



Two magnificent consoles

While some radios are collected for their technical refinements, probably the majority are collected because of their visual appeal. The two console radios featured this month fit well and truly into this category.

Fig.1: The eloquent Stromberg Carlson model 781, in its semi-elliptical console.



THERE ARE SOME radios which simply scream out for the correct setting. The Kreisler 710 of 1937 and the Stromberg Carlson model 781 of 1938 simply conjure images of standing in the sitting room corner of a Californian bungalow in the leafy eastern suburbs, a moquette club lounge suite, and a new Buick or Dodge motor car parked in the neatly raked gravel drive.

The Stromberg Carlson in particular is without a doubt one for the 'deco freaks'.

The Stromberg Carlson

The completed and restored radio now looks every bit as enticing as the images described above. The solidly built cabinet is semi-elliptical in plan (i.e., looking from

above) and has a stratiform speaker grille, which is offset by the black plinth at the base of the cabinet and black trim on the top. The accommodating dial has a central magic eye tuning indicator, and the edge-operated controls are tuning on the right, and split volume and tone on the left.

Sitting below the dial are a series of 10 self-cancelling pushbuttons. Eight are pre-set station selectors, while the other two are for selecting short wave and manual tuning.

Some rather unkind Philistine has dubbed this radio model the 'Dalek', after the android characters from the TV series *Dr Who*. However a Dalek would *never* have such class!

When this radio was found it was in a very sorry state indeed. It was covered in dust inside and out, and was rumoured to have hailed from Broken Hill. Judging by the call signs in the station selectors, this may well have been true.

One leg was missing altogether, another had been replaced with a block of wood, and another was split. The one remaining 'good leg' served as a pattern for a

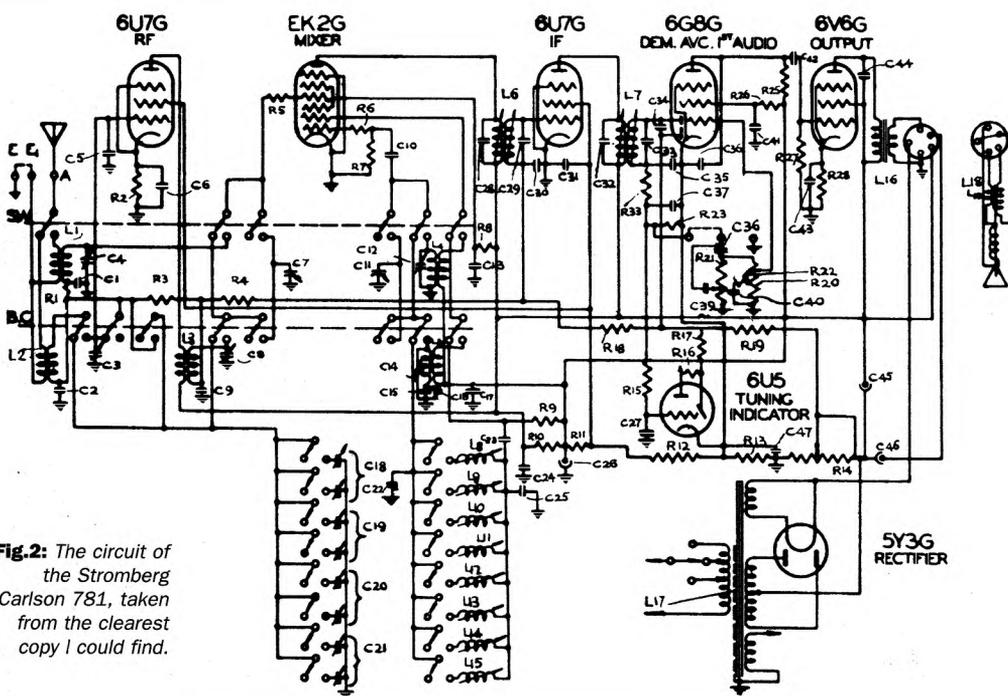


Fig.2: The circuit of the Stromberg Carlson 781, taken from the clearest copy I could find.

