VINTAGE RADIO

By JOHN HILL

Restoring an old radio chassis

Don't neglect an old radio chassis just because it no longer has a cabinet. Often, just restoring the chassis can be worthwhile, particularly in the case of some radiogram units.

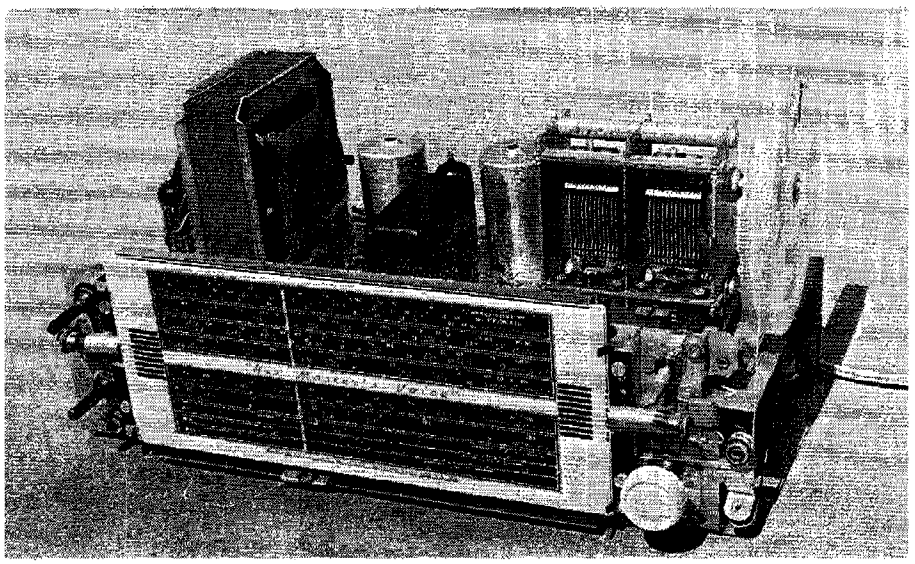
Most of my valve radio receivers are complete. I guess if one is going to collect old radios, complete sets or sets that can be easily made complete are the way to go.

But things don't always work out as planned and most radio collectors soon end up with a sizable supply of bits and pieces. These often include cabinets without innards and vice versa.

Murphy's Law has it that no two will ever match up. In other words, if you have 10 empty cabinets and 10 chassis, then the chances of pairing up any two are about zero. Part 3/15A of Murphy's Law states that: if any two such items do match up, it is by pure coincidence rather than by good planning, good luck or skilled ingenuity. Murphy really had very negative views!

But let's not get depressed. To hell with Murphy and his infernal laws.

There are three things that can be done with an old chassis. First, it can be added to the spare parts supply. It doesn't take long to strip a chassis and put away the usable parts. Second, it can be stored as is, until that long awaited day when a suitable cabinet is found. And third, it can be restored to working order and used in a number of different ways.



This old HMV radiogram chassis is one of the author's favourite receivers. It has a push-pull output & three shortwave bands. The elaborate glass dial carries all the station call-signs.

Of course, if the chassis is restored and working, it can be quickly fitted to a matching cabinet when one is found.

Spare parts

Let's look more closely at dealing with old chassis and incomplete receivers.

