

AWA Review

ABSTRACT

E. H. Scott produced a highly collectible line of radio sets during the 1930s and 1940s. Scott sets had unique serial numbers, which changed in format and value through the years. Efforts to collect and analyze serial numbers began over 30 years ago. The Internet has permitted much wider communications among collectors and has allowed the authors to collect well over 1000 serial numbers. This volume of accurate data has permitted a more thorough analysis, including estimates of numbers of sets produced. This article describes the serial number systems used by Scott and the resulting patterns in set production from 1932 to 1947. Understanding the serial number assignments allows owners to determine models of unknown sets and even estimated production dates of some models.

E.H. Scott Serial Numbers: An Updated Analysis

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One of the greatest radio mysteries of the 1930s was not broadcast on the air and has taken well over half a century to unfold. Interest in this mystery was nearly non-existent at the time it developed and has become of greatest interest to radio historians and collectors during recent years. What great radio mystery could have been ignored during the golden age of radio and of interest when radio plays second fiddle to television, computer games, and the Internet? The production totals of the Stradivarius of Radio, the receivers of the E.H. Scott Radio Laboratories.

The mystery lies in the fact that, unlike most other radio companies, the E.H. Scott Radio Laboratories assigned serial numbers that did not easily disclose the number of receivers manufactured and records of the laboratories have never been found. Starting in 1932, these serial numbers consisted of a single letter followed by two or three digits and were not assigned in a very logical order. Sometime near the beginning of 1938, the serial numbers were changed to a pair of identical letters followed by two or three digits. It is very likely that this system of serial numbers was used to deliberately prevent potential competitors from learning Scott's production thereby making economic decisions leading to competing lines of receivers more difficult and risky. Today the interest in these unusual serial numbers has nothing to do with competition and everything to do with production of these scarce and desirable classic radio receivers.

The quest for an answer to the mystery took root almost 30 years ago. J.W.F. Puett, a longtime Scott authority, began gathering serial numbers in the 1970s. He published these lists periodically, and searched for patterns in the numbers. In 1992, the E. H. Scott Historical Society (EHS) was formed and the serial number gathering and analysis was revived. By 1998, a pattern had begun to emerge in the sets with single letter prefixes (sets produced through mid-1937, including the Allwave AW12, AW15, AW23 and some early Philharmonics). Articles appeared in the EHS Scott News and in the AWA Review, Volume 11, 1998. In recent years, the Internet and eBay have been a boon, as more numbers are gathered from sets posted on the web. To date, the database includes serial numbers for 500 double letter prefix sets and 600 single letter prefix sets, a total of 1100 sets.

EARLY (SINGLE LETTER PREFIX) SETS

Until the introduction of the Allwave 12 Deluxe sets in 1932, little can be inferred from the few serial numbers found on Scott receivers. The Shield Grid 9 sets had a paper tag with a serial number stamped on it. These tags are often missing, but can sometimes be found inside the IF container. The AC-10 sets had a serial number tag on the tuner and amplifier/power supply chassis. There are not enough samples of the AC-10 numbers to infer anything about production of these sets. The

numbers do appear to be sequential however; lower numbers are clearly earlier versions of the AC-10. The first chrome chassis, the Allwave 12 “two-dial” set released in 1931 does not have a serial number tag on the chassis. Instead, some sets will have a grease pencil number written on the underside (inside) of the chassis. It is not clear that this is even a serial number, as not all sets have a number. In 1932, the Allwave 12 Deluxe began a consistent pattern of serial numbers for Scott set production.

