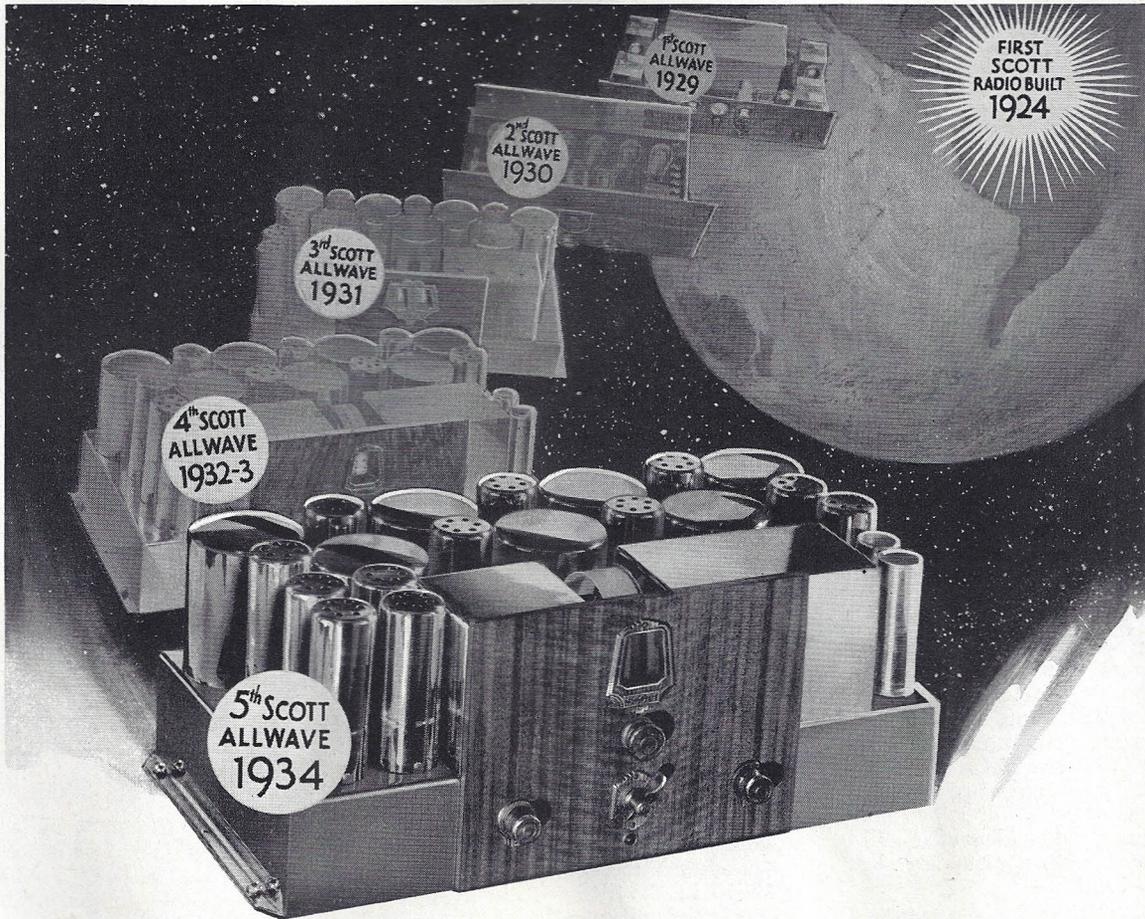


The Scott News

Vol. 7

SEPTEMBER, 1934

No. 7



Why The Scott Allwave Fifteen is Radio's Finest Allwave Receiver

Within the past few months a large number of radio manufacturers have just discovered that world-wide reception with an ALLWAVE receiver is actually possible. This means that once again the radio industry has followed the pioneering of the Scott Laboratories in a major radio development.

During 1928 we began our development of a receiver for the reception of broadcast (not code) signals on the short wave as well as the broadcast band, with the result that in 1929 we introduced our first

ALLWAVE receiver, the SCOTT SHIELD GRID NINE, which tuned from 20 to 550 meters. Since that year EVERY SCOTT RECEIVER has been an ALLWAVE.

In looking through some back issues of the "SCOTT NEWS," which is used to acquaint our present owners and prospective customers of the latest developments in our Laboratory, I find in the issue of January 1932, just two and one half years ago, a very enlightening editorial on world-wide reception, part of which reads as follows:

"There is so much information in this issue on short waves that a long editorial is unnecessary. A glance through its pages tells a startling story, for it proves beyond all question of doubt that the day of regular, consistent, day after day, reception of broadcast stations in all parts of the world with a SCOTT ALLWAVE RECEIVER has arrived—that World-wide reception is here!"

