The Bald Letter

FREE FOR THE DURATION

November 15, 2020

Thanksgiving - Edition #10

2020 Virus Edition #10

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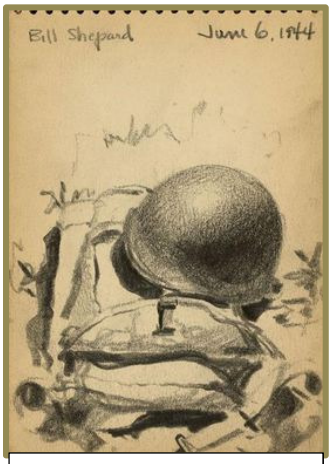
This is the tenth issue of a fun history hobby e-letter. Share it and pass it around. It's free. It's for fun. It's read from coast to coast.

Go to www.relivingradio.com for past issues of the **Bald Letter**. Help yourself and forward them to others. They're FREE.

The **Bald Letter** is the work of Dick Karman who is solely responsible for its content He would welcome your comments, complaints and corrections. dick@karmans.net

Thanksgiving is just around the corner: a time for reflection. So while we're looking back at vintage memories of our collections, and so much to be thankful for, read about radio and remember the way radio was, not so very long ago.

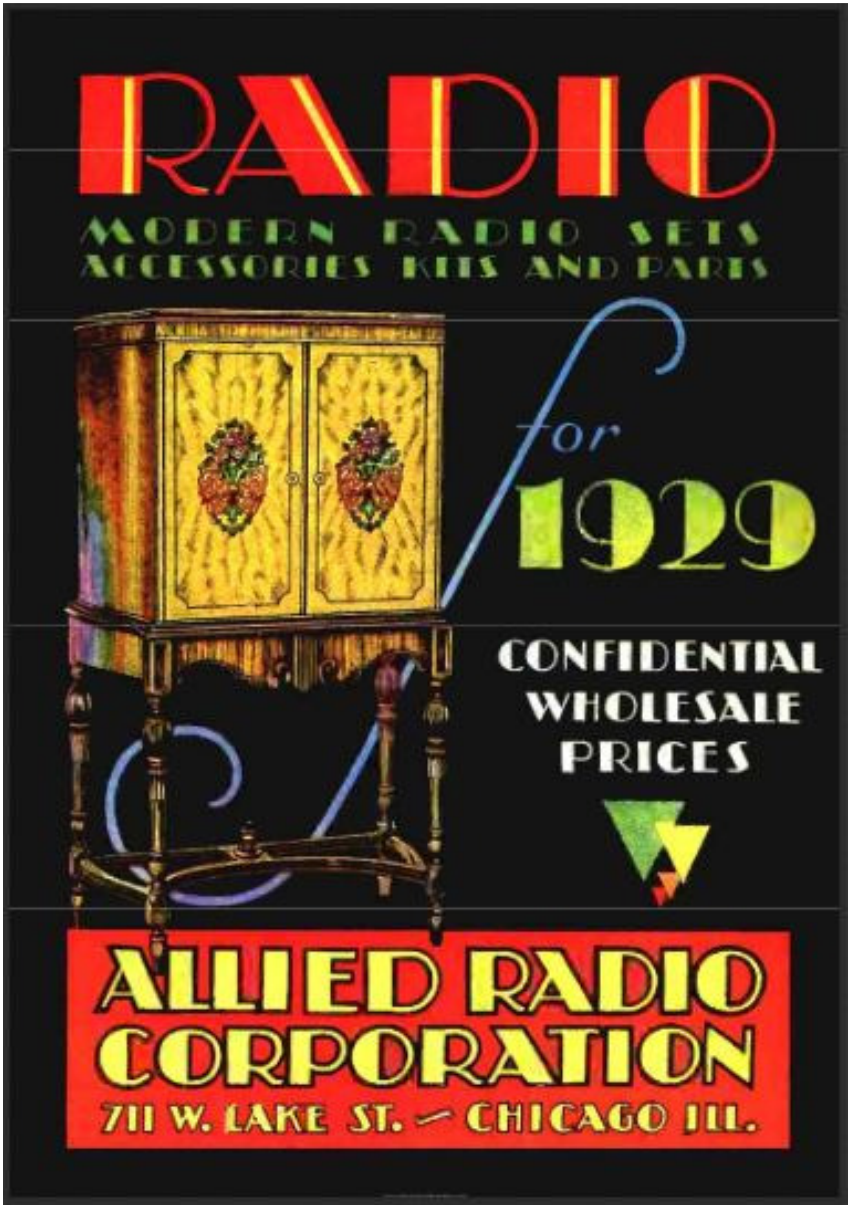


The art of Bill Shepard on D-Day, in honor of Veteran's Day 2020

Thanks to all who helped to make this possible and especially Hue Miller from Oregon. A special thanks to our Veterans. Veteran's day should be every day. Every day we have freedom because so many gave up freedom and even gave their lives so that we could live free in a free country.

