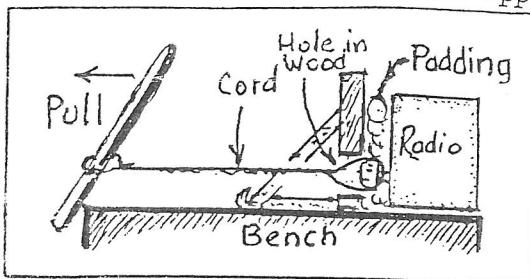
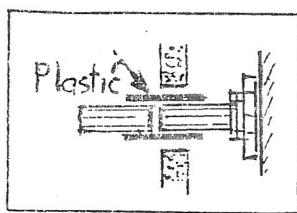


THE BELL COLT Part 1

In the adverts for Bell Colts, the word colt was seldom used but in an advert by Bell on page 100 in MGA there are three identical cabinets, one a Colt at £13/19/6 one a Champ at £12/12/0 and the other an Explorer at £15/15/0 with short wave. It would appear that the Champ has no built in aerial and maybe no tone control. A wooden cabinet model in June/55 had a similar chassis, was this the first Colt? In July/55 the plastic version was shown available in four colours and in Jan/56 another wooden cabinet model appeared in

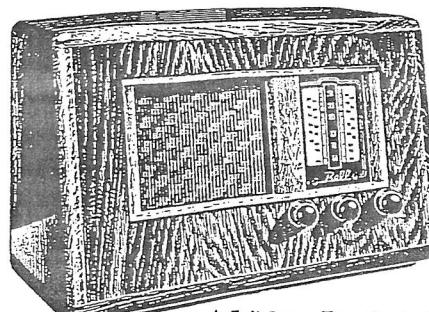
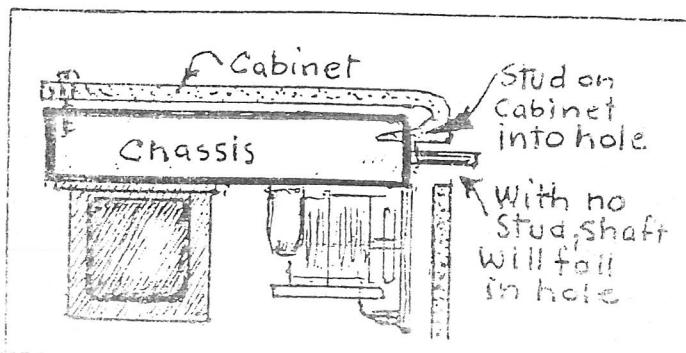


on some models the type of plastic in the knobs has a habit of sticking to the shafts. Some previous owners have used levers against the cabinet to take a nick out of the knob and crack the cabinet. One method is to tie a heavy cord around the knob and mount the cabinet on one end of the bench against a soft padding then with a lever arm on the other side of the bench pull on the cord. If still not a success drill a hole in the centre of the knob and use a bearing puller hooked over the knob with a short shaft through the hole in the knob against the shaft on the set. This will either break the knob or pull it off.



The volume and tone controls can be replaced with those with longer shafts as the old ones may be worn out and the tuning shaft can be extended with a brass coupling unit with flush grub screws to clear the cabinet or a close fitting solid plastic tube glued to the shaft and extension. This could be used on the others if the controls are in good order.

The next stage is to remove the chassis. Be careful not to allow the chassis to drop at the rear when removing the mounting screws with the set upside down, as this will break the stud on the cabinet at the front in a hole in the chassis used to align the shafts central to the large holes required for the push-in knobs and to anchor the chassis at the front. If broken off, this stud should be glued back in place in case the radio is packed upside down during a removal trip when the weight of the chassis will be suspended from the two rear screws causing cracks or breakage at the rear of the cabinet.



UNMATCHED
QUALITY

AT ONLY
£16/11/-

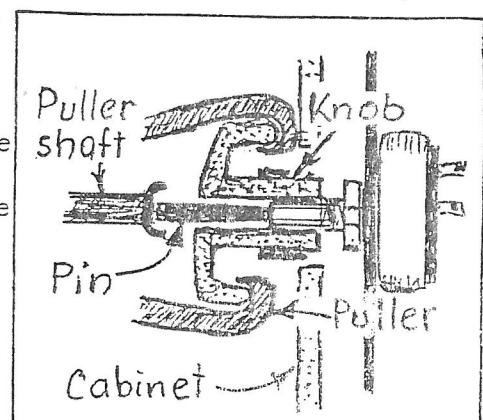
This 5 valve A.C. mantel radio is beautifully styled in natural or dark oak.