Then follows probably the most significant paragraph in the editorial, and remember this was written exactly TWO

AND A HALF YEARS ago. The paragraph reads as follows:

"Just one year ago I made the statement that any receiver that did not tune the short waves as well as the broadcast band would be obsolete. I did not prove to be a very good prophet for we are still practically alone in the short wave field."

Today, however, practically every manufacturer now recognizes WHAT THE SCOTT LABORATORY DISCOVERED OVER FIVE YEARS AGO, that a radio to give its owner ALL that is on the air, MUST tune the short waves, as well as the broadcast band. In other words, it must be an ALLWAVE receiver.

WHICH WOULD YOU CHOOSE?

Suppose you found it necessary to undergo an operation for some complaint and had your choice of two surgeons; one a man well known in his profession and with years of experience, another who had just received his doctor's degree, which surgeon would you prefer to perform the operation on you? What a ridiculous question you say. "Of course, I would rather have the experienced man, but what has that to do with the buying of an ALLWAVE receiver?" It means just this—

Practical experience in designing and building ALLWAVE receivers is just as necessary for the receiver designer and manufacturer whose aim is to produce a successful ALLWAVE receiver, as it is to the surgeon whose skill is to be depended on to perform a successful operation.

YEARS OF EXPERIENCE COUNT

Here at the Scott Laboratory we have probably had more years of experience than any other radio manufacturer in the industry in the building of high powered ALLWAVE custom built receivers, and it is quite logical to assume that a laboratory with such a wealth of experience behind it in the ALLWAVE field, will know more about the designing and building of an ALLWAVE receiver than the manufacturer just starting out to build one.

Perhaps it would be interesting for those not familiar with the history of the Scott Laboratory to know something of the years of experience behind the SCOTT ALLWAVE FIFTEEN. During 1922, 1923, and 1924 hundreds of our readers who built their own sets will remember the articles published by Mr. Scott in over 100 daily newspapers in U. S. A. and Canada, containing circuit and construction diagrams. From the information given in these articles many thousands of receivers have been constructed by home builders. During this period there was actually built in his experimental laboratory, and described in the various articles, the circuits, construction, and operation of over 100 different receivers, from the simplest crystal sets to complicated superheterodynes. Out of this wealth of experience came the design for a superheterodyne which is now known to the older radio fans all over the world as the SCOTT WORLD'S RECORD SUPER.

The performance of this first SCOTT

WORLD'S RECORD SUPER, built way back in 1924, startled the radio world at that time, for during a period of 13 weeks it established no less than Four World's Records for the consistent, night after night reception of stations 6000 miles or more distant, a very remarkable achievement ten years ago.

VERIFIED WORLD'S RECORDS ESTABLISHED BY THE SCOTT WORLD'S RECORD SUPER DURING 1924

1. A World's Record for number of broadcast stations heard—6000 to 8000 miles distant.

6 Stations—6000 Miles Distant
7 Stations—7000 Miles Distant
6 Stations—8000 Miles Distant

A total of 19 different foreign stations, all 6000 miles or more distant from the receiving point.

2. A World's Record for the greatest number of programs heard from stations 6000 miles or more distant from the receiving point.

18 programs from stations — 8000 miles or more distant
19 programs from stations — 7000 miles or more distant
79 programs from stations — 6000 miles or more distant
Total number of programs heard—117.

The World's Records established by this first Scott Receiver were not the result of mere chance, but were made because the SCOTT WORLD'S RECORD SUPER had incorporated in its design, features which had, up to that time, never before been used in a superheterodyne receiver.

VERIFIED ALLWAVE PERFORMANCE RECORD IN 1931-1932

Perhaps the reception record made between June 1931 and July 1932, with the SCOTT ALLWAVE RECEIVER will furnish the most conclusive proof of just how far in advance the design of SCOTT ALLWAVE RECEIVERS actually are ahead of others in the radio world. On June 1, 1931, a test was started from Chicago with the Australian station VK2ME in Sydney, Australia, 9600 miles distant and station VK3ME in Melbourne, 10,000 miles away. In order to make this test as authentic as possible, not only was a very careful detailed log kept, but also from three to twenty aluminum recordings were made OF EACH TRANSMISSION. Half of the original recordings of each transmission were sent to the engineers of the Australian stations, so that they could actually play back and hear how the programs from their station were being received over 9000 miles away, while the other half of the recordings were retained at the laboratory as our record of the reception.

This test was carried on for a period of TWELVE CONSECUTIVE MONTHS, with the result that EVERY SINGLE TRANSMISSION put on the air by VK2ME at Sydney, and VK3ME (with the exception of three) at Melbourne, were re-

ceived, logged and recorded, and the reception fully verified by the engineers of the two Australian stations. A special booklet has been compiled which describes in detail this Australian test, and there are still a few copies available which we will be glad to send to anyone interested.

