatively recent development. Heretofore, it has been necessary to provide an outside adjustment to enable the I. F. coupling units to be adjusted from time to time when humidity or climatic conditions altered the characteristics of the coupling units.

Are the major parts used in receiver standard production parts such as are generally used in other receivers or are they specially designed to your own specifications, precision built and laboratory tested?

The only parts used in a SCOTT RECEIVER that are generally used in other receivers are tube sockets, binding posts, AC switch, wooden tuning knobs and grid clips. All other parts, such as variable condensers, dial, coil changing mechanism, speakers, transformers, choke coils, tube shields, R. F. coils, I. F. coils, chassis and amplifier bases, tuning meter, etc., are specially designed and used exclusively in the SCOTT ALLWAVE DELUXE RECEIVER.

How many years do you guarantee parts of receiver (excepting tubes) against mechanical defects or breakdown?

5 years. For years all parts used in SCOTT RECEIVERS have had such high safety factors that a breakdown of any part is a rare occurrence. During the eight years we have been selling radio receivers we have had very positive proof of the workmanship and quality built into them, and it is with this knowledge of the service SCOTT RECEIVERS have been giving their owners that we have no hesitation in absolutely guaranteeing every part in them against any defect and will replace any part that becomes defective within five years.

Are provisions made for either phonograph or microphone?

Yes.

Are the consoles used with your receiver exclusively designed for it ONLY or are the consoles used regular stock models which are available to other radio manufacturers?

Specially designed. The brochure, "SCOTT CUSTOM BUILT CONSOLES," describes some of the fine cabinets we have designed for the DELUXE chassis. Every console shown in this folder has been designed exclusively for SCOTT RECEIVERS.

E. H. SCOTT RADIO LABORATORIES

Makers of Fine Custom Built Radios

4450 Ravenswood Avenue

CHICAGO