

fitted on the metal plate above VT21. The printed circuit was cut to accommodate the 0.22Ω current sensing resistor. Unfortunately, due to the physical layout the potentiometer chain couldn't be connected to the output side of this resistor. The following components were removed: R100, R101, R102, C83, C86, C87, W17 and VT22. R103 was changed to 680Ω, R104 to 270Ω and R106 to 120Ω.

*K.J. Treeby,  
Plymouth, Devon.*

### STOLEN

Several items were stolen from my car whilst I was staying overnight in Telford on a business trip. These are as follows: An Avo Model 8 in a brown leather carrying case, the probes well worn and repaired with insulating tape; two tool cases, one holding a soldering iron plus a plastic/green cloth tool roll containing various servicing tools, the other case containing tools for the car; and a red plastic spares box of the type with trays that fold out when the lid is opened, containing various electronic spare parts. I would be most grateful for any information leading to the recovery of these items, and would be prepared to offer a reward.

*J. E. Bagley, Whitehall, Bewdley Bank,  
Canon Pyon Road, Herts. HR4 7SH.*

### CAR RADIO-CASSETTE PLAYERS

I service car radio-cassette players and frequently find that the connections to the tape head have broken. The cause is usually broken cores in the lead, or the lead

breaking away from the terminals on the head. Many manufacturers use very stiff screened cable, often poorly anchored. For many years I've overcome this problem by using record player pickup arm lead – the five-core, very fine flexible cable that's used to connect the cartridge to the sockets under the deck. The lack of screening hasn't caused any problems, in fact many manufacturers have started to use unscreened cable. But it tends to be rather heavy, not very flexible and it still breaks!

The problem is that I have to pay £2.40 for a 15 in. length of the pickup lead, and the source of supply will eventually dry up. I've tried to obtain this type of lead elsewhere, so far without success. Does anyone know of a source of supply, preferably by the metre? Perhaps some enterprising supplier could persuade a cable manufacturer to make some?

*Geoff Davies,  
Rugby, Warwickshire.*

### WANTED

I would like to thank those readers who have written in with details of playing NTSC tapes on UK VCRs. I'd like to obtain an 8928/JVC HR3330TR, but have so far failed to locate one. Does any dealer or individual have one for sale? If so, please write stating the condition and price (please don't send the machine until a sale has been agreed!).

If any other reader wants one, I'd be happy to keep a "want list" and pass on any offers received.

*John de Rivas, West Towan House,  
Porthtowan, Truro, Cornwall TR4 8AX.*

## Video Trouble

*Les Lawry-Johns*

A belt in our Fidelity VCR broke – I'm told it's a Fisher-Sanyo machine. Now I've never repaired a video recorder in my life and don't stock the belts, so I ran down to Geoff's place in Sun Lane. He fitted a new belt and tested the machine. I took it back home and it worked all right for a week or so. Then severe hum bars started to show and you couldn't watch the picture. Back it went to Geoff who kept it for a week or so because it wouldn't record the sound.

Eddy who works for Geoff had replaced some rectifiers to cure the hum bars but didn't seem to want to spend time on the loss of sound recording. Something in the i.f. panel he said. I took it home for Honey Bunch to play with. She was able to use it to play our recorded tapes but wasn't pleased about the sound recording problem and kept on at me to have a go. If Eddy couldn't find the cause of the problem, what hope had I? After some days she visited one of her daughters and came back with an elderly Sony Betamax machine. This frightened the life out of me but, with HB's son-in-law, we managed to get it going and it performs quite well. We have to have a machine so that HB's grandson can watch "Home and Away" and "Neighbours" after we've collected him from school in the afternoon.

I feel guilty about this lack of adventurousness but don't like to risk mucking things up. I still tackle TV sets

of course but the call for repairs is not great nowadays, as you probably know. There are quite a lot of Ferguson portables around with dry-joints causing intermittent field collapse however.

Then there was this chap who brought in a TX10. Said it kept cutting out. He left it and I immediately checked the focus/e.h.t. unit on the right-hand side when viewed from the rear. As it was blackened I disconnected the bottom screws and hung it free as a check – I was down at the shop, and my new focus/e.h.t. units were back at the bungalow, so I had to check as best as I could. The set worked all right, showing a faded BBC-2 picture. Then suddenly there was a flashover in the faulty unit and the h.t. fuse failed. The chopper transistor had shorted, so I had to fit a new BU208A. After doing this I popped back to the bungalow for a focus/e.h.t. unit – the modified type.