The ***Bald Letter*** is distributed on the 15th of each month, knowing that what we are experiencing now is but a momentary light affliction.

2 Corinthians 4:17-18


RADIO
MODERN RADIO SETS
ACCESSORIES KITS AND PARTS
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1929
CONFIDENTIAL
WHOLESALE
PRICES
ALLIED RADIO
CORPORATION
711 W. LAKE ST. — CHICAGO ILL.

100 Years of KDKA

By Dick Karman, Editor

It would be hearesy for a newsletter that archives the history of radio and technology to overlook November of 1920: the first step into the future. The story of KDKA's broadcast 100 years ago and, of course, the results of the Harding and Cox election have been told and retold.

Some of the most complete and most recently written history of this event is also some of the most enjoyable (personal preference). It is the AWA documentation by David and Julia Bart and is on the web at https://antiquewireless.org/wp-content/uploads/AWA-Review-33-KDKA-Story-Part.pdf. It covers the historic event as well as KDKA operations through the years. The Barts have been preparing for the centenial for more than 3 years. Little did they know the Corona Virus would make an AWA review even more popular. Our small publication can't hold a candle to a great work like this one. Your editor recommends it for "home work."

Photo KDKA

Big NEWS From 1923

Hoover Approves New Wave Distribution- Interference Will be Eliminated by May 15

By Carl H. Butman (*Radio World April 21, 1923*)

WASHINGTON, D. C.-

Interference, the bugaboo of both radio operators and fans, will be greatly reduced, if not eliminated, by May 15th. On that date will go into effect the assignment of about 35 exclusive wave lengths to some 30 localities, where Class B, the high-powered broadcasting stations are situated. Wave lengths for Class A stations will also be assigned by districts by May 15, it is hoped.

Although Secretary Hoover is understood to have approved of the tentative allocation of the specific wave lengths to broadcasting stations, it is pointed out that each district radio inspector must now confer with the local operators and owners before the wave lengths are definitely assigned. For this reason the list is not yet made public.

All elements of the radio industry and public promised voluntary cooperation in an effort to eliminate interference especially in broadcasting, and officials of the Department of Commerce point out that it is now literally "up to them" to do so.

The tentative distribution of broadcasting waves is based on the recommendations of the Second National Radio Conference and is the first step in the application of the wave band allocations made recently. It will mean that anyone in the United States with a good receiving set will soon be able to pick up each and every high-powered radio broadcasting station and most of his local stations without experiencing the interference which has been prevalent for many months.

Practically every B station will have a national exclusive wave length, between 300 and 345 or 375 and 545, except where there are two or more in a locality, but the waves are assigned to localities rather than stations and will have to be shared in some cities. In four instances- New York, Philadelphia, Los Angeles

and San Francisco- two or three additional wave lengths will also be assigned, but they will not be exclusive nationally. Those waves allocated on the Atlantic Coast will be repeated in the Pacific Coast cities. While not exclusive, these additional waves will aid in supplying additional facilities and will scarcely cause interference as the stations will be about 3,000 miles apart. The difference in time of three hours will also tend to eliminate any interference. As soon as the nine radio inspectors can arrange with the Class B station owners in their districts, authority to broadcast will be issued on the specified wave lengths and stations will be required to use them only.

Where two or more stations exist, a time schedule will be arranged. Until the assignments are made definitely, B stations will continue to operate on 400 meters, and C stations on 360, but by the middle of May it is hoped that all readjustments will be completed and the transfers made. A few radio wave lengths in each district have been reserved because of anticipated interfere-ence with other lines of communication or held for new stations.