The pattern in the single letter prefixes has held up well over time, and new serial numbers reinforce and clarify this numbering plan. Table 1 shows the prefixes and ranges of numbers for the Allwave series (12, 15 and 23) sets:

Production is sequential within a series, but the numbers do not necessarily correspond across two or more series. Thus, A-200 (AW12) may not be the same as Z-200 (AW15), but we can say that Z-50 will be earlier than Z-200. For each range, the lowest and highest known serial numbers are given. The columns labeled “AW12 C”, “AW15 C” and “AW23 C” indicate the count of sets in each range. Thus the “count” columns represent production total by model for *known* serial numbers. From this, we see that the AW23 was the largest pre-1938 production set followed by the AW12 and then the AW15. The columns labeled “Gap” represent the gaps between the highest previous set and the lowest following set. As

Table 1. Allwave sets by serial number.

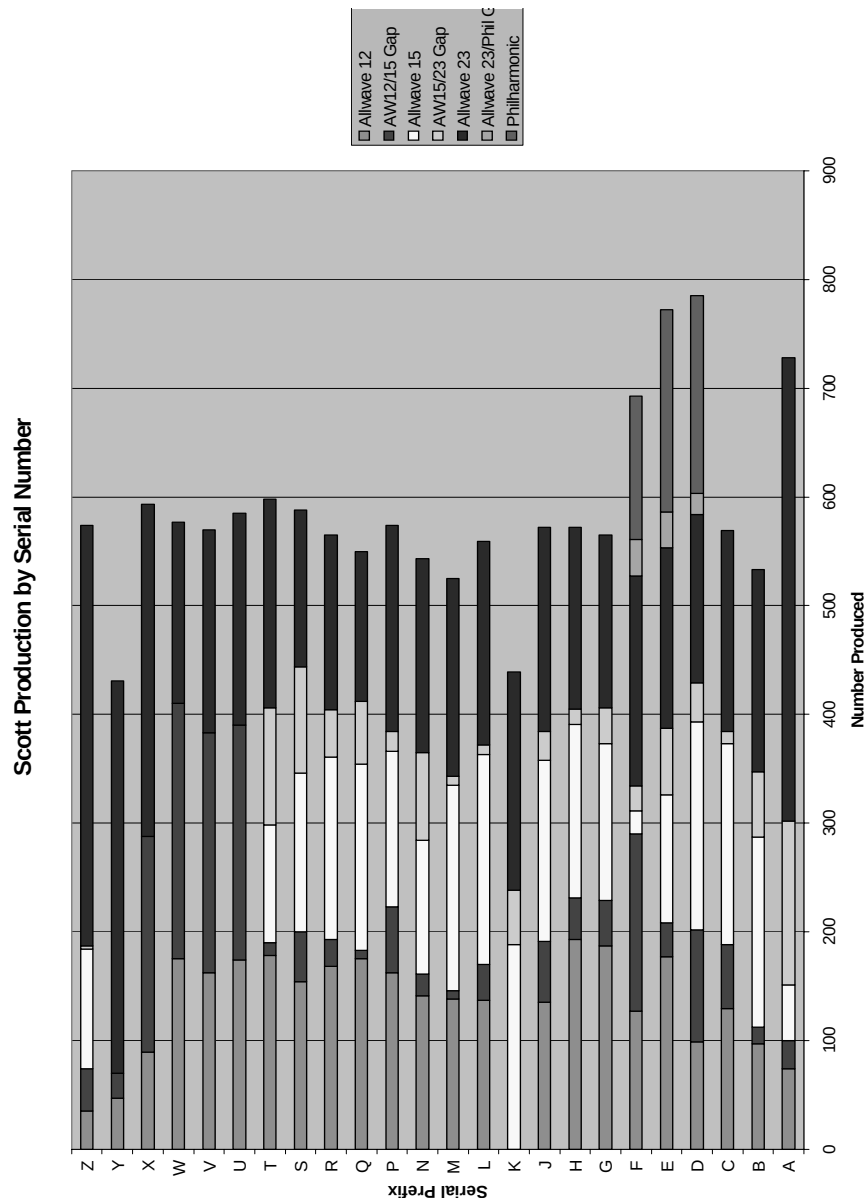
Prefix	AW12 L	AW12 H	AW12 C	Gap	AW15 L	AW15 H	AW15 C	Gap	AW23 L	AW23 H	AW23 C	Gap	PHIL L	PHIL H	PHIL C	Total
A	156	229	74	26	256	306	51	151	458	883	426					551
B	149	245	97	15	261	435	175	60	496	681	186					458
C	70	198	129	59	258	442	185	11	454	638	185					499
D	53	151	99	103	255	445	191	36	482	636	155	19	656	837	182	627
E	74	250	177	31	282	399	118	61	461	626	166	33	660	845	186	647
F	121	247	127	163	411	431	21	23	455	647	193	34	682	813	132	473
G	56	242	187	42	285	428	144	33	462	620	159					490
H	55	247	193	38	286	445	160	14	460	626	167					520
J	70	204	135	56	261	427	167	26	454	641	188					490
K		-1	0		254	441	188	50	492	692	201					389
L	82	218	137	33	252	444	193	9	454	640	187					517
M	108	245	138	8	254	442	189	8	451	632	182					509
N	93	233	141	20	254	376	123	81	458	635	178					442
P	73	234	162	61	296	438	143	18	457	646	190					495
Q	71	245	175	8	254	424	171	58	483	620	138					484
R	75	242	168	25	268	435	168	43	479	639	161					497
S	55	208	154	46	255	400	146	98	499	642	144					444
T	52	229	178	12	242	349	108	108	458	649	192					478
U	66	239	174	216		-1	0		456	650	195					369
V	70	231	162	221		-1	0		453	639	187					349
W	69	243	175	235		-1	0		479	645	167					342
X	57	145	89	199		-1	0		345	649	305					394
Y	190	236	47	23		-1	0		260	620	361					408
Z	64	98	35	39	138	247	110	3	251	637	387				500	532
			3153				2751				5000					11404