When this was fitted the picture was reliable but was faint and lacked green content. I turned up the green at the c.r.t. base but the tube was obviously low. So I took the chassis out, turned it up and shorted out the resistor that's in series with the c.r.t. heaters. The heaters then glowed a bit brighter and the picture slowly improved: after a while the greens returned.

When the owner returned I showed him the picture and told him that it would improve with use. There was a problem with the remote control system, which would give only even-numbered channel selection. I couldn't find anything obviously wrong with the cables and contacts and, as the owner didn't seem to be too concerned about this, I wrapped the set up. Perhaps someone familiar with these sets would like to comment on this symptom?

microamp." Sid bent over the Cathode Cruncher. "Does seem pretty lifeless" he agreed, but I can't believe the tube is all that flat. Maybe something's wrong with the booster."

Andy, rain soaked and breathing hard, muttering imprecations about heathen hill farms, backed through the double doors and dumped the abused TV on the floor. "They'll have a new set up at Pickersgill Craggs" he told Sid. "Send them one with a wide mains input range - that generator has a will of its own!"

"Only because Arthur Longbottom insists on fiddling with it" Sid replied. "But we could do with the sale. I'll take one up later." Meanwhile he took the covers off the booster. Overheated resistors and a disintegrated capacitor greeted him. "Even the perishin' test gear needs repair in this dump" he moaned, then went on to disembowel the booster with gusto.

Norman left him to it and, while Andy turned his attention to a record turntable with a linear tracking system fault, took a look at a Ferguson SRA1 satellite TV receiver that had come in because of random remote control operation. The customer's complaint was that it had switched itself off once, gone into standby several times, and had changed channel on a couple of occasions. Not unusual with TV sets, but satellite TV receivers were still something of an unknown quantity in the workshop.

Norman took off the covers and snapped on the bench lamp. After an hour on the bench nothing had happened. "I might as well link it up and watch something" he muttered. He fetched a spare TV set from the soak bench and connected it to the SRA1, then plugged in the lead from the dish on the roof. Things soon began to happen, just as the customer said. By luck the unit sent itself into the sound mute condition. During the sudden silence a slight sizzling noise could be heard. Norman doused the bench lights to look for telltale sparks. Sure enough there were some on the underside of the board, near the IR receiver. He disconnected the unit from the mains and investigated.

The SRA1 has a three-cored mains lead and is thus earthed. The PCB is earthed to the metal case at only one point, near the IR receiver. This point was making poor contact. The arcing was due to the non-isolated aerial socket used with the TV set's isolated chassis allowing line-frequency currents to flow in sufficient quantity to cause a small spark at the indifferent earth connection. Norman felt pleased with himself.

Andy's problem turned out to be caused by a defective motor. Shortly afterwards Mr. Knowles was on the phone to thank them for their trouble and to say that the picture was splendid.

"Makes you wonder what some peoples' eyesight is like" was all that Norman could say.

## What will 1990 Bring?

*Les Lawry-Johns*

Not a lot, I suppose. But at least we're still here. So many seem to have popped off recently. It makes you feel you're cheating by keeping going, but I suppose that there's still room for us even if we have to do without some of the things we'd become used to. As I sit here I'm crowded in by three dogs and a bird: dogs on the left, bird on the right. I don't know which is worse. The dogs keep quarrelling (quietly though) while the bird runs around her cage as though there's someone after her. Honey Bunch has gone out to do some shopping and, no doubt, gossiping. I mustn't say too much, because she'll read this before I send it in. But, good lord, don't I gossip as well?

There's not a lot to tell you about sets. That Fidelity VCR is still playing up. First there was no sound, now it buckles the tapes. However, we've still got the Sony Betamax machine, though the heads have needed cleaning several times - after a certain tape has been played I think. I clean the heads with my finger sprayed with Aero-Clene. A lazy man's way of doing it no doubt, but it seems to work. Sorry about that . . .