By May 15 the nine radio inspectors of the department will also undertake the reallocation of specific waves to old Class A or new Class C stations in their districts now operating on 360 meters. These wave lengths, between 222 and 300 meters, will not be exclusive nationally but will be exclusive in each radio district, giving practically every station a selective wave. Along the borders of adjacent districts, inspectors plan to arrange the allocation of wave lengths so that no material interference will be created due to the assignment of waves in close proximity.

Class C stations now licensed on 360 meters will be permitted to continue the use of this wave length if they so desire, but they will not be permitted to vary the wave length.

The reallocation means much to fans, any of whom should be able to pick up any B station and any of the A stations in his district due to the allotment of many additional waves.

A great amount of additional work will fall upon the shoulders of the radio inspectors and unless the receiving public, operators 'and other interests co-operate by staying on wave lengths assigned, the work will be delayed and interferences will not be overcome.

Nostalgia With The Sky Lark

by F.W. “Tech” Sloat W7AHK (Silent Key)

It was Saturday evening and I had just finished cleaning up the Sky Lark, a neatly built three dialer by Benler of New York. It is a five tuber and battery-operated, about 1925 vintage. Two weak 201As were replaced and it was ready to play. The switch was turned on and out of the old speaker came some big band music from KDWN in Las Vegas. It was very nice and it is my favorite music.

Sky Lark Type M08 151 from 1926

Photo by “Indiana Radios” on the Antique Radio Forum

I leaned back and relaxed. There was some fading and the signals disappeared. With the rheostat turned up a bit and the dials re-adjusted some different band music came in. Then, plainly, came the announcement, "KPO, Hale Brothers and The Chronicle, San Francisco, The City By The Golden Gate."

This couldn’t be! KPO has been gone for many years. Was I hearing right? Was someone playing a trick on me? Underneath the lid of the Sky Lark is fastened a printed log giving the dial settings for various stations, and I noticed Calgary with dial settings of 53-53-53. With shaking hands I turned the dials to this position and in came CFCN with the Bronco Busters. Good old CFCN, what in the world is going on? Near the top of the dials was a strong signal and the unmistakable announcement, "KGW, The Oregonian, Portland, Oregon bringing you the music of Dick

Jurgens and His Band, Playing In The Golden Canopied Ball room at Jantzen Beach on the shores of the Mighty Columbia River in Portland."

Going to the other end of the dials was the strong signal and the recognizable voice of Aimee Semple McPherson giving her sermon from the Angelus Temple in Los Angeles. (You may remember, Aimee disappeared in the ocean and came up in the desert. She landed in jail.),

At 26-27-26 was a great one, "KNX, The Los Angeles Evening Express Station, and "The Music of Abe Lyman and His Orchestra from the Coconut Grove in the Ambassador Hotel." It was great. I had often listened to Abe Lyman and I could imagine the movie stars and other notables out on the dance floor. I listened to many of the old tunes. There was some fading and the Sky Lark went dead.

Looking inside gave the sign that the battery was dead. A glance at the clock- It was 1:00 A.M. Boy! I have to get up in the morning, and to bed I went. All of the next day I thought about what I had heard- or had I heard it?

Sunday evening, with the battery charged up, the Sky Lark was again turned on. Alas! The band was a bed-lam of talk shows, profane language and everything from financial advice to sex. No sign of the old stations and programs could be found. Sadly, I returned the Sky Lark to the shelf. I had decided to keep this tale to myself, knowing no one would believe it, but I remembered years ago, a prognosticator had advised us that all these signals which had been transmitted into space would return.

Sky Lark Type M08 from 1925

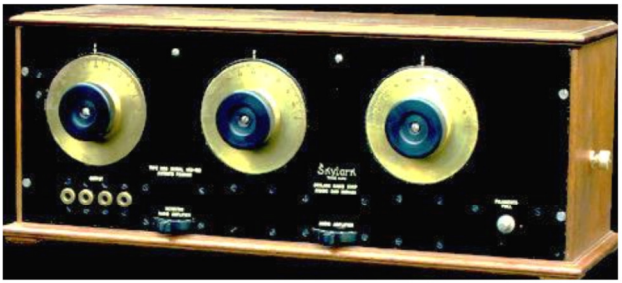


Photo by "Indiana Radios" on the Antique Radio Forum

Melville Eastham, Oregonian

(Originally written for the "West Coast collectors")
Compiled by Dick Karman


Photo Courtesy of General Radio Company

Melville Eastham was born on June 26, 1885, near Oregon City, Oregon. Robert Palmer, a friend of Eastham (a one-time manager of the Marconi Co. in Portland) when inter-viewed in the 1960s, reported that Eastham kept the 'family farm' (located in what is now Tigard) until his death.