Scott serial numbers

sets are found in each prefix within these gaps, the number of missing sets is reduced. Finding an AW12 set with a K prefix, or AW15 sets with prefixes

of U, V, W, X or Y would add significant information to this table and the analysis. Fig. 1 gives production numbers by prefix:

Fig. 1. Production numbers by prefix.



LATE (DOUBLE LETTER PREFIX) SETS

Use of the double letter prefixes probably began late in 1937, and may coincide with the introduction of a second receiver produced at the same time. Up to this point, Scott had only offered a single model with a choice of cabinets. With the introduction of the Sixteen, Scott started building multiple receiver offerings at the same time. It is possible that this change sparked the introduction of the double letter prefixes. Production patterns in the double letter prefixes are similar, with chronological sequences within each prefix. However, we also see blocks of like sets built in a certain prefix or group of prefixes. For example, the Super XII sets all have prefixes of QQ, TT or WW, and appear together in a block of numbers in each prefix. Other blocks include JJ (Scott Special), and HH (FM Tuners). Some prefixes appear to only include one model, for example: PP is all Phantom sets and RR is entirely Philharmonic sets. Table 2 shows the later serial numbers by set.

Again, the “count” columns represent production tallies for each model and prefix for known serial numbers. The columns labeled “Gap” represent gaps between set types. Because the next model in a given prefix may not always be the same (in TT, the Super 12 is followed by a block of Phantom sets, but in WW, the Super 12 sets are followed by a block of Laureate sets), the gap number

is calculated to the next sequential serial number.

TOTAL SET PRODUCTION ESTIMATES

Total production numbers for the Philharmonic include the single letter prefix sets, making it the 3rd highest produced Scott receiver. The Phantom and the Sixteen/Eighteen follow behind for highest production in the double letter sets. A combined tally of estimated production is shown in Fig. 2.

While the missing sets in the gaps between the prefix ranges still represent the 2nd highest tally of serial numbers, we have a statistically relevant sample size. Using the database of just over 1000 serial numbers, we can estimate the number of each model produced by counting the possible serial numbers within each range and set type. Thus the sample of known serial numbers represents between 4 and 5% of the extrapolated data (see Table 3).