Some TV sets have been attended to, and that seems to be about all I've been capable of recently. A shorted diode in a Ferguson portable had blown the mains fuse, and there was a far eastern set with a faulty line output transformer. I couldn't do this one because I didn't have the transformer to fit in it. Anyway, it was only a few months old so still under guarantee.

The owner's complaint about an ITT set was that the aerial socket needed fixing because the picture and sound kept failing. I repaired the socket but the signals

kept going because, as I found out after a while, of a dry-joint at the base of the tuner unit. It didn't look as though it was dry, but it responded to tapping. So I scraped it clean and resoldered it carefully. The signals didn't go off after that.

You may wonder how I can do these jobs. It's because the shop still hasn't been sold. It went into auction the other day, but hardly a sale was made (few reached the required price, including mine). So I suppose I'll have to keep hoping that someone will come along to clear my enormous bank overdraft. I've had offers, but they wouldn't clear my debt to the bank. When I look round at the dogs, cat and bird I wonder if they know more than us. They seem to get along without all the worry and trouble we've made for ourselves. We have to be clever and keep on inventing things like TV sets and so on. Where do we end up? Up to our ears in debt, that's where . . .

I've recently had a couple of jobs from the same house. One was a Grundig set that I had to cart off to the shop. There was reduced field scan at the bottom of the raster, but when I got the set on the bench nothing seemed to be wrong. I stripped it down and resoldered everything to do with the field output stage. After that I couldn't make the set do anything wrong however much I probed around. So in the end I took it back and explained the situation to its owners.

They asked me to look at another set of theirs, upstairs. Up I went to look at a dead HMV receiver, one fitted with the Thorn 9500 chassis. The mains input was o.k., so I went along the back to the red button cutout. This was open-circuit and I just happened to have a spare one in my case. After fitting it the set came on all right. I charged them £15 for the trouble and they paid up happily. I've been expecting them on the phone ever since about the Grundig receiver, but I've not heard so far. Maybe the soldering has been successful.

Well that's all for now. My best wishes to you all for 1990.

Sony has launched its first S-VHS VCR in Japan. Model SLV-R7 is priced at the equivalent of £800 and a European launch is expected later this year. Features include an on-screen display and a digital timebase corrector (TBC) to reduce jitter. Sony's CCDF380 8mm camcorder has been released in the UK with a suggested price of £799. A key feature is the auto-lock panel that covers the less used facilities and puts the camcorder in the automatic mode. This offers pick up, point and shoot filming. The CCDF380 weighs 1.2kg.

Hitachi has launched the Lapwatch Model VTLC50 in the UK at a suggested price of £1,300. It combines a VHS VCR with a 5in. TV set with LCD screen and has PAL/SECAM capability – it will also play NTSC tapes.

### IN BRIEF

If you hurry you've just time to attend The Video Show, which is being held on March 23rd-25th at the Westminster Exhibition Centre (Horticultural Halls), Vincent Square, London SW1. This consumer video show is organised by *What Video* and *Camcorder User* magazines. The first morning is a free trade preview, public admission being from 12 noon.

The Vintage Wireless Company Ltd., Tudor House, Cossham Street, Mangotsfield, Bristol BS17 3EN has published a new "wanted list" for 1990. It's a 28-page listing of stock required for resale. The Saturday retail showroom has been reopened – callers are welcome from 10 a.m. to 3 p.m.

## Things Ain't So Good

Les Lawry-Johns

They're certainly not. The shop still hasn't sold and not many jobs are coming in. Those that do take me ten times longer to sort out than they used to do.

Take the set I collected the other day. I'd looked at it before but it had refused to go wrong. I was then told that the bottom of the picture came up after several hours. To about half way. I took it down to the shop and spent several hours trying to find the cause of this. It appeared to be a TX90, but there were some differences in the field output stage. Eventually I changed the transistors and diodes. The diodes shorted and I found an open-circuit resistor in the feed to the output stage. Its value appeared to be 12Ω, but when I fitted a replacement of this value the diodes again shorted. The lower transistor also appeared to have been damaged. So in went more components, including a 22Ω resistor this time. The field scan now opened up, but with bottom compression. This was overcome by altering the value of a couple of resistors – there's no linearity control. If all this puzzles you, the name on the front was Logic instead of Ferguson. The main panel was mounted flat in the middle, not upended on the left-hand side as with Ferguson sets.