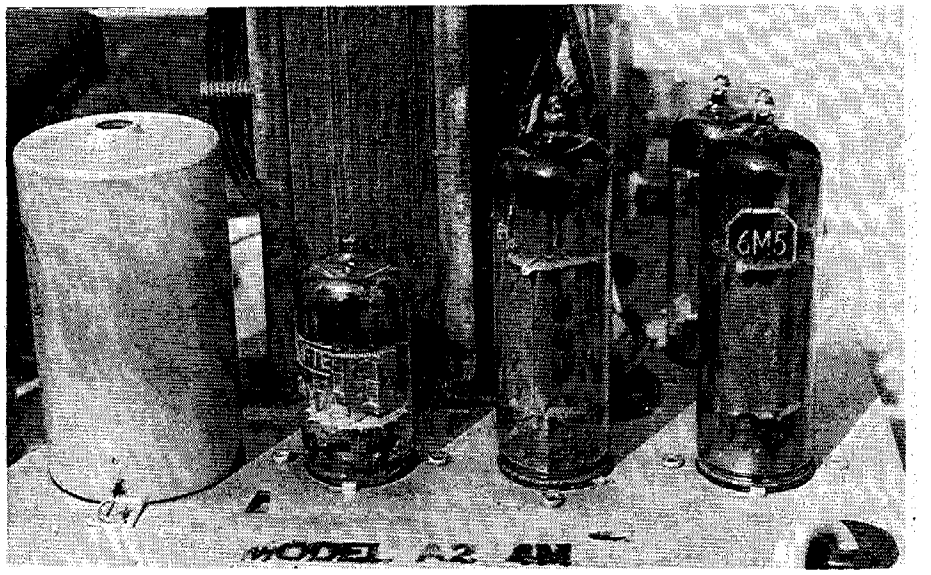
If a collector is to have a comprehensive range of spare parts he must be prepared to sacrifice numerous incomplete receivers. I have stripped well over a 100 old sets for spare parts and still often find that the part I want is the one I don't have. That damn Murphy again!

Any radio collector or vintage radio repairman must have spares. He needs power transformers, valves, loudspeakers, dial glasses, control knobs and many other bits and pieces. Usually, these items cannot be acquired by any means other than stripping incomplete receivers.

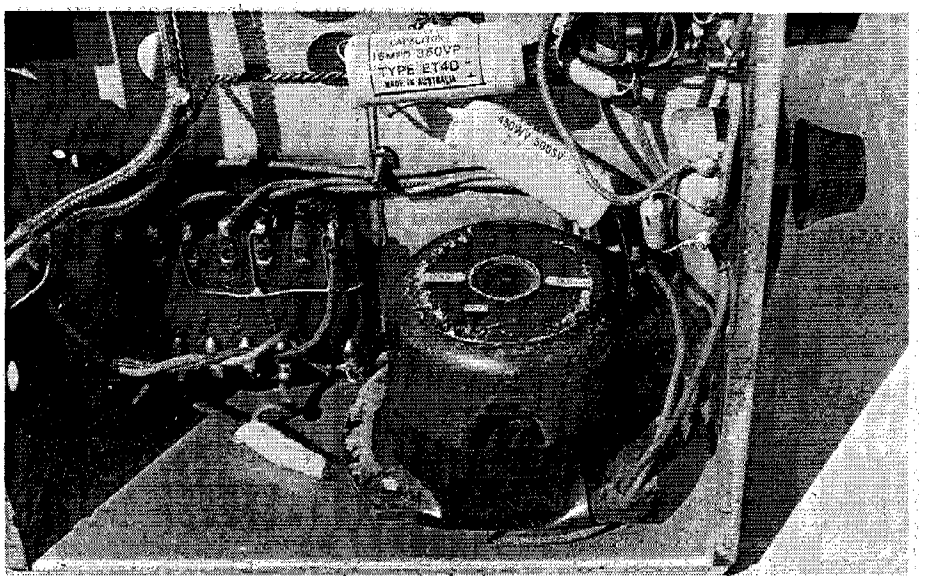
That said, there have been many occasions when I have regretted stripping a particular radio. Sometimes, when an incomplete set is wrecked, a source of spares turns up that would have allowed the chassis to have been restored.

It is for this reason that many collectors leave their incomplete receivers as they are and either strip odd parts as required or combine them with others to produce a single working receiver as the opportunity arises. It's a good idea if there is sufficient room to store them properly. However, they often end up stacked on top each other in the garage. When a spare part is eventually required, deterioration has often set in and the wanted part is no longer serviceable.