Unlike the gaps between models, the gaps at the top and bottom of all ranges are not included in the tallies. We could assume that all numbering started at 10 for each prefix, but there is no evidence to support this. However, it is safe to say that Scott produced approximately 25,000 sets in the period between 1932 and 1941. This works out to 2,500 sets per year on average, or 10 sets per working day.

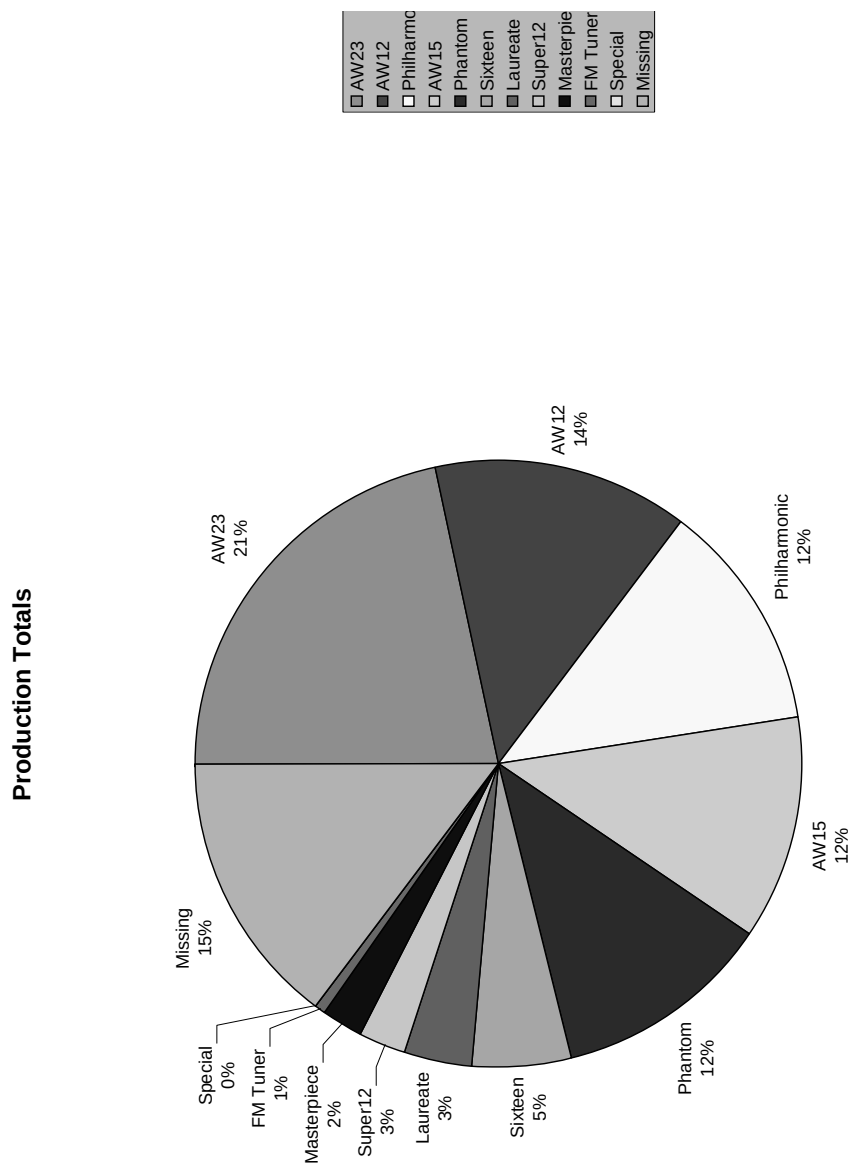
This analysis is not without a few oddities. Mistakes have been found, especially in