Someone then phoned to say that his GEC colour receiver was smelling. I thought that this might be due to the tripler, so I asked him to bring it down to the shop. When the set arrived I switched it on and the smell came up. On sniffing around I found that its source was the upper left-side mains fuse. You could see that its black cover had been melting. So I unplugged the set and

removed the cover of the fuse. The fuse came out as well of course. It was blackened and had obviously been damaged by poor contact. The fuseholder was cleaned and the contacts tightened, then a new fuse was fitted. It no longer smelt and the job was finished. I told the owner that he wouldn't get the smell again and he departed in high spirits.

I was subsequently asked to repair a Grundig set and agreed to have a look as I knew the owner. He brought it in and told me that there was no sound or picture at all. So I removed the rear cover and started to check the line output stage etc. As this appeared to be in order I spent some time checking around the tuner. Nothing seemed to be wrong so I turned to the front of the set and twiddled the control knobs. The screen lit up, with dots, and the sound hissed. I tuned the buttons down to our transmitter and got a faint picture with sound. The results were the same when the aerial was disconnected. An examination of the aerial socket showed that it had seen better times. When a new one was fitted the picture looked as good as new and the sound was perfect. I launched into a fever of abuse but the owner maintained that the screen hadn't lit up and that there had been nothing at all from the speaker. Oh well, we can't all be perfect, can we?!

A Philips G11 I was called to did funny things after a few minutes. So I took it down to the shop where I had it working on the bench for a couple of hours. As it wouldn't do anything wrong I had to take it back to the owner. She phoned later to say the fault had reappeared, so I had to repeat the procedure.

This time it did do funny things when I had it on the bench. After about an hour the bottom of the picture came up, with a white line indicating compression – about half way up, actually. I tapped around the field output stage gently, and this immediately restored full scan. So I had to wait for the fault to put in another appearance – it couldn't be made to occur by disturbance. Eventually the bottom came up again and this time I was gentler, disturbing things with my fingers. It was only when I gently rocked the TDA2600 field output chip's heatsink that the fault cleared. So out it came and the socket was thoroughly cleaned and sprayed. Then back went the chip, the clip and the heatsink. I gather that the fault hasn't occurred since.

The same owner then brought a Philips KT3 along. She said that it had been working well until one day when it had started to click at switch on. I removed the rear cover and disconnected the tripler from the line output transformer. The sound then came on and there was plenty of life from the transformer. Assuming that the tripler was responsible for the trouble, I removed it and fitted my last one. You can imagine my annoyance when the set tripped just as it had done previously. I had checked for discharge from the e.h.t. cap and there hadn't seemed to be any. Nevertheless I removed the cap and carefully cleaned the area around it. The set then came on and didn't click. I cursed myself for being too quick to accuse the tripler. How can I carry on when I'm so stupid?

That's the problem you see. Something wrong with my head. Probably what should have happened twenty years hence. It started about three years ago. When I went to the doctor about it he said he thought it might be my heart. It wasn't, so I can only assume it's something to do with ageing. The trouble is that it's getting worse as time goes by. What with that and the shop, things are bad.

great care must be taken.

When you are sure that your checks confirm that the unit will run, replace TP01 and DP21, fit TP37 and switch on. If you have a variac you can be more prudent, using it to set the mains input at 110V before you try the unit. If the power supply works under these conditions,

set the 12V rail correctly (monitor at test point BP08) by adjusting PP57 *slowly*. Then raise the mains input to 240V and check that the 12V setting is maintained. If you've been thorough the power supply should work normally and the machine can be returned to its owner. If you haven't – go back to square one and try again!

# The House Husband

Les Lawry-Johns

Well here I am, still trying to get used to retirement: confined to the bungalow and wondering what to do after I've done some of the jobs a housewife does. I never realised how hard they work and the different things they have to do. H.B. goes out most mornings to earn a few bob and I'm left to my own devices. I suppose I'll get used to it but I don't know when. The shop hasn't sold yet and I don't suppose it will for a while. If things don't change I might even rent it out to someone. At least that would help me pay the bank a little of what I owe it. I still get a few jobs, some of which might interest you.