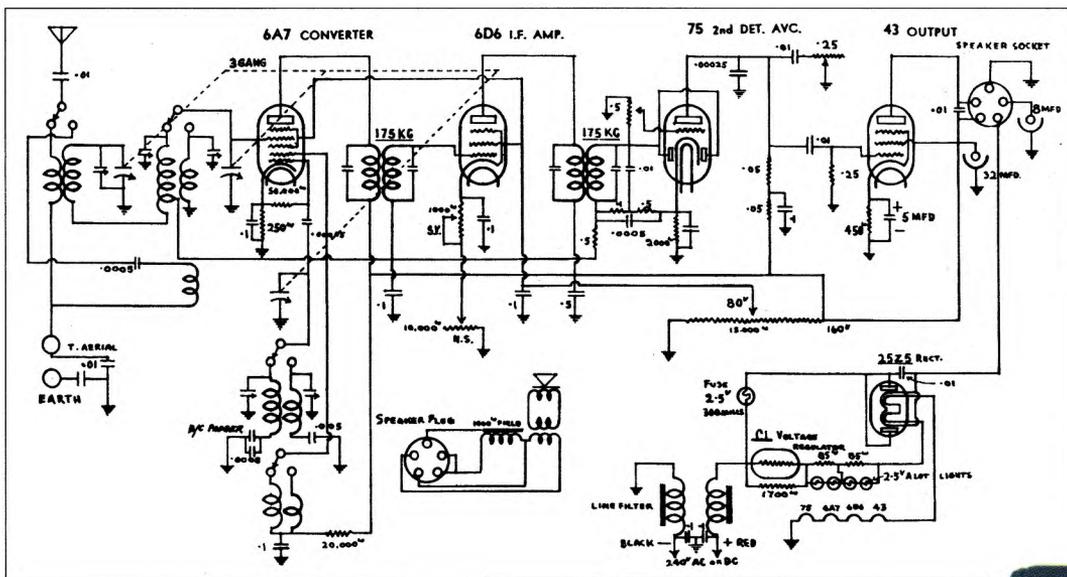


Fig.5: The circuit for Kriesler models 830-833, the closest I've been able to find to that actually used in the 710.

Fig.3: The cabinet of the Kriesler 710, a 1937 model famous for its elaborate dial.



wood turner. However the dial was complete and by some miracle, none of the cabinet veneers had lifted. After a painstaking cabinet restoration, it was time to turn to the chassis.

The chassis

The rather cramped and blobby circuit (the best I could find) is shown in Fig.2, and suggests what's in the chassis. The basic pushbutton arrangement can be seen, but the actual wiring is a far cry from the simplified circuit. Each of the pushbuttons activates a spring loaded cancellation bar, which in turn operates a set of 10 axially arranged switch banks. The bare wiring from one to the other is extremely complex, and would be well-nigh impossible to trace and correct in the unfortunate event that it had been tampered with.

Indeed, in the chassis of my set there was evidence of soldering and a replacement capacitor of some sort that looked for all the world like a 'ring in'. Those perceived alterations did not auger well. The mechanism was stiff and none too free.

Copious amounts of 'WD 40' lubricant spray were applied to all the mechanical parts and the buttons were serially pressed for a very long time until the whole mechanism was working freely and with minimum pressure. So far, so good.

After the usual checks and replacement of all faulty components, checking the wiring under the chassis, and finding a modern replacement speaker for the 10" speaker which had an open circuited 1500-ohm field coil, it was time to bench test it.

By another miracle the switching, if it had been tampered with, was working satisfactorily, and there were semblances of shortwave reception. The pushbutton tuning and manual tuning both seemed to be working too, despite being in need of a good alignment.

The Circuit.

As you can see from Fig.2 this is quite interesting. A quick glance shows an RF amplifier, thereby giving the

expectation of good results. However when we trace the circuit through, we see that the RF amplifier is only switched in for the broadcast band manual tuning function.

The two switches with dashed lines to the right and designated 'SW' and 'BC' represent the pushbutton selectors for those two bands respectively, in which manual tuning is functional. In the circuit, the broadcast band is shown connected, but with the pushbuttons in circuit.

If you follow the first 'BC' contacts (i.e., the wipers and contacts as shown), you see the top of the tuning coil then connected to a series of pairs of trimmers (C18 to C21). These trimmers, which tune the aerial coil L2, then connect via the fourth 'BC' contacts and the second set of 'SW' contacts to the grid of the EK2-G mixer. The RF amplifier is not used. At the same time, though, the AGC is connected to the 6U7-G grid despite there being no signal input.

If the 'BC' manual option is selected by pressing the B/C pushbutton, the wipers of the 'BC' switch now swing over to the right hand contacts. This connects gang section C3 and trimmer C5 (at the 6U7 grid) in circuit, and the RF coil L3 is tuned by C8 and gang section C7 via the third and fourth con-



Fig.4: Here's a closeup of the 710's impressive 'Map of the World' dial glass, with its universal time indicator and tell-tales for volume and tone.

tacts of the 'BC' switch and the second set of contacts of the 'SW' bank.

If short waves are selected (from any given pushbutton option), all other pushbutton connections are cancelled, and the wipers of the 'SW' switch sections are moved over to the right-hand contacts. It becomes pretty clear that the shortwave coil goes direct to the EK2-G grid, being tuned by gang section C7 and trimmer C4. Again AGC is applied to the

6U7-G grid, despite it having no signal input.

As for the oscillator section, if the pushbutton tuning option is selected as shown, we see that coils L8 to L15 are slug tuned Colpitts oscillators. When manual tuning is selected, gang section C11 and trimmer C14 are switched in and tune L5. (The circuit is very difficult to follow because of its very poor quality draughting and printing.) The circuit has several mistakes in component parts corresponding to the parts list.

'Acoustic Labyrinth'

The 781 was one of several 1937/8 Stromberg Carlson sets featuring their much publicised 'Acoustic Labyrinth'. This is a labyrinth box placed behind the speaker, which in theory extends the audio path for radiation coming from behind the speaker and hence improves the bass response.