Table 2. Late (Double Letter Prefix) Sets

Prefix	16/18 L	16/18 H	16/18 CGap	S12 L	S12 H	S12 C	Gap	Phan L	Phan H	Phan CGap	Phil L	Phil H	Phil C	Gap	Mast L	Mast H	Mast CGap	Lau L	Lau H
AA								282	490	209	12	245	234	36					
BB											19	490	472						
CC	11	234	224	26				261	444	184	14	459	484	26					
DD	99	227	129	47				275	485	211									
EE	57	242	186	70				313	432	120									
FF																	304	410	
GG	67	237	171	17							255	489	235						
HH	13	244	232	70															
JJ	12	242	231	8											311	493	183		
KK								261	480	220									
LL																			
NN	14	86	73	34				121	220	100	34	10	242	233	18				
PP								51	485	435		22	462	441			255	390	136
QQ					41	241	201	39	281	499	219								
RR											15	497	483						
SS								128	486	359									
TT					24	204	181	126	331	473	143								
UU								21	152	132	0							153	374
WW					10	222	213	31										254	493
XX								155	241	87	24	15	120	106	34			266	495
YY								15	224	210	45	270	396	127					
ZZ								268	487	220					52	236	185	31	
																	504		
																	2357		

Note: The FM Tuners and Special Communications Sets are not shown. The FM Tuners are between HH-315 and HH-446, and the Special Communications receivers are JJ-251 to JJ-271.

Fig. 2. Production totals



the serial numbers gathered in the early days. It is not uncommon to find an AW15 listed as an AW12 (there are 12 tubes on the AW15 tuner chassis). Over the years, some serial number tags have been interchanged on sets, creating additional confu-

sion. The NN prefix has a mixture of sets with serial numbers below 200, but all NN sets above 200 are Masterpiece sets. Based on these numbers, and knowing the Scott sales volumes (in dollars) for each year through the 1930's, sales esti-

Scott serial numbers

Table 3. Production totals estimated from known serial numbers

Set	Count
AW23	5000
AW12	3153
Philharmonic	2857
AW15	2751
Phantom	2685
Sixteen	1246
Laureate	799
Super12	595
Masterpiece	504
FM Tuner	132
Special	21
Missing	3399
Total Sets	19743
Grand Total	23142

mates can be created. To develop these estimates, an average value was assigned to each model. Obviously, some sets were higher than the average (extreme high-end cabinets, the Quaranta sets, etc.), and some lower (price slashing sales, end of production sales). For the purposes of the sales volume analysis, the following average values were used: AW12 and AW15: \$240; AW23 \$275; Philharmonic \$410 and all other models \$240.

Table 4 – Production Related to Sales is shown on the page opposite. The estimated sales based on these values falls within $\frac{1}{2}$ of 1% for each year where sales figures are known. For 1940 and 1941, these same figures provide estimated sales of just over $\frac{1}{2}$ million dollars. The difference between the Estimated and Actual numbers is due to the missing sets in the

gaps between models. The numbers should converge as more sets are found and the gaps are reduced. The production counts track the serial number data closely, providing additional verification of the estimates.

THE POST WAR ERA

The E.H. Scott Radio Laboratories emerged from World War II a different company. Management of the company was taken over by Hal Darr, Scott's trusted accountant, during an extended visit by E.H. Scott to New Zealand. The company name was changed to Scott Radio Laboratories, Incorporated. Capitalization was substantially increased through a large stock offering, product sales were through distributors such as upscale furniture stores instead of direct mail order, and the serial numbers were for the most part assigned in sequential order. As the E.H. Scott Radio Laboratories had done prior to 1937, the new company again adopted the practice of manufacturing one receiver model at a time and offering it with several cabinet and accessory options.

Another change from the prewar era was the practice of date stamping the receivers before leaving the factory. On the 800 series receivers, date stamps can nearly always be found in the lower left corner of the station preset shroud (looking from the front of the tuner chassis with a flashlight) and on the top side of the tuning motor laminations (requires re-

removal of motor for inspection). Some 800 series receivers have been found with a date stamp located on the backside of the dial support bracket. The combination of sequential serial numbers with date stamps provides considerable production information from a relatively small sample of collected

serial number and date stamp data.