For example the Philips G11 set I had to pick up the other day. There was only a vertical white line in the centre of the screen. This told me that the line timebase was working but the line scan coils weren't being driven. On inspection I found that the scan coupling capacitor C3135 (0.91 $\mu$ F) had bulged out. When it was removed and checked it proved to be open-circuit. I found a replacement of the same value and rating but of more rectangular shape and fitted it, ensuring that it didn't touch any nearby components. When the set was switched on again there was a full raster but no vision or sound. I had to tune in all the stations as the owner had probably tried retuning in an effort at clearing the white line. It was then soak tested for a while before being returned to the owner who was pleased that it had been done so quickly – and cheaply (I can't bring myself to charge the current rates).

The next set I had to visit was a Bush one fitted with the Rank T20 chassis. This had no visible picture. The e.h.t. was o.k. so I took the coward's way out and increased the first anode voltages. This produced a picture but I'd forgotten the brightness network, so I couldn't do the job properly. The customer seemed to be quite happy however so I left him with it. I know a resistor had gone high in value but I didn't have the circuit with me. I may go back and do the job properly one day: when he calls me again for something else.

Then there was the Philips K30 with a scrambled picture and poor sound. I'd repaired the set some time ago – removing the aerial socket and repairing it. I thought that the present trouble would be a repeat performance but when a screwdriver was placed in the socket a much better picture was resolved. So I checked the cable from the VCR and then connected the main aerial cable to the set directly. The picture was till scrambled and as the plug and cable were o.k. I had to refer the owner to an aerial rigger. I used to put up aerial cable to the set directly. The picture was still

The jobs are not all that many, which is why I'm not writing so much. It's mainly a question of doing things like peeling the potatoes, which I'm doing while H.B. is out teaching her daughter to drive. Nobody did that for me. I had to teach myself on an airfield in Egypt. The

second time I drove the lorry a Chief Petty Officer hailed me down and asked for a lift. As I was driving he commented "you blokes amaze me the way you can handle these vehicles". I didn't like to tell him I couldn't drive and wasn't licenced. A few nights later I was in charge of the night guard and had to post several men around the airfield. It was coming up for midnight so I popped over to the marine section and borrowed one of their lorries. While I was driving it around the hangers the port side wheels slipped into a hollow and the whole thing turned over. Luckily no one was hurt but we were unable to turn it back up. I waited till the next morning before reporting it and was subsequently charged and brought up before the C.O. As the officers from my squadron appeared on my behalf I got off lightly. A month's stoppage of leave I think, which didn't mean much being stuck out there. It's funny that I can remember such things that occurred fifty years ago but can't remember what happened yesterday.

But I can remember popping down to the shop when who should turn up but Beardy and Nonbeardy. This surprised me after the dust up we'd had on the previous occasion. They carted in a Philips K30 and said that it went off a few moments after it was switched on. When I switched it on I could hear the sparking. After removing the back cover I saw the arcing around the e.h.t. cap. I switched off and to my surprise the cap wasn't even clipped on. So I cleaned the area around the top of the tube and sprayed it with antistatic solution, then looked at the cap which was in a sorry state. I had to clip it off and look for another one, then peel the insulation back to prevent further discharge. Having done this it was just a matter of soldering the leads and pulling back the covering. When I clipped on the cap and switched the set on it came to life and stayed that way. After refitting the rear cover it was time to face the intrigued two.

"That's that" I said.

"Is that all it was?" said Beardy. "We don't have to pay for a little thing like that, do we?"

"Oh yes you do, and the next time you can try to do it yourself" I commented, wondering whether they would remember to discharge the e.h.t. cap to earth as I had done if they did try. After a struggle I managed to get £15 out of them before they left, vowing never to return to such a pricey establishment.

When I got back to the bungalow Stan from SEME called, not to take an order but to see if I was still alive and to see H.B. He left me the latest SEME catalogue which is full of interesting things. After he'd gone H.B. started on me.

"That cassette in the car is mucking about all over the place."

I'd fitted it only the week before and it was brand new. So that's another job I've got to do. I suppose I may get around to doing it one of these years . . .

# Triple Trouble

Les Lawry-Johns

I got up and stood to get dressed, as I've always done though some of you don't believe it. You see it's always best to do things the hard way, then when things get really hard it doesn't seem too bad.