Eastham was a gregarious man of the keenest intellect, a lover of good conversation, and the possessor of an extraordinary range of interests. He always had great energy and an ever-growing circle of friends in the electronics industry. Spark Gap radio caught his interest at an early age and by 21 he was pursuing his vocation and education in Massachusetts, eventually growing strong ties to the Massachusetts Institute of Technology.

He was a gadgeteer, skilled in mechanical design. He joined forces in 1906 with Mr. W. O. Eddy and J. Emory Clapp., thus establishing the Clapp, Eddy and Eastham Company which manufactured X-ray machines. Mr. Eddy left the partnership a year later, and the name was shortened to Clapp-Eastham. In 1910 Eastham saw and met the need for parts and components for the nascent "build it yourself radio" community (known only as amateurs). Those parts with a much broader audience outsold their original product line. It was in that year that Clapp sold his interest in the partnership.

According to the Oregonian of Aug 2, 1913, Melville Eastham had become engaged to Jessie Chase of Portland, who was attending college in Boston at the time.

Clapp-Eastham, Gold Star, 1925
By then Eastham had left to start General Radio Company

Eastham was a keen businessman. According to the history of General Radio Company (1965), Eastham's primary interest had always been electronic instrumentation. Clapp-Eastham Radios began building complete radio receiving sets in 1915.

Robert Palmer said,

> *"Later, in 1915, Melville founded The General Radio Co. in Cambridge, Mass, primarily to fill the great need for precision measuring instruments in the radio and allied fields. Soon after, there was hardly any government, university or commercial laboratory in the world that did not have some General Radio instruments. They were the peak of perfection!"*

During the First World War General Radio instrumentation was second to none, and was used around the world to build and to calibrate this new communications device known as radio.

Although Clapp-Eastham Radio Company shut its doors in 1929, as did many of the early manufacturers, due to patents and design disputes, General Radio Company continued to thrive "between the wars." Quality and innovation were the trademarks that carried it for more than eight decades.

Melville had a never-ending interest in technical education. Throughout his career and in the legacy that he left behind, his main philanthropic interest was the Massachusetts Institute of Technology. While building General Radio, he worked with many of M. I. T.'s officers and faculty on wide-ranging problems and was a member of the Visiting Committee from 1936 to 1939.

Melville Eastham was a leader in the Office of Scientific Research and Development during World War Two. During that time he was instrumental in developing the loran navigational guidance system. For this he was awarded the United States Medal for Merit, the highest civilian award.

General Radio Impedance Measuring circuit

Truly an Oregonian, in 1945, he received the honorary degree of Doctor of Engineering from Oregon State University (then Oregon State College). He was a Fellow of The Institute of Electrical and Electronics Engineers, the American Association for the Advancement of Science, the American Academy of Arts and Sciences, and a member of the Acoustical Society of America, the American Physical Society, and the American Meteorological Society.

During WWII (1944) Eastham stepped down as president of General Radio so that younger men could takes roles of leadership. He believed that engineering required imagination, and imagination was a gift of the young. He stayed on as chief engineer. In 1950 he retired from General Radio Company, but visited the engineering and manufacturing facilities frequently.

Eastham, according to Gordon Sloat*, an employee at Tektronix who knew Melville, came to visit the family farm in Tigard almost every summer and while doing so he checked in and spent time with engineers that he knew “out west”.

Melville Eastham died on May 7, 1964.

* Gordon Sloat was the brother of NWVRS member, Francis ‘Tech’ Sloat, who wrote of the interview with Robert Palmer and about Gordon in an article in the January 1995 Call Letter of the NW Vintage Radio Society.

Sources: History of the General Radio Company 1915 to 1965 by Arthur Thiessen, © 1965 by General Radio Company
Harvard University, Collection of Historical Scientific Instruments: The Clapp-Eastham Company

A Home Brew Beer and Sausage Rig

By Pete Petersen, Past President of PSARA
WY7Z, (Silent Key)

Let me take you back to 1860 and the first recorded attempt to transmit speech by electricity. In that year Phillip Reis, a German schoolteacher, constructed a voice transmitter by hollowing out a beer-barrel bung and stretching a sausage skin over the small end. He fastened a thin strip of platinum foil to the skin. A second foil strip, placed a small distance above the first, had a contact point that was adjusted to lightly touch the first foil strip. As Herr Reis spoke into the large end of the bung, his voice vibrated the sausage skin, causing the contacts to make and break with the same frequency as his voice (more or less).