In good looks, in excellence of reproduction, in unbeatable radio value — there's everything you want in a Bell Radio.

★ Full Range Tone Control
★ Floodlit easy-to-read Dial ★ Built-in Aerial
★ Australasian reception

natural or dark oak which is shown in MGA page 101 in light oak but on page 100 as a Planet and in our Bulletin for May 1993 as a White enamel finish on page 9. On the rear cover of MGA are illustrated six colours, some with different knobs and dials. The seventh colour would be the dark red.

The first item on restoration is to remove the chassis. With the push-on knobs on short shafts. Some previous owners have used levers against the cabinet to take a nick out of

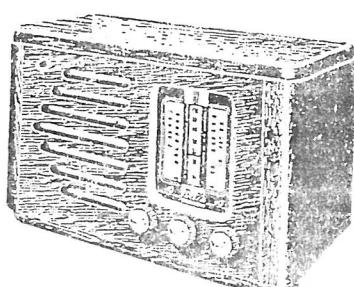


As the push-on knobs are no longer available, the shafts will have to be extended or replaced.

5 Valve Mantel

With built-in aerial, Australasian reception. On specially-selected natural or dark oak.

£16/11/-

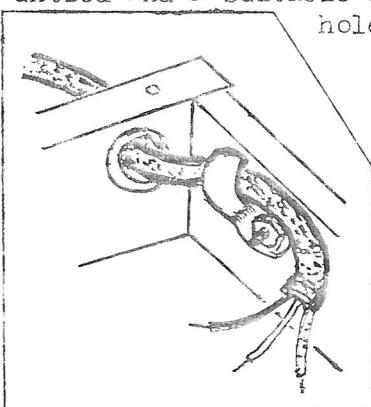


THE BELL COLT Part 2

Having removed the chassis from the cabinet, don't remove the valves until you have cleaned all the dust and grime from the chassis to prevent this from clogging up the valve socket holes from where it will be difficult to remove. Remove the valves one at a time and use an indelible felt pen to write the type number on the lower edge of the glass. Some will have the original type number worn off when you can refer to the valve equivalent list to find the correct label. These equivalents indicate an American or an English type some of which may not be an exact replacement but will fit the socket and be usable.

The next step will be to check the power transformer. The primary should be 50Ω and the secondary 350Ω from each rectifier plate to earth. If open windings are found then the transformer will be useless where a new one, type 52 R68 will be expensive and difficult to locate and a rewind also expensive so a used similar one will be required. Then check the primary and secondary windings on each IF transformer where the resistance should be about 25Ω . Other similar IF transformers can be taken from a surplus Bell chassis. The mains cord will require to have the knot untied and a suitable clamp installed to lock the cable inside the chassis. A suitable hole is already in the side of the chassis. The use of a knot to

lock the cable is now illegal as constant twisting can break the cord off at the ends and a bare phase end could touch the chassis! Also the early open ended power plug, if used, now illegal will have to be replaced with a modern one.



The electrolytic capacitor may need to be reformed if the set has been idle for some years. The leakage should be under one milliamp for each section after twenty minutes but if a high current persists with a low voltage, then a new capacitor will be required for that section and if all sections are useless a new unit or three new separate units will be required. Some three section units short enough to clear the speaker transformer are available but these mount with three lugs instead of four on the original but these can be used by bending two of the lugs to fit two of the holes when the third lug will come down in the large centre hole to be bent over the chassis. A taller unit can be used if the speaker transformer is relocated on the chassis at an angle at the front as used on some later Colts. Replace any wax capacitors, usually two, one from the high tension on the oscillator coil and one on the LCC line at the rear. The detector plate resistor is often high, often measuring 500Ω and will need a new 150Ω half watt. Also check the large carbon resistors in the power supply, one at 1000Ω , one at 2000Ω and one at $22k$.