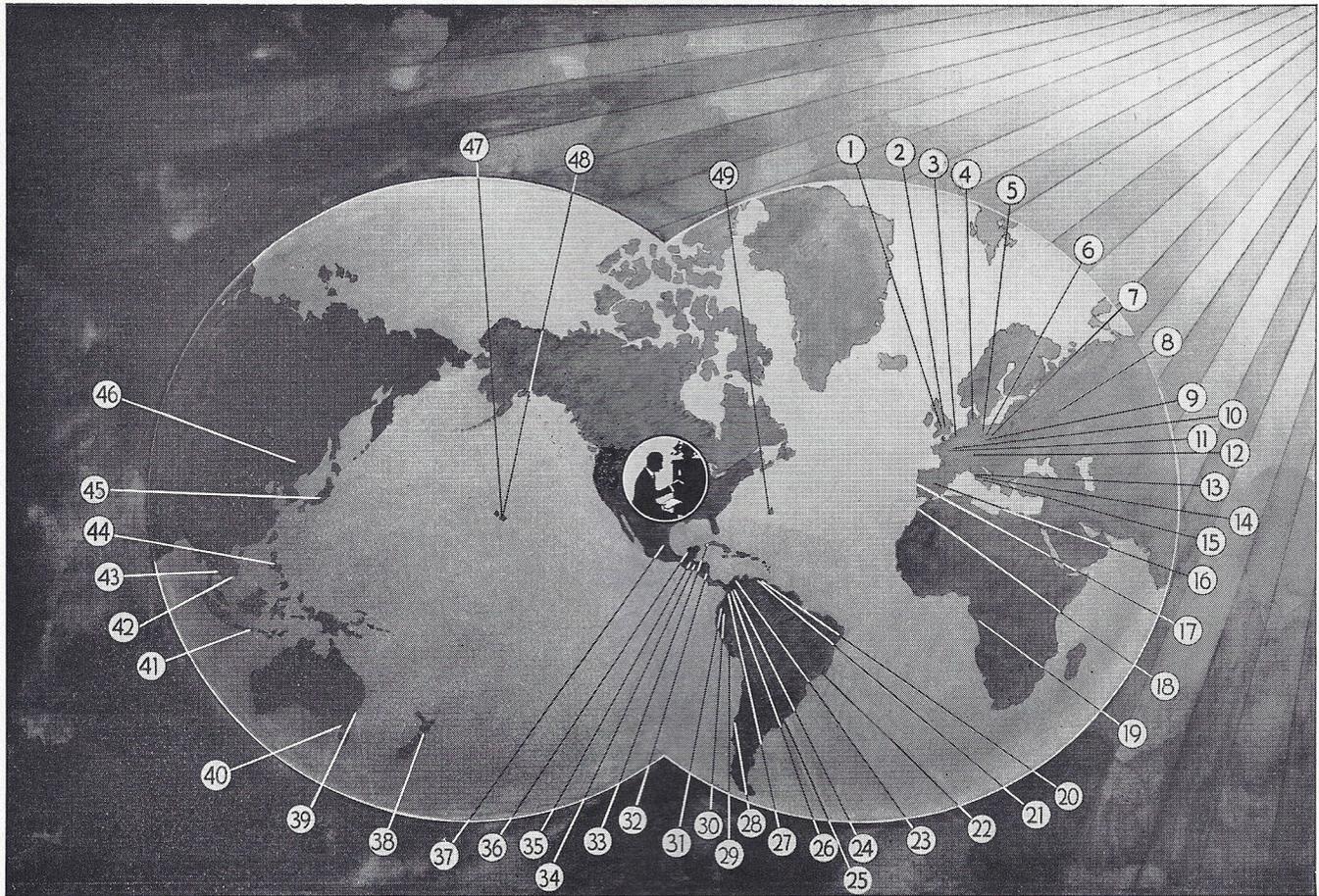
SCOTT ALLWAVE OWNERS DUPLICATE PERFORMANCE RECORDS

So remarkable were these records in 1931 that a number of people doubted their authenticity, since such reception was not being secured with any other receiver available at that time. It was difficult for them to realize that ANY receiver was capable of giving such performance. Many expressed the opinion that a specially tuned-up receiver was being used for this test. To prove this was NOT so, and also to prove that such reception was possible with ANY SCOTT ALLWAVE RECEIVER, we sent out a letter January 1, 1932, to all of our SCOTT ALLWAVE owners in every part of U. S. A., requesting they send us in logs of foreign stations they received between this date and June 30, 1932. The result is now a matter of history, and the drawing on the next page shows the location and number of the different foreign stations that were received by owners of SCOTT ALLWAVE RECEIVERS during this period.

