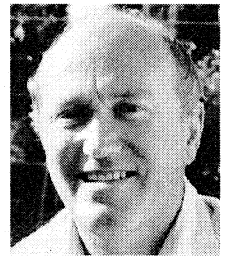


# VINTAGE RADIO

By JOHN HILL



## Trash or treasure – or how to recognise the good stuff

**Scrounging old radios & the parts to restore them is all part of the vintage radio hobby. Much of what one finds is junk but every so often, one strikes it lucky.**

A few years ago, I was a most enthusiastic collector of old radio receivers. Countless hours were spent scrounging around secondhand shops, garage sales and auctions, looking for those elusive bargains. It was time-consuming work which located a lot of junk and very few real treasures.

Those days have all but gone and scrounging is now something I mainly do when on holidays. My radio collecting has become so well known in the district in which I live that I no longer have to seek out old radios – they seek me out instead. Well, their owners do!

In the past week I have been fortunate enough to have been offered a number of interesting items from various sources, some of them being of 1920s vintage. It is incredible that such ancient equipment still survives in any quantity.

### The old Apex receiver

Perhaps the most interesting of these recently acquired items is a 1929 Apex, an 8-valve neutrodyne of American manufacture. This particular set is a mains-powered, steel-cased TRF receiver with a 3-gang tuning capacitor. The receiver's 91-year old owner had

recently gone into a retirement village and I found myself in the right place at the right time, thus possibly saving the old set from going to the tip.

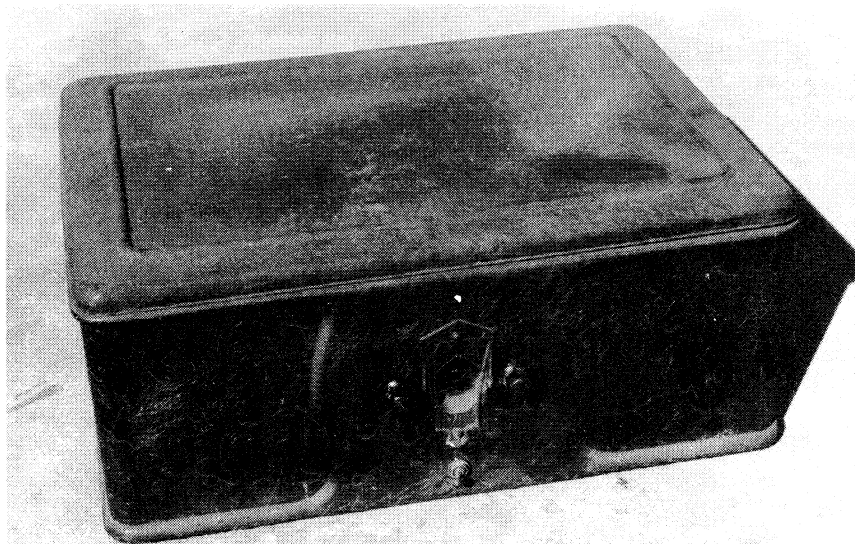
While the receiver itself was in quite reasonable condition for its age, the same could not be said for the loud-speaker. Its open field coil and tattered speaker cone left little doubt as to its serviceability.

When I first saw the old Apex, I thought that it would just have to be a 1929 model. Radios with pressed steel cabinets came in around the 1928-29 period and didn't last much longer. The valve line-up also suggested a similar date. The valves include: a 280 rectifier, five 227 triodes and two 245s in the output. Whether the output valves are in push-pull or are parallel connected is not known at this stage.

It is pleasing to note that Apex is mentioned in "Radio Manufactures of the 1920s". The Apex chapter included an old advertisement for the 9-valve version of my particular set. The advertisement was dated June 1929 – not a bad guess!

At this stage, I do not know whether the Apex is a 110V or a 240V model. The power transformer specification plate carries blank spaces where the vital information should have been stamped. In such a case, it would be prudent to plug the set into a 110V transformer for a preliminary try out. Because such a transformer is a permanent part of my workbench, that does not present a problem.

Some of the better aspects of the old Apex are: the cabinet is undented, it still has its original knobs, the dial is OK, the friction drive works quite well and the on/off switch still functions.



**This 1929 model 8-valve Apex is a TRF receiver of American manufacture. The pressed steel radio cabinet has about the same aesthetic appeal as a sardine tin.**

No doubt, the Apex will require a lot of work to restore it fully. There will probably be open-circuit audio transformers, crook paper capacitors and other nasties underneath the chassis, but such problems can usually be overcome one way or another. A quick check revealed that all but the output valves were in excellent condition.