That accomplished, he faced the problem of what to use as a receiver. His solution was simple and ingenious. To build a receiver, Herr Reis used a violin. He took the violin and stuck a steel knitting needle in the violin's bridge and placed a coil of wire around the needle to make it an electromagnet. The transmitter, the receiver, and a battery were connected in series. The battery current, modulated by the transmitter, intermittently energized the receiver electromagnet. This caused the violin strings to vibrate audibly- presumably, at frequencies corresponding to those of the original sound.

Did it work? Just barely. A solid tone, as from another violin, occasionally could be reproduced fairly well. When trying to reproduce speech, only a rare syllable could be recognized and very indistinctly at that. Succeeding equipment was slightly more successful but the method of reproducing sound by making and breaking contacts never proved practical.

Perhaps it's stretching things a bit to say that our modern microphones are descended from German beer and sausage (noble as this lineage might seem) but modern equipment would not exist without these early experiments.

Losing a Handle on History

In feedback on the "POW radios" in the last issue of the Bald Letter, your editor was reminded of the British Biscuit Tin radios. Some of the best examples which, as noted, were on display in mueums. The one below was found in the International World War II Museum in Natick, Massachusettes. Your editor has read other accounts of radios and radio operators which have been perserved in this museum so it was a welcome reminder.

"The Natick museum billed itself as the most comprehensive in the world for its displays that cover all theaters of combat and provide the perspectives of ordinary soldiers and their leaders; the persecuted and the persecutors; and the civilians back home." (Boston Globe Sept 2, 2019)

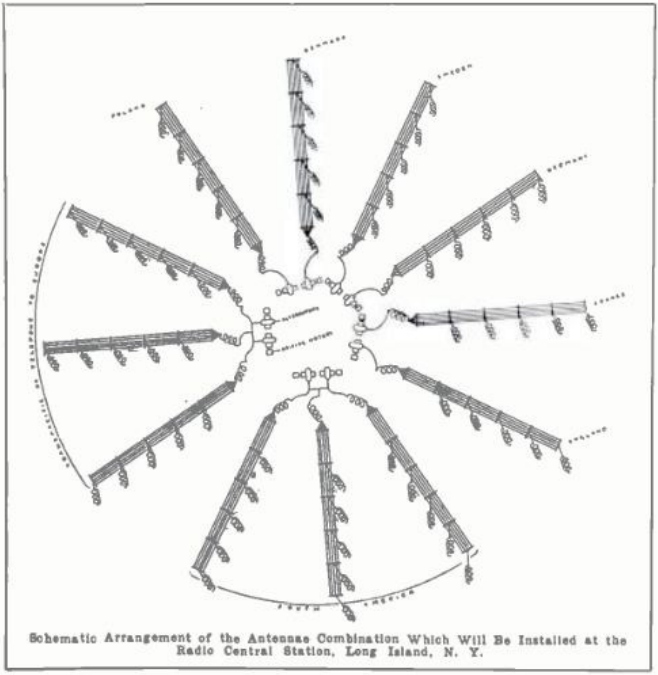
Following up and looking for more great stories and radios, this writer was disheartened to learn that the museum had abruptly closed its doors in September 2019, not to open again.

With millions of dollars in irreplacable displays and tens of thousands of World War II memories involved, we will never know the outcome or where it all ended up, but several radio collector's clubs (mostly on the east coast) found a great deal of radio history at the Natick facility. Spy radios, communications gear from both sides, memorabilia, and inumerable personal anecdotes from men and women who lived through the war, which all worked together to bring wartime life (and radio) and the memories of war very close to home. By losing this museum we lost a very tangible handle on wartime radio history.

A Note from the Past

From Past Bald Letters

In past issues of the Bald Letter there was a photograph reproduced from the July 7th 1923 issue *of Radio World Magazine*, showing a 652 foot free-standing radio tower. It explained that the tower was one of 72 such towers at Port Jefferson, Long Island. To this editor that seemed like a monumental accomplishment. Lately an article about the development of the Alexanderson Alternator described the building of this antenna array in 1920 and displayed this drawing:



Schematic Arrangement of the Antennae Combination Which Will Be Installed at the Radio Central Station, Long Island, N. Y.