I like to get some of those old chassis working again. There's no reason to shun an interesting old radio just



The audio end of the HMV radiogram chassis. It uses a 12AX7 to drive two 6M5 output valves & this arrangement produces more than enough audio power for normal listening.



This chassis has been converted for use with a "permag" loudspeaker by fitting the original field coil to one end. Resistors & filter chokes can also be used as substitutes for field coils.

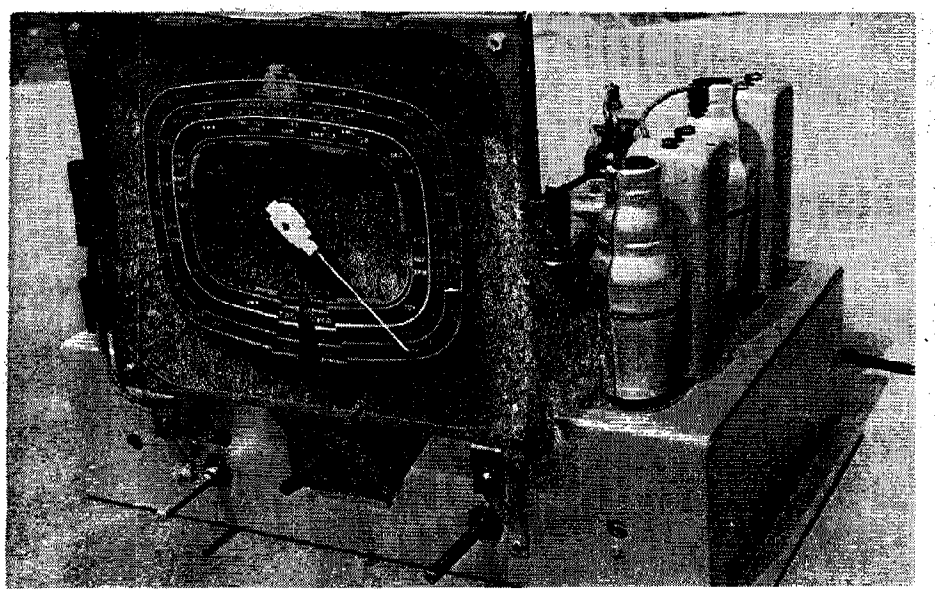
because it has lost its cabinet. Often, an unloved chassis can be made up into a really good receiver and I use some of my restored chassis quite extensively.

Wall-mounter speaker

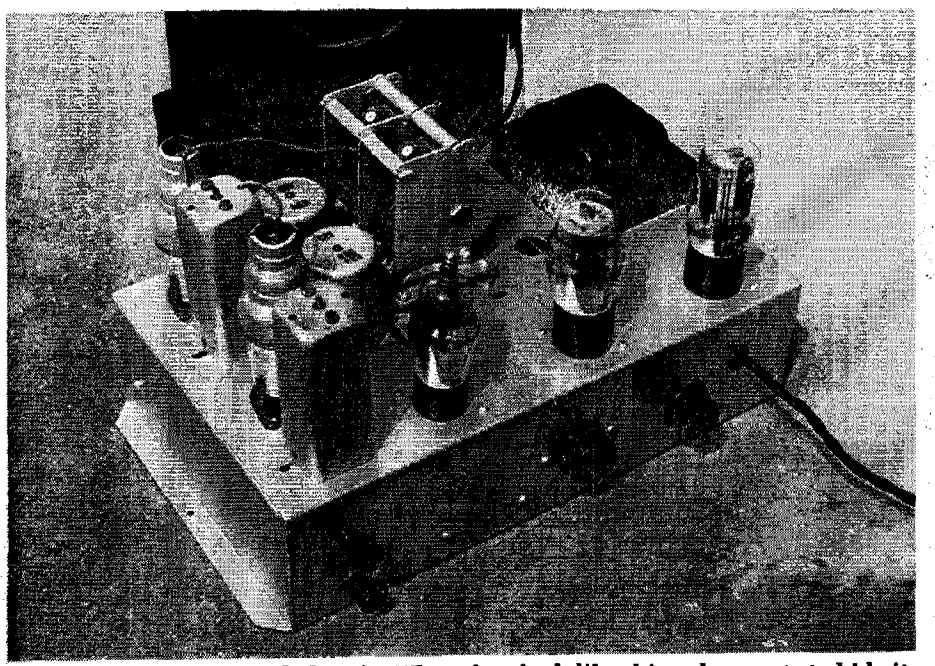
On the wall of my workroom is a speaker box. It's just an inexpensive veneered chipboard cabinet that contains a cheap 20cm 8W loudspeaker. It was originally bought to make my daughter's radio-cassette player sound a bit better. The end of the speaker cord is fitted with a 3.5mm mono plug.