It is significant that among the logs sent in from these SCOTT ALLWAVE owners, were 1216 logs of programs received from VK3ME, and 750 logs of programs received from VK2ME. I might say, that included in the list of stations are only the logs of programs which were verified by the various stations from whom the programs were received.

GUARANTEED TO OUTPERFORM ANY OTHER ALLWAVE RECEIVER

The real test of a radio receiver is—What will it do in YOUR home—not somewhere else. The SCOTT ALLWAVE FIFTEEN is sold to you with the distinct understanding that you are to be allowed 30 days after delivery in which to make a comparison test against any other allwave receiver. If during this period the SCOTT ALLWAVE FIFTEEN does not demonstrate its superiority by bringing in more stations— from greater distances— with more volume— and better tone— on both the short waves and the broadcast band than any other receiver with which it is compared, you have the privilege of returning it (you to pay the transportation costs) and the money you paid us will then be promptly refunded. In addition to the performance guarantee the SCOTT ALLWAVE FIFTEEN is guaranteed against defective parts for a period of Five Years (except tubes, which are guaranteed by the manufacturer). This guarantee means that you do not need to take our word that the SCOTT ALLWAVE FIFTEEN is the world's finest ALLWAVE receiver—for it enables you to prove this fact right in your own home.



Location of Foreign Broadcast Stations Received By Scott Allwave Owners in U. S. A. During 1932

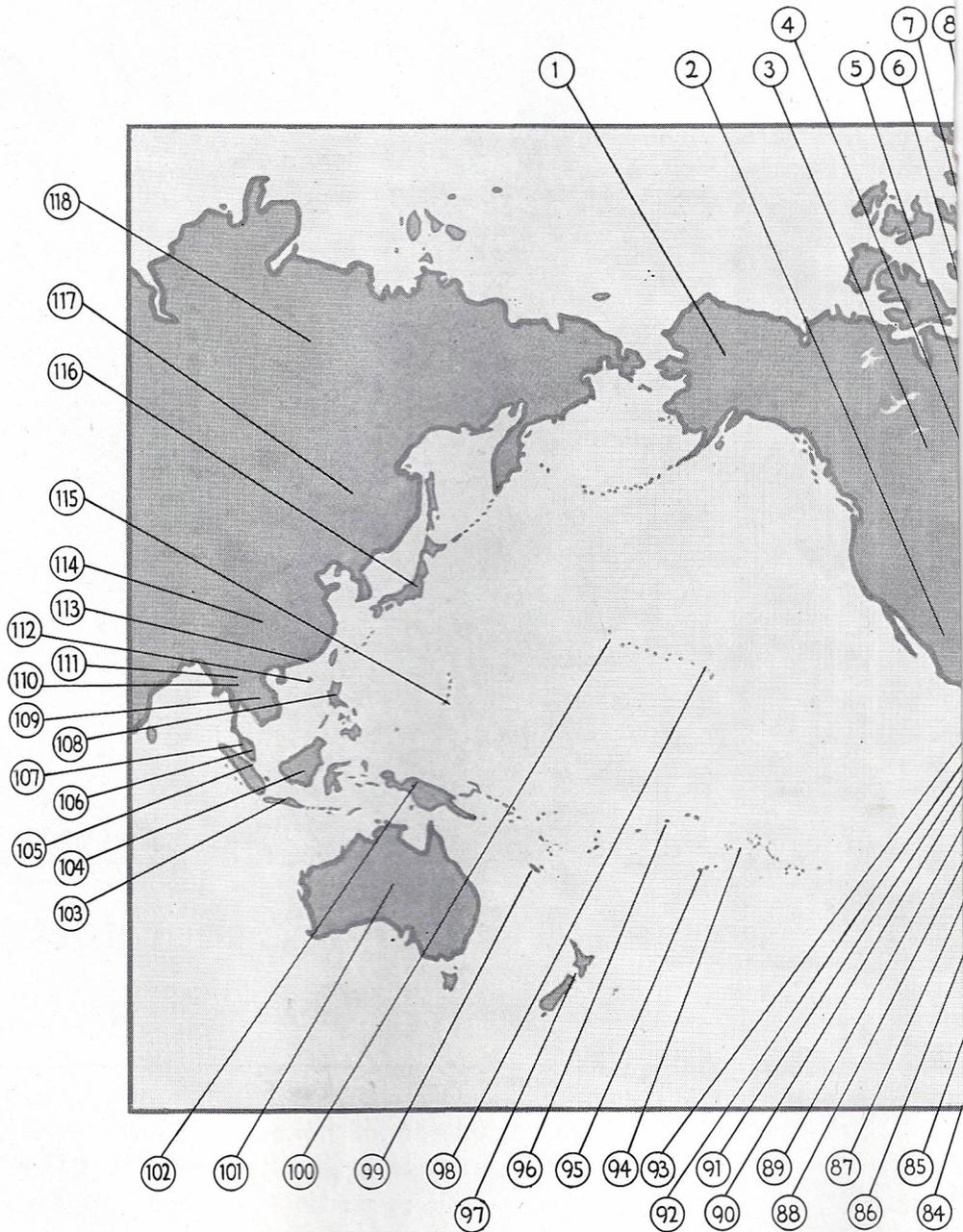
The new SCOTT ALLWAVE FIFTEEN is many times more efficient than the 1932 model with which the records below were made. The information on this page is given to show the results SCOTT ALLWAVE RECEIVERS were giving their owners in 1932—See opposite page—center column.