Radio News Magazine, Dec, 1920

There are twelve spokes on the "wheel" each with six towers, each tower more than 600 feet in height. The directional combinations allowed the antenna patterns to beam to any part of the world. As the story told, when combined with several 200,000 watt Alexanderson High Freguency alternators, RCA (probably rightfuly) claimed that New York was the "Center of Radio and Radio-Telegraph Communications" for the World.

Useful Tool: A Signal Injector

From Hue Miller (kargo_cult@msn.com)

About 20 years ago, I had a little handheld 'Micronta Signal Injector' instrument, which was extraordinarily useful as an all-around troubleshooting device. It injected a signal that tested DC, audio, and even RF circuits for working.

I always thought it was just a square wave generator. I looked at the manual and I see it's this instead: An audio "squegging oscillator" with a diode on the output to generate distortion (harmonics). I believe I'm going to look into redesigning the circuit to work on 1.5 or 3 volts and use an LED instead of a “power hog” lamp.

The 290 uH coil is not the oscillation frequency of this device; it's there to boost the RF harmonics. Hind-sight says I should have bought two or three of those things when I had the chance. You could troubleshoot anything from a crystal radio to a communications receiver using that thing and a signal tracer.

What I liked was that this little gizmo sent a signal that could be heard as audio and had enough rough harmonics that it would travel through radio RF stages also. And it was handheld. If you had a radio you were working on, you touched this to points in the radio and you heard the tone from the speaker.

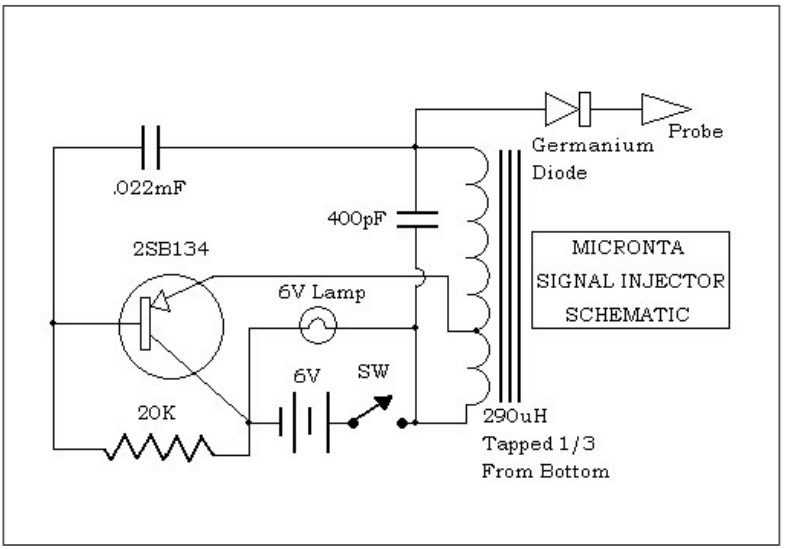
How to Use . . .

Since you are using an injection type method of signal tracing, it is best to start tracing from the speaker or kinescope back to the antenna. As you touch the probe to the input grid of each circuit, an audible note will be heard in the speaker and indicates the stage is "O.K.". (On kine-scopes, the screen will show alternate black and white horizontal bars). As you pro-gress, if there is no indication (in speaker or on kine-scope) when you touch probe to input grid, stop and measure plate voltage and grid bias, and proceed to trouble-shoot for defective components.

(from Radio Shack)

To build your own- I looked up the 2SB134 transistor and it's Germanium, low gain (hfe 70), low frequency (FT ~ 3), in other words, looks like "nothing special", in fact I was thinking a dumb old 2N404 would work. Or probably most any generic silicon transistor, but you might have to change the resistor. I note that the coil is 290 uH. Most "loopstick" coils and transistor antenna bars are around 230 – 240 uH, so perhaps we could wind some additional turns on one, wire them in series inductance-aiding, and use the junction for the transistor tap. Give it a try!

Hue



Editor's note:

Back a dozen or so years ago a thread on Antique Radio Forum discussed and dissected this tool. Several folks, who knew more than your editor, also sang its praises in the area of diagnosing radio problems and tracing signals throughout vintage gear. Even though Radio Shack is no more, you can enjoy that discussion at www.antiqueradios.com/forums/viewtopic.php?t=109446.