This 8W speaker works quite well considering its price and the miserable box it is mounted in. When it is connected to something worthwhile, it sounds surprisingly good. It produces much better sound than a mantle radio and is quite comparable with any good table model.

Any chassis that I restore to working order has a 3.5mm socket fitted to it and that eliminates all the hassles when it comes to connecting this loudspeaker. If need be, the chassis is modified to make it compatible; eg, by building in a field coil substitute, output transformer or whatever. It's then



This old chassis is from the early post-war era. It is a 5-valve receiver with shortwave & gives excellent performance when connected to a wall-mounted loudspeaker.



Rear view of the restored chassis. When they look like this, who wants to hide it in a cabinet? Note the tone control at the back of the chassis.

just a matter of plugging in the speaker and the chassis will work.

An old valve chassis driving a wall-mounted speaker also makes a good workshop radio. There's a bit of a market for garage radios and an old 5-valve chassis is a good basis for such an outfit.

Radiogram chassis

A number of my working chassis are from radiograms and that makes the odd one a bit better than average.

Some radiograms were quite expensive and the radio section was often far more elaborate than in most standard radio receivers. It is not uncommon for a radiogram chassis to have a few extras like a stage of radio frequency amplification, a push-pull output and two or three shortwave bands. If you're lucky, you could have separate bass and treble controls too!

Personally, I'm not interested in collecting radiograms. They are just too big and heavy and take up too much room. However, I am of the opinion that some radiogram chassis are well worth keeping because they make excellent radio receivers when used in conjunction with a wall mounted speaker.

This idea is by no means new or original. Over the years, I have collected many old console and radiogram chassis that had been built into home-made cabinets. Some of these conversions are quite neat while others are dreadfully rough and unappealing.

I have four radiogram chassis in working order: two HMVs, a Precedent and a Philips. The Philips and one of the HMVs have push-pull outputs and they really do sound good. The 8W speaker is more than adequate in the quiet confines of my workshop.

The other two chassis are not so spectacular. One is from a HMV tablegram and is nothing more than a "Little Nipper" with the addition of shortwave. The Precedent is a real "el cheapo" affair and amounts to little other than a standard 5-valve broadcast receiver with a big dial. It is not in the same class as the other units.

Valve testers

There are other advantages to having a few working chassis besides listening to them on a wall speaker.

In a past story on valve testers, I made the statement that if a valve tests OK in a valve tester, it is only a favourable indication that the valve is useable. To be really sure, the valve should be tested in a working receiver.