## **The Grundig that went Bang**

When I'd done the cleaning etc. I went out to pick up a TV set. After a bit of an effort I found the place. The old girl told me that her son had replaced the fuse in the set but that it had blown again straight away. It was a Grundig CV720KT/C7400GB, which I'd not come across before, so I carted it downstairs, bunged it in the car and told the owner I'd bring it back within the hour. This seemed to surprise her somewhat.

Back at the shop I took off the rear cover and looked at the chassis. It was a rather small, horizontal one with a few plugs and sockets. There was just one screw to the right of centre, the rest of the panel being held by clips. Having freed this lot and disconnected the plugs etc. I removed the panel and examined it closely. My meter showed a dead short, well almost, across the mains input. It was nothing to do with the degaussing. The meter led me to a bridge rectifier which when removed proved to be the offender.

I looked high and low for a suitable replacement but couldn't find one. So I popped along to Geoff's in Sun Lane and got one from him. As it was larger and the leadouts were different I had to insulate them and turn them over to fit into the right holes. After making sure that I'd fitted it properly I replaced the panel and plugs etc., switched on and plugged in the aerial. There was a good picture and sound. I put the back on and loaded the set into the car, which is easier said than done as it's a small one nowadays. The old girl was delighted when I carted it upstairs and fitted it where she wanted it to live. She paid up happily and in no time I was back home with the dogs and H.B.

"What have you been doing?" she asked.

"Well I've already seen to an old girl," I replied, "and left her very happy I might add."

"Really, after all these years?"

"Just a question of a bridge" I replied, wondering what she would think of next.

## **Fuzzy Picture then Smoke**

For some reason this made me think of another lady I'd visited recently. She'd given her address as number 68 on a certain road and asked me to collect the keys from number 74. When I got there I was surprised to find number 74 next to number 68 and wondered what had happened when the houses had been built. Anyway the lady from number 74 let me into number 68 where I found an ITT CVC5 on the table. Apparently the picture had gone fuzzy then smoke had come from the set. So it was another case of taking the set to the car and the problem of getting it in. I told the lady I'd be back shortly and sped off to the shop. Getting the set in and on to the bench left me breathless, but with the back

removed and the cover taken off the right-hand side line output transformer assembly I could see what had happened.

The line output transformer tag that's connected to the PL509's top cap is also connected to the tripler. The latter lead's insulation had broken down and was shorting to the focus assembly, hence the fuzziness complained about initially. Under the bench I found a stout lead which, after pulling out the three wires, proved to be an adequate cover for the faulty lead in the set. When I'd fitted the cover I arranged the lead clear of the focus assembly and resoldered it to the line output transformer. I then checked that there were no shorts across the h.t. line etc. As everything appeared to be in order I switched on. After the warm-up period a good picture appeared. I left the set on test for a while then returned it to the owner who was now back at number 68. She was happy to pay me my charges after seeing the picture and listening to my puffed voice.

## **Transport**

If you wonder why I get puffed getting sets into and out of the car it's because of the layout. There are just the two front doors, and if a set is put on the passenger's seat it gets in the way of the gear change etc. So I have to move one of the seats forwards and plump the set in the back. H.B. sold the estate car to one of her relatives you see and got this miniature vehicle from another relative, thinking that I wouldn't be doing any more repairs. I keep my mouth shut and put up with it though I'm not happy with the situation despite the reduced petrol consumption.

## **Back at the Ranch**

Having been in the navy you'd think that I would have a preference for rum. Well I did, for a time. After a spell on beer I got on to whisky, which is where the small amount I make on repairs tends to go, me drinking it neat and H.B. taking it in coffee – black with one spoonful of sugar – which I would have thought would water it down. Anyway, I decided to try it like this one night and ended up more sloshed than I did with the neat whisky. Strange that. Maybe it's something to do with my brain: I've not been able to think straight since I reached sixty five.