TOTAL NUMBER OF FOREIGN PROGRAMS RECEIVED 19,257
 TOTAL NUMBER OF FOREIGN STATIONS HEARD 320
 TOTAL NUMBER OF FOREIGN COUNTRIES HEARD 46

Key	Call	Country	Programs Received	Key	Call	Country	Programs Received	Key	Call	Country	Programs Received
10	PONTOISE	FRANCE	3355	13	HVJ	ITALY	138	26	HKX	COLOMBIA (Bogota)	23
14	I2RO	ITALY	1824	4	OXY	DENMARK	133	25	LSAAK	ARGENTINE	20
2	G5SW	ENGLAND	1371	36	XAM	YUCATAN	126	1	GBX	ENGLAND	19
40	YK3ME	AUSTRALIA (Melbourne)	1216	1	GBW	ENGLAND	126	27	HKT	COLOMBIA (Manizales)	19
26	HKF	COLOMBIA (Bogota)	1114	1	GBU	ENGLAND	120	41	PLV	JAVA	66
16	EAQ	SPAIN	900	48	KKP	HAWAII	107	1	GBS	ENGLAND	61
23	HKA	COLOMBIA (Barranquilla)	853	17	CTIAA	PORTUGAL	98	45	JIAA	JAPAN	19
24	HKO	COLOMBIA (Medillin)	813	22	PPQ	BRAZIL	91	35	TGW	GUATEMALA	17
39	YK2ME	AUSTRALIA (Sydney)	750	24	HKN	COLOMBIA (Medillin)	81	5	DAN	GERMANY	17
23	HKD	COLOMBIA (Barranquilla)	451	30	HCIDR	ECUADOR (Quito)	80	12	HBJ	SWITZERLAND	17
26	HKM	COLOMBIA (Bogota)	426	26	HKC	COLOMBIA (Bogota)	76	48	KDK	HAWAII	16
49	VRT	BERMUDA	366	8	RV59	RUSSIA	85	15	IAC	ITALY	15
31	PRADO	ECUADOR	341	32	TI4NRH	COSTA RICA	69	1	GBC	ENGLAND	14
6	DJB	GERMANY	304	48	KKH	HAWAII	66	25	LSOR	ARGENTINE	14
21	YV11BMO	VENEZUELA	284	6	DIQ	GERMANY	55	19	OPM	BELGIAN CONGO	14
42	F3ICD	INDO-CHINA	274	46	RV15	RUSSIA	50	25	LR3	ARGENTINE	13
7	ZEESEN	GERMANY	285	12	HBT	SWITZERLAND	49	22	PPU	BRAZIL	13
33	CMCI	CUBA	237	30	HCJB	ECUADOR	41	22	PRDA	BRAZIL	12
6	DJA	GERMANY	212	20	YVQ	VENEZUELA	33	9	DHA	GERMANY	11
25	LSN	ARGENTINE	197	26	HKU	COLOMBIA (Bogota)	29	11	FTK	FRANCE	11
18	RABAT	MOROCCO	187	26	HJY	COLOMBIA (Bogota)	28	28	CEC	CHILE	10
25	LSX	ARGENTINE	172	24	HKE	COLOMBIA (Medillin)	24	48	KEQ	HAWAII	10
								29	OCI	PERU	10