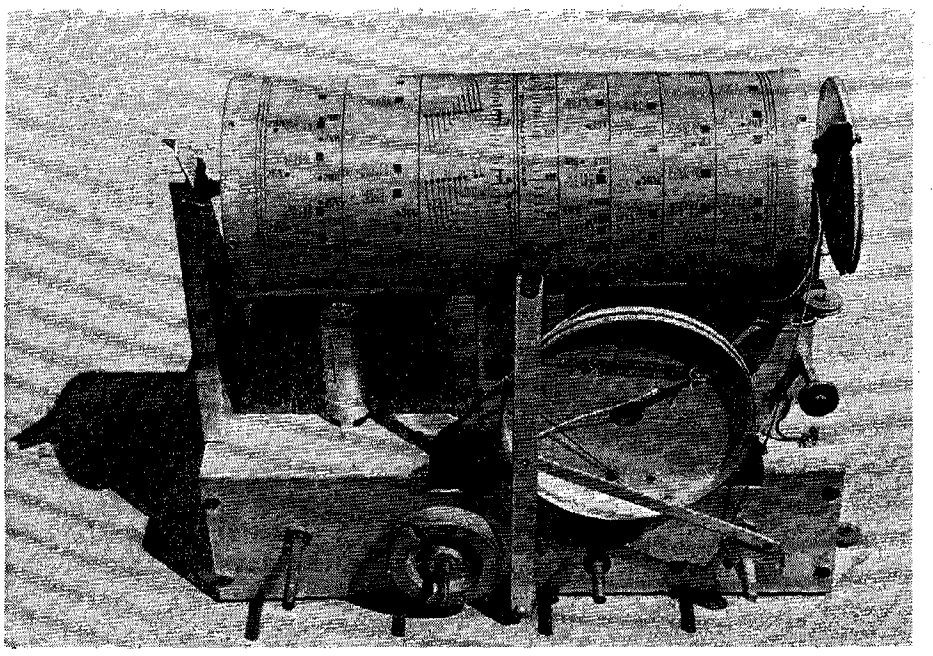
Having a comprehensive range of working chassis is a great help in this regard. It is far more convenient to test valves in a working chassis than in a complete working radio. With some receivers, valves sometimes cannot be removed without first removing the chassis from the cabinet.

On the other hand, by using a working chassis, the valve can be substituted in less than 30 seconds.

Another use I put my working chassis to is testing old high voltage electrolytics. I have also mentioned this in a previous story so I will reiterate only briefly.

New high voltage electrolytic capacitors can be both difficult to obtain and expensive to buy. On the other hand, many secondhand electrolytics are quite serviceable but they should be carefully checked before putting them back into service.

To check them, I use a working



This old 5-valve receiver with its unusual dial is next on my list of chassis to be restored. They don't make them like this any more!

A working chassis can be a convenient high voltage DC supply for checking old electrolytic capacitors. Exercise extreme caution when testing electrolytics in this manner, to avoid receiving a nasty shock.

chassis to supply the high-tension DC voltage. When a good electrolytic is connected into the high tension circuit, the voltage will drop about 10V or so and then return almost immediately to its original reading. A problem capacitor could cause a 40-50V drop and the voltmeter needle will be slow to rise again. In fact, the HT may not even climb back to its original reading.

When doing this test, don't forget to discharge the capacitor when finished. Do this carefully, otherwise it could well prove to be a shocking experience!

Chassis restoration

When restoring an old chassis, I usually go through the normal procedures of cleaning, painting, restringing the dial cord, and replacing any paper capacitors or cooked resistors. I find the sight of a well-restored chassis quite pleasing and in some cases it would be a shame to cover it up by putting it into a cabinet. On the other hand, if a chassis is left all dirty, dusty and rusty, then it doesn't generate much interest.

An unusual chassis

My next chassis restoration will be a rather novel one, even if the make and model is unknown. All I can find out about this one is that it is a relatively standard 5-valve, dual-wave receiver that has a big rotating cylindrical dial. Obviously, it has come out of a console cabinet and is all that remains of what was once someone's pride and joy.

The most striking aspect of this chassis is its rather unusual dial. Apart from that, it is pretty average and should be a straightforward job to repair.

My vintage radio collection consists of many interesting and desirable old receivers. However, when I decide to do a bit of serious radio listening, it's usually one of my old radiogram chassis that supplies it.

If you have a few old chassis laying around collecting dust, you may consider using them as I do. They can be very handy for test purposes and when properly set up, they make very practical receivers. **SC**