Based on a sample of 16 serial numbers with associated date stamps, production of the 800 series chassis began around January 1946 with the first receivers completed on February 1, 1946. Assuming all serial numbers were assigned, the 9000th series 800 receiver was completed near the middle of June 1947 and total production of the 800 series receivers probably did not exceed 9,500. Plotting these serial numbers against the date stamp, Fig. 3 indicates an initial production rate of approximately 25 receivers per working day until mid August 1946. Production for the next two months dropped to approximately 15 receivers per working day during which time it appears the company may have been upgrading equipment or tooling for increased production. From mid October 1946 through mid April 1947 the company produced approximately 35 receivers per working day followed by a production rate of approximately 10 receivers per working day until production on the 800 series receivers ceased sometime after June 1947. This later decrease in production was likely related to decreasing model sales combined with

Table 4. Production related to sales

Year	Sales	AW12 Prod	AW15 Prod	AW23 Prod	Phil Prod	Other	Est Sales
1932	408000	1700					408000
1933	482000	2000					480000
1934	568000	300	2075				570000
1935	690000		700	1900			690500
1936	786000			2860			786500
1937	780000			500	1200	625	779500
1938	521000				600	1150	522000
1939	685000				625	1785	684650
1940					500	1500	565000
1941					500	1500	565000
Total		4000	2775	5260	3425	6560	22020
Estimated		3784	3026	5500	3143	6871	22496
Actual		3153	2751	5000	2857	5875	19632
							Total
							23404

Scott serial numbers

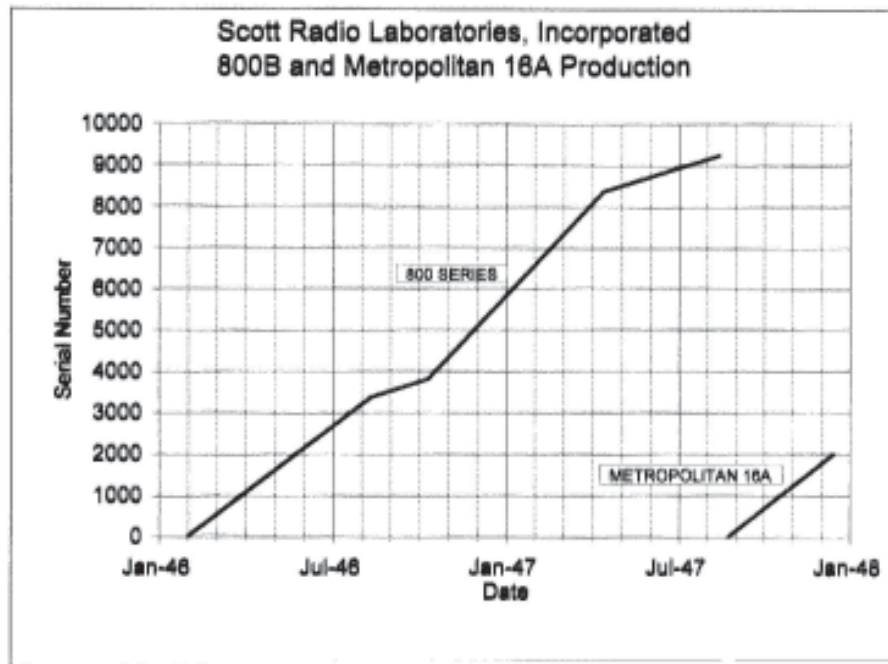


Fig. 3. Production rates for 800B and Metropolitan sets

a need to retool for production of the next model.

Following the 800 series receiver, the Scott Radio Laboratories, Incorporated offered the Metropolitan 16A, a similarly styled high fidelity receiver without shortwave reception or motor operated tuning. Date stamps on the Metropolitan 16A receiver can be found on the back of the dial support bracket immediately to the right of and partially behind the tuning capacitor shield (looking from the back of the tuner chassis). From limited serial number and date stamp data collected for this model, production appears to have started around July 1947 with the first receivers completed in mid to late August 1947. Production of the Metropolitan 16A exceeded 25 receivers

per working day through late November 1947 when the total exceeded 1600 receivers. Production of the Metropolitan 16A receiver is likely to have ceased near the end of 1947 with fewer than 2000 total receivers completed.