KEY TO LOCATION OF FOREIGN COUNTRIES WHERE SCOTT ALLWAVE RECEIVERS ARE NOW IN DAILY USE

- 1 — Alaska
- 2 — Mexico
- 3 — Canada
- 4 — Cuba
- 5 — Jamaica
- 6 — Bahamas
- 7 — Haiti
- 8 — Dominican Republic
- 9 — St. Vincent
- 10 — Porto Rico
- 11 — Bermuda
- 12 — Virgin Islands
- 13 — Trinidad
- 14 — French West Indies
- 15 — Barbados
- 16 — Newfoundland
- 17 — Miguelon Islands
- 18 — Azores
- 19 — Iceland
- 20 — Portugal
- 21 — Ireland
- 22 — Spain
- 23 — Scotland
- 24 — England
- 25 — Belgium
- 26 — Netherlands
- 27 — Holland
- 28 — Norway
- 29 — Denmark
- 30 — Sweden
- 31 — Germany
- 32 — Finland
- 33 — Latvia
- 34 — France
- 35 — Czechoslovakia
- 36 — Poland
- 37 — Switzerland
- 38 — Jugoslavia
- 39 — Bulgaria
- 40 — Roumania
- 41 — Italy
- 42 — Turkey
- 43 — Persia
- 44 — India
- 45 — Greece
- 46 — Syria
- 47 — Ceylon
- 48 — Bahrein Island
- 49 — Cyprus
- 50 — Egypt
- 51 — Somalia Italiana
- 52 — Sicily
- 53 — Malta
- 54 — Balearic Islands
- 55 — Mauritius
- 56 — Kenya-Colony
- 57 — Madagascar
- 58 — Northern Rhodesia
- 59 — Tanganyika Territory



**SCOTT ALLWAVE REC
IN ALL PARTS**

The map above, corrected to September 1st, 1934, gives a graphic picture of the many different parts of the globe where SCOTT ALLWAVE RECEIVERS are now in daily use. An examination of the map will show that SCOTT RECEIVERS are now in the hands of owners in practically every corner in the civilized world, and the hundreds of letters received from them, tell us that many are now securing reception such as they never believed possible. These reports prove, beyond



KEY TO LOCATION OF FOREIGN COUNTRIES WHERE SCOTT ALLWAVE RECEIVERS ARE NOW IN DAILY USE

- 60 — Mozambique
- 61 — Southern Rhodesia
- 62 — Belgian Congo
- 63 — South Africa
- 64 — Nigeria
- 65 — Angola
- 66 — Algeria
- 67 — Spanish Morocco
- 68 — Gibraltar
- 69 — Morocco
- 70 — Liberia
- 71 — Canary Islands
- 72 — Senegal
- 73 — Brazil
- 74 — British Guiana
- 75 — Venezuela
- 76 — Paraguay
- 77 — Uruguay
- 78 — Bolivia
- 79 — Argentine
- 80 — Chile
- 81 — Aruba
- 82 — Curacao
- 83 — Peru
- 84 — Colombia
- 85 — Ecuador
- 86 — Canal Zone
- 87 — Panama
- 88 — Costa Rica
- 89 — Nicaragua
- 90 — Honduras
- 91 — El Salvador
- 92 — Honduras
- 93 — Guatemala
- 94 — Tahiti
- 95 — Cook Islands
- 96 — Samoa
- 97 — New Zealand
- 98 — Hawaii
- 99 — New Caledonia
- 100 — Midway Isles
- 101 — Australia
- 102 — New Guiana
- 103 — Java
- 104 — Borneo
- 105 — Sumatra
- 106 — Singapore
- 107 — Federated Malay States
- 108 — Philippine Islands
- 109 — French Indo China
- 110 — Siam
- 111 — Burma
- 112 — Portuguese South China
- 113 — Hong Kong
- 114 — China
- 115 — Guam
- 116 — Japan
- 117 — Manchuria
- 118 — Russia

EIVERS IN DAILY USE OF THE WORLD

all question, that a SCOTT ALLWAVE RECEIVER will actually give its owner, not only reception from stations located in their own particular land, but will also bring to him the programs broadcast from stations in foreign countries thousands of miles away. We shall be very happy to give any one interested the name and address of owners in any of the countries listed, if they are interested in knowing what kind of reception SCOTT ALLWAVE RECEIVERS are giving in that part of the world.

The New Scott Allwave Super Antenna System

In addition to the research which has been carried on continuously in the Scott Laboratory during the past five and a half years perfecting our designs for an ALLWAVE receiver, constant experimentation has also been carried on to develop an antenna system which would not only give maximum pick-up of signals on both the broadcast and short wave bands, but at the same time reduce as much as possible the effect of electrical interference or man-made static in the reception of stations on the short wave bands.

Reception of short wave stations on the regular single wire type of antenna used for reception on the broadcast band in locations close to a high-way with heavy automobile traffic, or in locations where electrical equipment is used, is far from satisfying. Electrical interference which does not cause the slightest interference in the reception of stations on the broadcast band very often makes reception from stations on the short wave bands almost impossible. So, naturally, constant experimentation has been carried on in the Scott Laboratory with a view to eliminating this interference so that reception on the short wave bands might be as satisfactory as it now is on the broadcast band.