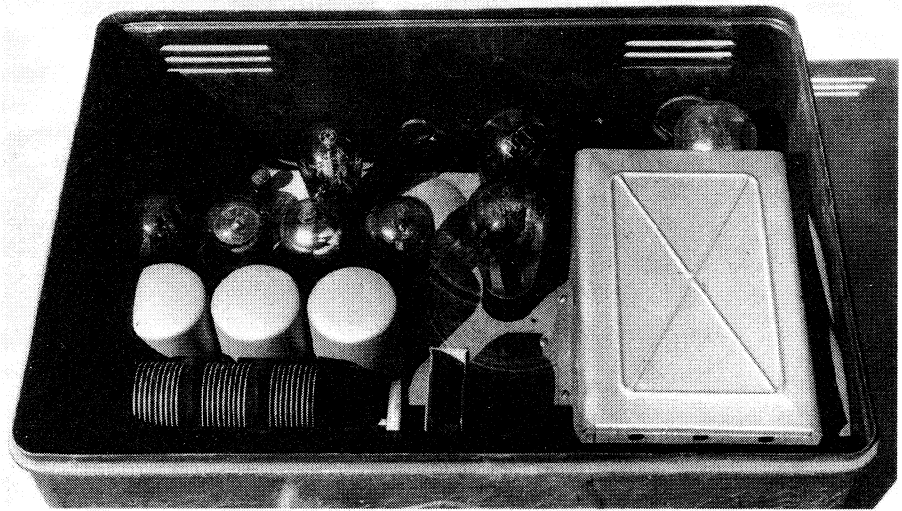
### An unusual find

In the same shed that the Apex was found there was also an old 5-valve chassis which is interesting in an unusual way.

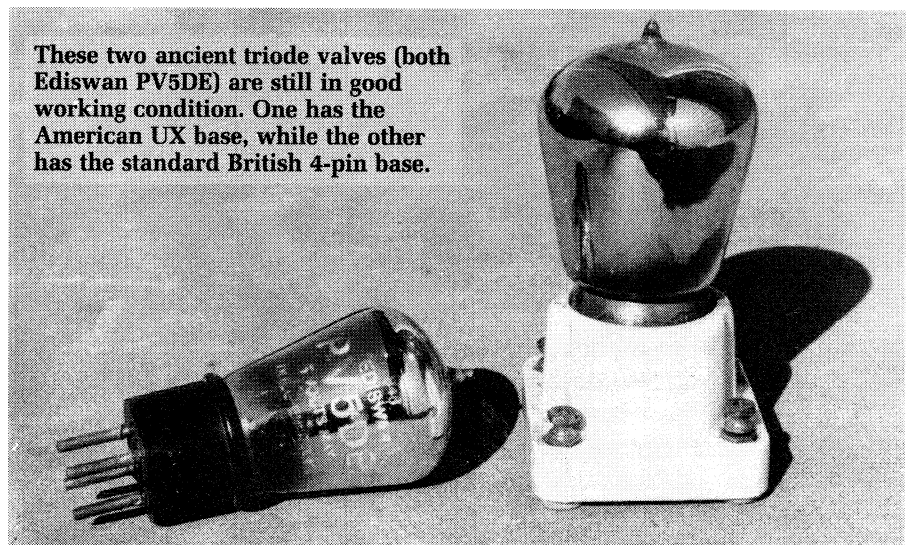
The chassis originally used 4V European side contact valves, as witnessed by the large valve socket holes and the 4V power transformer. Someone had gone to a lot of trouble in the past and removed the side contact valve sockets and replaced them with smaller octal sockets. Apparently, whoever did the conversion had not given any thought to the heater voltage of the replacement octal valves, as there was no provision made to supply 6.3V to the heaters. Instead, the octal replacements had been wired up to the 4V heater winding on the power transformer.

It would appear as though the project was abandoned at that stage, with the new octal valves still in their sockets. Testing these valves in a valve tester revealed that they were indeed new for they all tested "GOOD". There's nothing like a bit of luck now and then!