Although the serial number and date stamp data indicate production of the 800 series receiver ceased around June 1947 and of the Metropolitan 16A receiver ceased around the end of 1947, both models appear to have been offered for several years thereafter. Some of the 800 series receivers have been found in large combination consoles with television sets having 20-inch or larger rectangular picture tubes that were not available until 1951 and both receivers have been

found with Webster Chicago model 357 three-speed record changers manufactured well after 1947. Also, a small number of the 800 series receivers have serial numbers in the 17,000s.

In spite of their high serial numbers these few 800 series receivers have mid 1947 date stamps. One 800 series receiver having a serial number of 17666 and a date stamp of July 1, 1947 also has the number 8923 handwritten and upside down on the back of the dial support bracket. The date stamp is reasonably consistent with the handwritten number indicating a strong probability that the 800 series receivers having serial numbers in the 17,000s were receivers that were originally assigned lower serial numbers and subsequently assigned higher serial numbers when modified, included in a special cabinet or installation, or sold at a later date. Whether or not a serial number in the 17,000s was assigned, it is clear that the Scott Radio Laboratories, Incorporated manufactured and stored a number of extra 800 series and Metropolitan 16A chassis for later sales, incorporation in television combinations, and possibly for special installations.

From this analysis it is clear that the E.H. Scott Radio Laboratories and Scott Radio Laboratories Incorporated produced a total of approximately 36,000 receivers for the civilian market from 1932 through 1947. Of these, approximately 2/3 were manufactured prior to

WWII at an average production rate of 10 receivers per working day and 1/3 were manufactured in 1946 and 1947 at a production rate averaging 24 receivers per working day. One of the most interesting lessons from this analysis is the fact that some of the least common classic Scott receivers are the lesser models of the late 1930s that are often overlooked by collectors as being less significant. These include the Super 12, Masterpiece, and Laureate. It is also interesting to note that the most elaborate and costly standard offering, the postwar 800 series having remote ready pushbutton motor tuning and FM on all receivers, was the highest production model. Finally, after well more than half a century and with the cooperation of many radio historians and collectors who have shared serial number data, we have substantially solved one of the greatest and longest-lived mysteries of radio.

ABOUT THE AUTHORS

Kent King has been a radio collector since 1976 and has specialized in E. H. Scott sets since 1985. The collection is focused on different models and chassis, and is probably one of the most diverse Scott collections in existence. The collection spans more than two decades and contains over 50 different models and chassis. Kent especially enjoys battery sets, including those from the 1920s and the chrome 2-volt and 6-volt sets of the 1930s. The collection also includes many post-war examples, including a half dozen sets produced under the Scott name following the bankruptcy in 1956. Besides radios, Kent is the Director of Information Security for a central Ohio insurance company and owns a 10 acre alpaca farm with his wife Michele and sons Matthew, Ryan and Michael.



Kent King



Norm Braithwaite

Norman S. Braithwaite PE is the owner of Pacific Hydrologic Incorporated, a firm specializing in flood studies and river channel stability, and trustee of Turtle Bay Exploration Park, home of the Calatrava Sundial Bridge in Redding, California. He began collecting radios in 1975 upon graduating from high school and developed a strong interest in the products of the E.H. Scott Radio Laboratories by 1980. Today, his collecting interests are focused on the laboratory's unusual and custom products. He presently cares for the only complete Scott 48-Tube Custom Receiver (Quaranta variant) known to exist, a rare Scott Special Communications Receiver, and several other unique Scott products. Mr. Braithwaite has written many articles on early and classic radios for *Antique Radio Classified*, *Vacuum Tube Valley News*, and other radio publications.