The new SCOTT Super Antenna System is, we believe, the last word in ALLWAVE Antenna design, and a series of tests just completed to determine the relative efficiency of

various types of antenna proved in a most conclusive manner, that the Scott Super Antenna System is superior to any other short wave antenna. The new SCOTT Super Antenna was tested against four other types of antennae:

- (1) A Standard single wire antenna, 80 feet long including lead-in.
- (2) A standard transposed doublet type antenna.
- (3) A well known transmission doublet type antenna.
- (4) A well known shielded lead-in type antenna with associated transformers.

Switches were arranged so that the various type of antennae could instantly be thrown and connected to a SCOTT ALLWAVE FIFTEEN RECEIVER. A sensitive G.R. output meter was coupled to the receiver, and distant stations tuned in from 640 Kc. to 16 megacycles. These stations were first tuned in on the SCOTT Antenna, the volume control set and the output in d.b. noted. Each of the antennae were then tested in turn on the same station, and the output in d.b. noted after each was switched on. This reading gave the actual output of signal plus noise at this volume level. The same process was repeated on seven different frequencies.

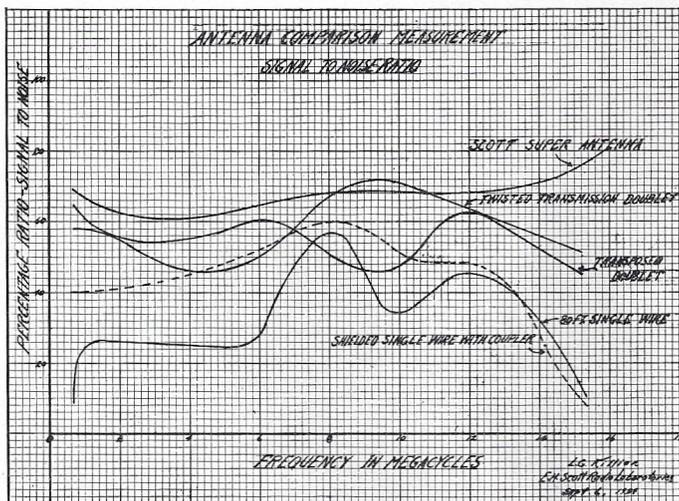
After each check as above, the set was slightly detuned and the output again noted,

which gave the actual noise level. The difference of the two sets of readings on each antenna gave the actual signal output, and the ratio of the signal output to the signal plus noise value, gave the signal to noise ratio. This latter value was averaged for all readings so that a more accurate value could be had. The tabulation of the data secured is given below and on the plotted curves which show the output gain and the signal to noise ratio of each antenna.

To properly interpret the curves it should be noted that an extremely loud signal, does not necessarily mean the most efficient antenna in a location where the local noise level is high. The real figure of merit is the ratio of signal to noise. On this basis the curves show the actual output above the noise level, which is the only real method of comparison of SHORT WAVE antenna system in metropolitan or noisy locations.

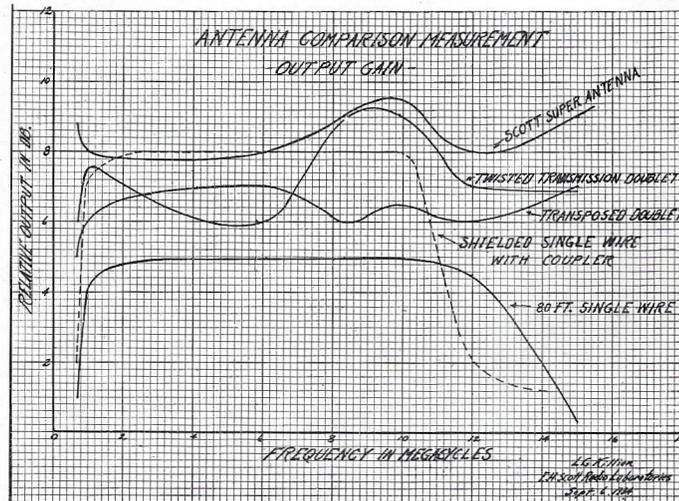
An examination of the curves proves beyond question the superiority of the SCOTT ALLWAVE SUPER ANTENNA SYSTEM for uniform gain over the entire wave band, and for effective noise reduction.

The SCOTT SUPER ANTENNA SYSTEM has been designed especially for the use of owners of SCOTT ALLWAVE RECEIVERS, to whom it is now available at a net price of \$7.50.