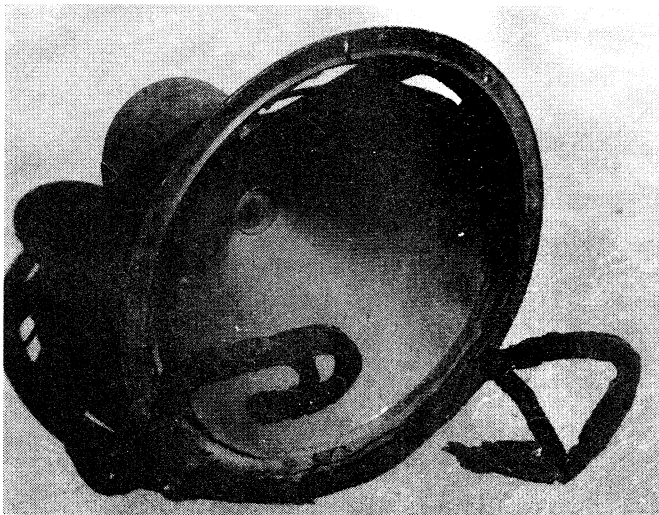
There was still another interesting item to come from that dusty shed



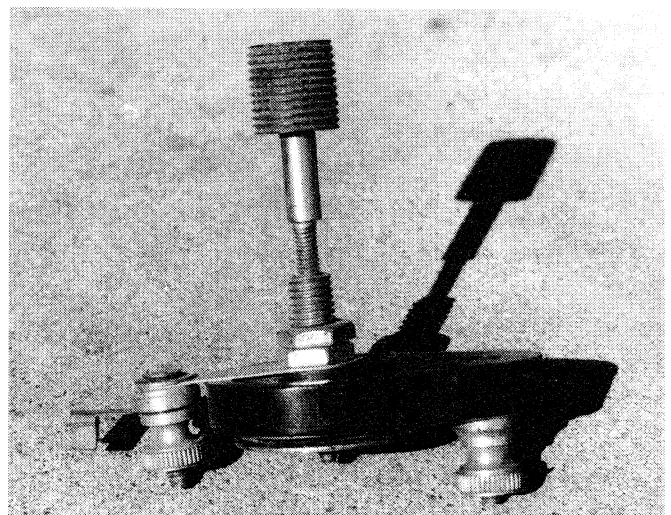
With the lid removed, the old Apex receiver looks a little more interesting. The pressed steel box at the right houses the power transformer & the large paper capacitors used in the high tension filter.



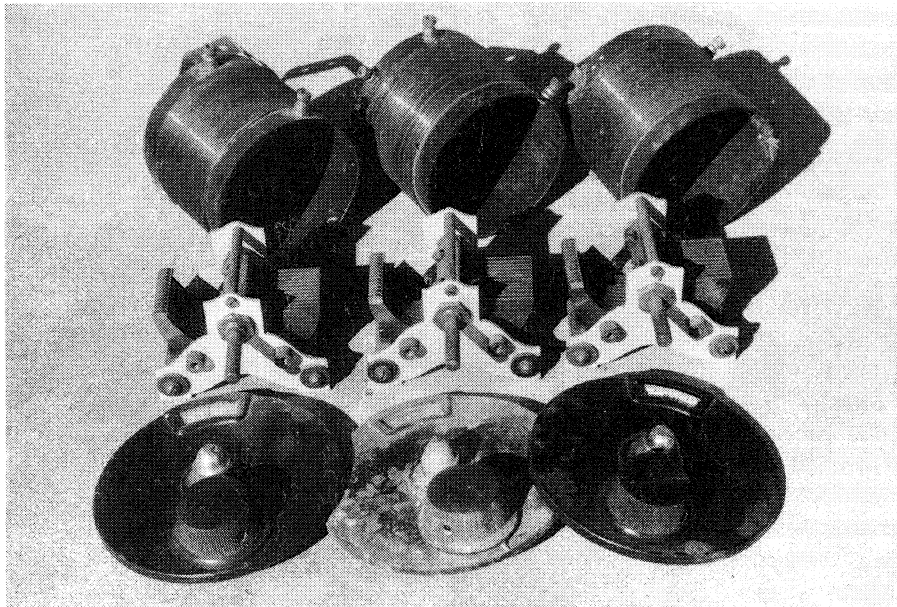
These two ancient triode valves (both Ediswan PV5DE) are still in good working condition. One has the American UX base, while the other has the standard British 4-pin base.