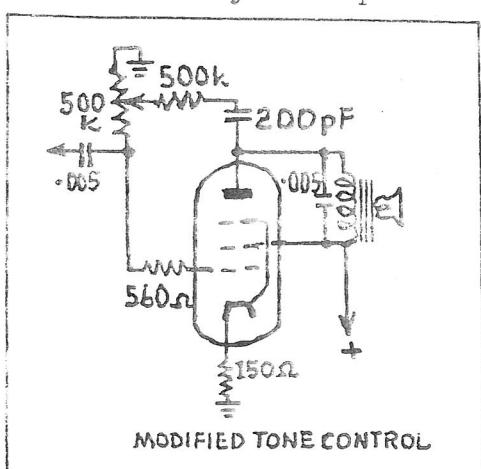
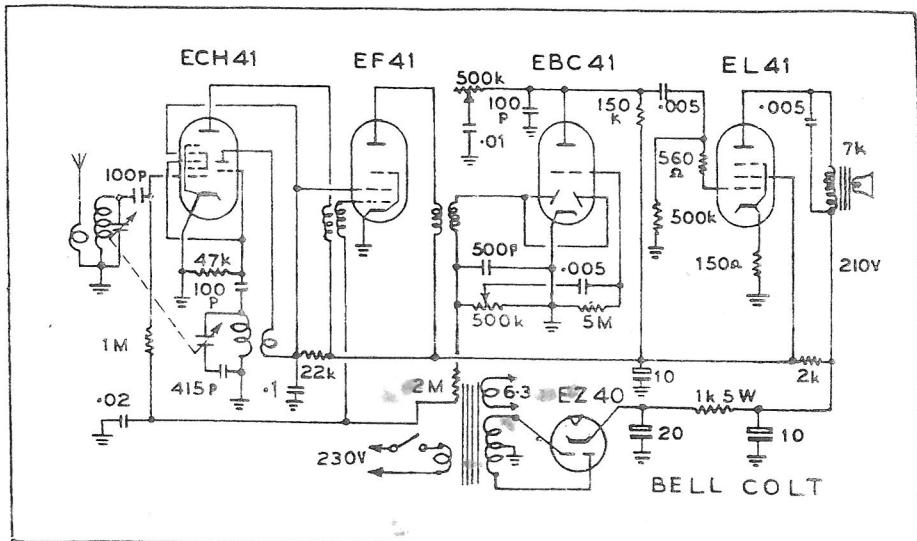
At this point we can apply the mains through a variac or a 110 volt transformer at first. If all is silent, disconnect the power and check the speaker transformer which often has an open primary. Replace this transformer and apply the full mains when all may be well apart from replacing a dead dial lamp and maybe a worn dial cord which will be found to be more tricky than at first thought.

EBC41 = CV3882	OR	EBC81 = 6BD7 (RIM 6CV7 LOCK) DH150 6LD3
EZ40 = 6BT4 UU9	OR	EZ80 = 6V4 U150
EL41 = 6CK5	OR	EL84 = 6BQ5 N150
EF41 = 6CJ5 CF61 6CU7 Z150	OR	N709 BF61 CV3889
ECH42 OR ECH113	EF80 = 6BW7 6AJ8 6CI2 X719 20D4	6P15
EF89	8D6 Z152 6F41	VALVE EQUIVALENTS FOR BELL COLT

THE BELL COLT Part 3

I have found three Colts with a whistle on the local station, each with a different fault. The first was found to have the third 10uf electrolytic section which filters the audio and RF sections, to be weak when a separate replacement obtained a cure. The next was found to have no electrical fault but the previous owner had joined the aerial to the top of the tuning coil to increase sensitivity maybe because he was in a remote area. The third was similar where there was a fine lead soldered across the two terminals on top of the tuning coil to connect the top of the tuning to top of the aerial coil.

Another fault, this time with the original design was found by David Clist when he was running a series of distortion checks and found that the tone control of a .01uf capacitor and 500k control from the plate of the high impedance detector to earth was producing high harmonic distortion when in the full base position. Most users of this set would not have used this setting as the tone was rather woolly. A simple



Another fault difficult to detect was frustrating a serviceman some years ago, a crackling similar to a dry joint that came and went. The elderly lady owner was becoming frustrated at the time it was taking, but I was able to supply him with another Colt chassis to put in the original cabinet to make the owner happy leaving me with the problem. After much shaking, soldering and replacing parts, no improvement. Then by removing valves it was found to be in the tuning section, finally found to be the 100p capacitor on the oscillator coil. Some years later another Colt turned up a similar noise that was constant. By removing valves from the front, no difference till removing the detector, when a great increase occurred. By shorting the output grid to earth, no more crackle but by shorting the plate pin of the detector socket to earth also removed the noise so here it was, the 100pf moulded capacitor to earth from the detector plate.

R J Hatton
Oct. 2004

The image shows the front cover of a 1955 Bell Radio catalog. The title 'BELL Radio' is prominently displayed at the top in a stylized font, with 'BELL' in a blocky, bold typeface and 'Radio' in a flowing script. Below the title, the text 'FEDERAL COMMUNICATIONS COMMISSION' is visible. The catalog is dated '1955' and features a price list for '1955' on the right side.