RATIO OF SIGNAL TO NOISE IN PER CENT

Frequency Megacycles	Scott Super Antenna	Twisted Transmission Doublet	Shielded Lead-in Type	Transposed Doublet	Regular 80-ft. Wire
.64	69 %	58 %	40 %	65.4%	9.1%
.99	66.6%	58.1%	53.3%	60.8%	24.5%
6.1	65.3%	51 %	53 %	60.2%	28.5%
8.19	68.6%	68.4%	60 %	50 %	56.8%
9.87	68.4%	71.5%	52 %	46.4%	34.5%
11.86	68 %	64.4%	48.5%	63.5%	46 %
15.2	75.2%	50 %	8 %	46 %	11.5%



AVERAGE SIGNAL OUTPUT IN DB—With Volume Control Constant at Each Frequency

Frequency Megacycles	Scott Super Antenna	Twisted Transmission Doublet	Shielded Lead-in Type	Doublet Transposed	Regular 80-ft. Wire
.640	8.8 DB	6	2	5	1
.990	8.0 DB	7.5	7	6	4
6.1	8.0 DB	6	8	7	2
8.19	9.0 DB	9	8	6	5
9.87	9.5 DB	9	8	6.5	5
11.86	8.0 DB	7	4	7	4.5
15.2	9.0 DB	7	1	6	.2



THE SCOTT ALLWAVE FIFTEEN RECEIVER

Perfect Undistorted Tone

SCOTT RECEIVERS have always been noted for their very beautiful tone. However, constant research has enabled us in the SCOTT ALLWAVE FIFTEEN to produce an instrument that has even finer tone than any previous model we have ever built. When you are listening to a voice, you hear that voice so clearly and naturally, that if you close your eyes it is not a difficult task to imagine that the person is standing talking to you, face to face.

You will find when you are listening to an orchestra that you will hear instruments in the lower and higher ranges that you have never before heard coming from the speaker of any radio receiver. You will hear violins, trumpets, cymbals and other instruments just as naturally as you would hear them if the orchestra were in front of you. When you listen to a piano, you not only will hear the notes of the piano coming from your speaker as clearly as if the pianist were playing in your own room for you, but you will hear it so clearly and naturally that you can actually, at times, hear the thud of the felts on the hammers striking the piano strings. We believe we can say without fear of contradiction that the new SCOTT ALLWAVE FIFTEEN sets an entirely new standard in the reproduction of voice, or instruments from a radio receiver.

All Tuning Controlled with Single Knob

The tuning of all stations, both on the short waves and broadcast band is accomplished by a single knob located directly below the dial. No trimmers are required to secure 10 KC selectivity on any wave length.

The I. F. Amplifier

In the design of the Intermediate Frequency Amplifier stage lies one of the secrets of the remarkable performance of this new SCOTT ALLWAVE FIFTEEN RECEIVER. In our Research Laboratory we have developed a system of so completely shielding the secondary of each I.F. unit from the primary, together with a special method of coupling them, that we secure tremendous amplification, raising the Sensitivity or gain of each I.F. stage to three or four times more than has ever before been possible with an I.F. transformer coupled and shielded in the usual way. Yet, with this increased gain, the receiver is always perfectly stable and free from oscillation at any degree of volume.

Volume Automatically Controlled

Once the volume is set at the desired level, it is kept there automatically in the new SCOTT ALLWAVE FIFTEEN by the per-

fect Automatic Volume Control system incorporated in its design, which holds the volume of signals from stations near and distant at a practically constant level.

Wave Bands Covered

All wave lengths between 13 and 550 meters are covered by four wave bands.

The Short Wave Station Locator

One of the difficulties experienced in tuning in short wave stations on the regular type of allwave receiver is due to the fact that all short wave stations come in on a very small fraction of the dial, and until one has had considerable experience, it is difficult to locate short wave stations. To overcome this difficulty, a Short Wave Station Locator is incorporated in the design of the new SCOTT ALLWAVE FIFTEEN which makes the tuning of the short wave bands as easy as the broadcast band.

All Parts Guaranteed Against Defect for Five Years

The SCOTT ALLWAVE FIFTEEN is built from such high quality parts; the actual building of it is done by such highly skilled technicians; all units so impregnated and treated to protect them against the effects of moisture and all adjustments so carefully made and permanently fixed that we believe no part of this receiver will ever break down.

Every SCOTT RECEIVER produced the past four years has carried a Five Year Guarantee, and many hundreds of them have been in constant use for years, and are today still serving their owners and giving them perfect satisfaction in nearly every part of the world.

Complete Technical Data

We have prepared a 12-page booklet giving complete technical details of the SCOTT ALLWAVE FIFTEEN and will gladly send this if you desire further technical information.

Exclusive Consoles

Our console brochure shows fifteen of the exclusive cabinets designed for the SCOTT ALLWAVE FIFTEEN. In addition to these, we are prepared to submit special designs to match furniture of any period. Your request will bring the brochure to you.

E. H. SCOTT RADIO LABORATORIES, Inc.

4450 RAVENSWOOD AVENUE

CHICAGO, ILLINOIS