Had the box been completely sealed and contained one or two more paths to extend the wavelength, it might have made some improvement. As it is, it seems to make not one iota of difference, and has been retained merely for the sake of completion. So fear not, you Stromby collectors who have a missing labyrinth — you're not missing a thing!

In fairness, though, this particular radio has a replacement speaker circa 1948. This is a permag type, and the choke and voltage dropping resistor have been mounted on the baffle board so that the speaker plug can still be used and there is no alteration to either the chassis or the wiring. However the observation still remains that there is no difference in sound at all between the labyrinth being in place and not.

Performance

As for performance, the set can best be described as 'adequate'. There is plenty of oomph on the broadcast band, and when manually tuned, the regional stations can be heard. But as for shortwave, it is only typical and nothing startling.

This particular radio does have one very annoying habit, though: drift. When the pushbuttons are selected, the selected stations are off-tune in about a half an hour.

Just why is difficult to understand. The most obvious course of action is to replace the mixer valve. Another possible, but unlikely scenario, would be the rise in temperature (perhaps only a degree) as a result of the valves generating heat. Perhaps this causes minute expansion in the chassis and the physical dimensions of the oscillator coils, thereby causing a change in frequency. However one can't imagine this radio being offered to the public with such an annoying habit. Perhaps it is time to look for a new valve!

Just why the RF stage is switched out for shortwaves is also a mystery. It would require only one set of coils and two extra switch contacts, and the performance would be considerably better. However not wanting another eight sets of switch contacts for switching RF coils on the broadcast band is understandable.

The Kriesler 710

There is no doubt that a radio with a broken or missing dial glass is significantly reduced in value, and there could be nothing more devastating than to have this happen with a Kriesler 710 'Map of the World' set (Fig.3), because here the dial glass is absolutely one of a kind and quite rare. In fact the dial glass almost IS the radio, as can be seen from the closeup in Fig.4. This is notwithstanding the handsome cabinet of pleasing proportions and veneers — and again, black striping and trim (and dust!).

There is no known circuit for this radio, despite the numbers '710' being quite clearly stencilled on the chassis. The circuit is significantly different from that published for the 710A, and can only be guessed at. The front end very closely resembles the models 830-833 which were published in the Radio Trade Annuals and the *Australian Official Radio Service Manual* for 1938. The circuit shown in Fig.5 is for an AC/DC version, and there seems to be nothing in a normal 240V AC version that matches the front end.

Be that as it may, careful examination of the chassis showed that the coils and switching arrangements are as in Fig.5, apart from the DC isolation capacitors used in the AC/DC model.

What is unusual is that this circuit offers short wave reception with a 175kHz IF — and although there's a pre-selector coil for the broadcast band, there isn't for short waves.

Of course putting in pre-selector coils for short waves is not without difficulties, in getting them to properly track. But with a 175kHz IF and without a pre-selector or RF stage the set was almost bound to have the image frequency or 'double spotting' problem. (I can almost hear the salesman: "Madam, you get twice as many stations for your money", or "...Sir, this radio is so good it tunes the short waves twice!")

The Kriesler chassis has four controls, the normal four plus a sensitivity control in the cathode of the 6D6 IF amp. The circuit actually shows two pots in series, as you can see: one marked 'NS' (presumably for 'noise suppressor') and the other 'SV' for sensitivity volume. Just why two controls are used in this position is a bit of a mystery. Was the second control a chassis control or a panel control? There is in fact only one on the 710.

As for performance, the 710 delivers about what one would expect from 1937 coils and a 6A7 converter — these were not renowned for their shortwave performance. Notice that AGC is not used on shortwaves because of the propensity of the 6A7 to 'pull' or drift off station. With the coils that were used, the daytime reception is about as good as you can get.

In 1937, though, shortwave reception was a fairly new innovation for domestic radios. It had only been a feature for two or three years at most until then, and was a strong selling point.

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Other features

The tuning mechanism is mounted on a large metal panel and the dial stringing is unduly complicated. Not only that, the dial pointer is on the *front* of the dial glass, and not behind it. (Just right for catching the sleeve of one's knitted 'cardy').

A novel feature is that the volume and tone controls are connected via cords and pulleys to little red tell-tales which travel vertically alongside the edges of the dial markings. The more red that shows, the more the controls are advanced...

However, without doubt the most stunning feature is the huge map of the world with its universal time indicator. If you look closely at Fig.4, you may see a prominent hole in the upper centre of the escutcheon. Undoubtedly a shaft and control knob should protrude through here, because directly behind the central disc are two pulleys. What you do is set the local time as per the inner disc, to the country marked radially on the rim. Then the time in any part of the world can be directly read off by referring the desired country to the time on the inner disc. However it takes no account of summer time!

It is going to require some fiddling around on a lathe to make up the required shaft and to then connect up the universal time indicator. Then the radio will be fully complete.

Given the selling features of a dual wave radio, the huge dial would have been designed to absolutely capture one's attention and imagination, and generate a sale. It still does! 