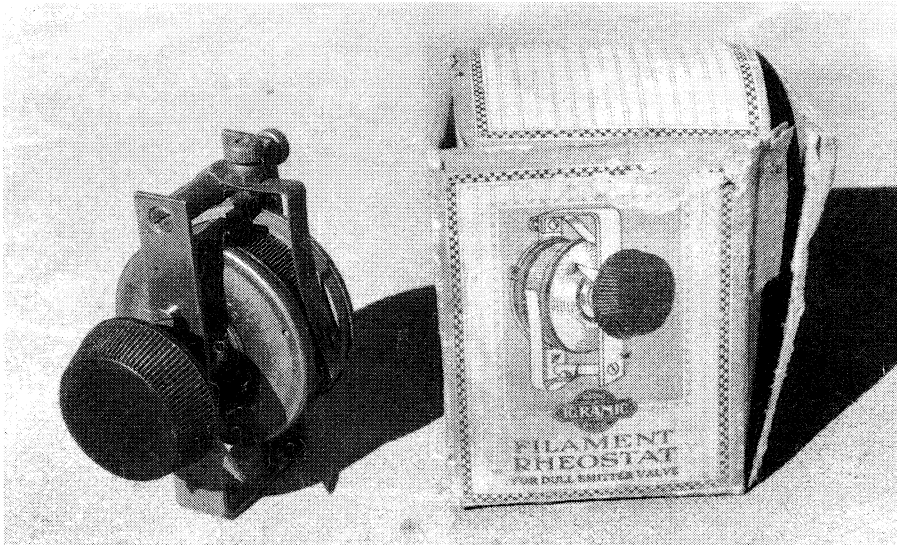
This old electrodynamic loudspeaker from the Apex receiver has not survived the past 60 plus years as well as the receiver & a suitable substitute will have to be found.



This neutralising capacitor from the junkbox of parts is far sturdier than the much more common screwdriver adjusted variety.



With a bit of cleaning & repair work, this trio of matching dials, tuning capacitors & coils could be used to rebuild an early TRF receiver. This equipment would be of about 1926-7 vintage.



This photo shows an old Igranic filament rheostat. It's quite a sturdy & elaborate device for a variable resistor.

and that was a mid-1920s horn speaker. Although sadly neglected and shabby looking, the Sterling "Baby" was actually in working order and should restore quite well.

The 1948 5-valve Healing hardly warrants a mention at this stage but it also came from the same shed. It was a good shed, that one, and it wouldn't surprise me if something else old and interesting comes to light in the near future. There is still a lot of junk in there yet!

### A box of treasure

I recently met Domonic, a new col-

lector who has caught the valve radio "bug" really bad. He is collecting radios as though there will be none left by the end of the month. In the space of just a few weeks, he managed to track down about 20 old radios plus a box of miscellaneous radio parts. It was these odd bits and pieces that were offered to me; not for money but in return for a repair. It seemed like a good deal to me so I accepted it.

Well, what was in the mystery box? All 1920s parts; that's what!

First, there were about eight old triode valves. A quick examination revealed that most had burnt-out fila-

ments but two of them were still serviceable. And even though the others were no longer usable, they were still very acceptable as show pieces. A display of old valves only has to look the part; they do not have to be in working order.

There was also a quantity of board mounted 4-pin valve sockets. These included the American UX type, as well as the British standard type. Two of the valve sockets were of the old porcelain variety which are fairly rare today.

There are also five vernier dials which could come in handy although they would all require stripping, cleaning and new dial glasses before they could be considered usable. In addition, there are a few ancient grid leak capacitors of the type that have clips fitted to them to hold a grid leak resistor. And there were a couple of resistors to go with them.

It is authentic old radio parts such as these that are so valuable when rebuilding an old 1920 receiver.

Apparently someone had stripped an old 5 or 6-valve TRF at some stage and the three inclined coils and matching tuning capacitors have been saved. Three of the previously mentioned vernier dials were possibly part of the same receiver.

Unfortunately, only one of the five audio transformers was still operative. This is not surprising as these particular items have a very high mortality rate. Most of them end up with open circuit primary windings due to the extremely fine wire used in their manufacture.

Also included amongst the bits and pieces were a number of swinging coil sockets with their accompanying plug-in coils. There are several 2-coil models with a single swinging coil and a 3-coil unit with two swinging coils. Once again, these are fairly rare items these days!

### Bits & pieces

Naturally, there are a lot of other incidentals: old mica capacitors, numbered dials, pieces of square section wire, odd vintage style control knobs, wire-wound rheostats, and a driver from an old Amplion horn speaker. The driver's pole piece windings are still intact, so that could be a handy item.

The last items worth mentioning from my treasure chest are several

variable grid leak resistors. There are four of them and they are all in working order with resistances averaging from about 0.5-10M $\Omega$ . It was the first time I had ever seen variable grid leak resistors; I had only read about them previously.

### Valuable items

No doubt some readers may consider that what I have described in the last few paragraphs is little more than junk. Well perhaps it is to some people but not to me. As far as I'm concerned, there are a few really valuable items there although some may wonder what would I possibly use them for.

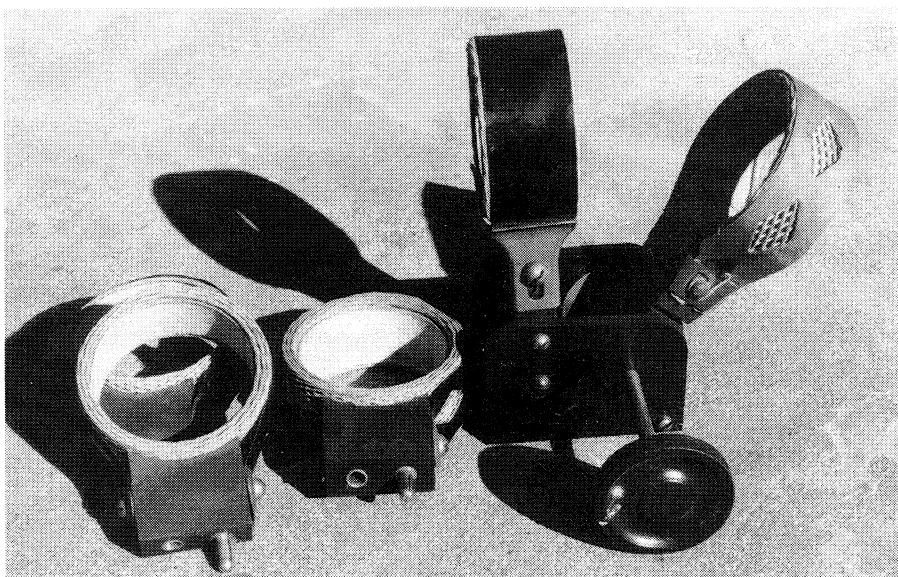
I have quite a number of 1920s receivers with missing and damaged parts – sets with broken dials, open-circuit audio transformers, missing knobs, burnt-out valves and numerous other problems. The restoration of old and incomplete receivers is an impossible task without a comprehensive supply of appropriate spare parts.

In the January 1993 issue of SILICON CHIP, the Vintage Radio story for that month described the restoration of a mid-1920s 3-valve receiver. That particular restoration required the following old-style spares: an on/off switch, a radio frequency choke, an audio transformer, a B605 valve, a couple of terminals and possibly a few other incidentals that have slipped my mind. All these parts were readily available from my own spare parts supply.

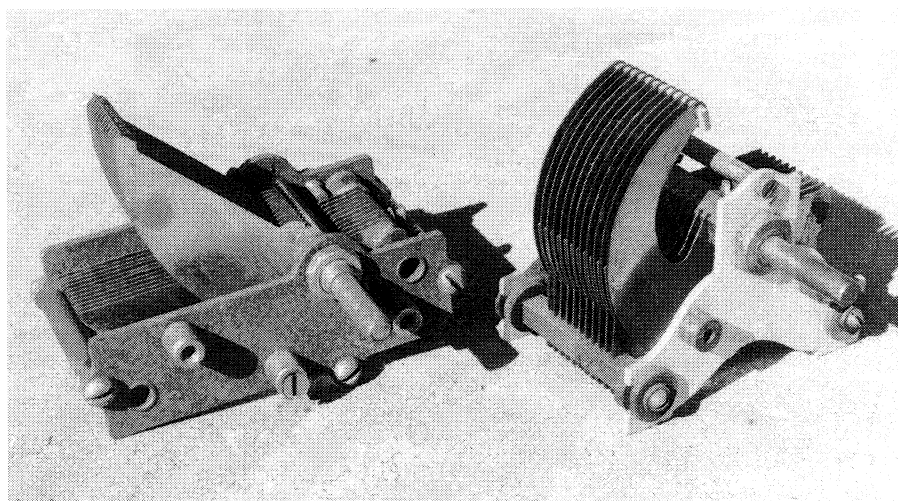
Going back to the August 1989 issue, Vintage Radio gave details of a complete rebuild of a mid-1920s receiver. In this instance, what was little more than an empty radio cabinet was transformed into a working 3-valve receiver. This was done by using carefully selected vintage spare parts that were appropriate to that era. The finished receiver may not have been very original but it looked the part and is a whole lot more interesting than an empty cabinet.

So there it is - old junked parts from valve radios of any age are useful to collectors and restorers of vintage receivers. One cannot operate without usable spares and one should not miss out on any opportunity to obtain them. No doubt many parts will never be used but others will be the essentials that restore an otherwise unrestorable receiver.

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This simple 2-unit swinging coil socket assembly (with spare coils) is one of several such coil assemblies found in the author's "treasure chest".



These old-style single-gang tuning capacitors always make a crystal set or 1-valve receiver a little more authentic looking.



These variable grid leak resistors are real relics from the past. The one on the left has a carbon track & wiper arm, while the others are, presumably, carbon granule compression types.