You might think that the reason this piece is called Triple Trouble is something to do with triplers. It really relates to the dogs however. They haunt me all day (and night). All Alsations, Tess who's the oldest and largest, Zebardi and Gunga – he's the youngest and causes more trouble than the other two put together. The cat still won't come in. She lives outside, sleeping not in the house H.B. made for her but in a car that's been bunged in the space next to the bungalow. Then there's the bird that still has the grudge against whoever puts his finger in her cage. Possibly something to do with having been kept in an army camp and jossled by the squaddies.

## **Liquorish Paper**

I'll just stop a minute to roll myself a cigarette with liquorice paper. Hard way to have a smoke but I told you that I always take the hard way. Another thing is that hand-rolled fags go out quickly when left. So they don't cause fires like those packet ones. I should get a discount on my insurance but I don't. That's enough for now. Cheers to you all.

# The Changing Scene

**Les Lawry-Johns**

I'm sharing the shop at present with S.K. Lakha, who tends to show me up. Take the newsagent's video for instance. I'd spent some time looking at it and got nowhere. Then he brought it in to S.K. who fixed it in minutes. How was I to know that a lamp shuts off the juice to the selectors when it goes open-circuit? Sorry I missed out on that one. I'd better read the magazine more thoroughly, because it was mentioned some time ago in a series of articles in this book of learning.

I also had more trouble with that CVC5 I wrote about a couple of months ago. It started to play up again, so I drove down to see it. The owner told me that it was o.k. for a while then the colours changed on the left-hand side. I stayed and watched it for some time. Then on some scenes the picture became green on the left-hand side, reverting to normal towards the centre. This suggested a fault somewhere in the bistable circuit. After fiddling around for some time I discovered that D40, which links the ident signal to the bistable, was faulty. Should have remembered that. But I think the owner will soon buy a new set. It is, after all, just a little on the old side.

A lady phoned up the other morning to say that all she had was a white line across the screen. She said she'd bought the set from me some years ago and that it was a Philips one. So I thought it was a G11, packed my bags with the Philips stuff – chips and so on – and ventured off to her house. When I got there a Fidelity portable looked at me. As it was a Mk.2 version of the ZX3000 I didn't suspect the line output transformer of causing the trouble. But it was a question of carting it off down to the shop, where L.K. was operating. He was working on a video, but wasn't in a hurry. I plonked the Fidelity on the bench and removed the rear cover. "What's wrong?" he asked. "Field collapse" I replied.

"Let me do it" he said. So I let him snoop around on the main panel, checking resistors etc. Then I thought I'd better do something. Like change the field output chip. I looked for one everywhere but had to go down to Geoff in Sun Lane for one. When I got back S.K. was still looking at the set. We fitted the new chip and of course the white line was still present. Back to checking voltages etc. These proved to be more or less correct, so I felt that it was time to change the timebase generator chip. This involved another visit to Geoff – it's a good thing he keeps his stocks high. When this was fitted we had a full raster and I thought that the job was over.

Connecting the aerial lead produced clear sound but no sign of a picture. My defective memory tried to tell me something, but I didn't want to listen. I put my finger about an inch from the line output transformer and a spark leapt out at it. S.K. looked horrified, but I was o.k. "I've been hearing noises coming from that thing for some time" he said. I thought surely the newer type of transformer, with the integral first anode and focus controls, can't do the same thing as the earlier type, but after some time spent looking for picture content there was a crack and the screen display reverted to the white line. It then became clear. The old girl's not going to fork out for a new line output transformer on top of everything else I

thought. I told her the sad story and left her to think about it. We've not heard since so she's probably decided to buy a new set. Oh well . . .

The point is that these Fidelity sets do tend to suffer from this sort of thing. It starts when the line output transformer sparks over internally. This usually knocks out the video chip and/or the timebase generator chip, depending on the model. So before you go ahead and start to replace the chips, change the line output transformer. With the earlier version this involves altering the focus and first anode supply circuits. All this means that it's wise to get the customer's agreement before you take on the repair.

A G8 that came in later left us in the same position. It seemed to be dead but there was plenty of h.t. It just didn't get to the line output stage because the h.t. fuse was open-circuit. There was no indication of a short-circuit in the line output stage so I fitted a new fuse, crossed my fingers and switched on. A picture appeared but the reds and greens were a bit out. Some time was spent getting this right and I was just admiring the picture when the set went off without warning. More fuses merely confirmed that there was trouble in the line output stage. The customer was told that the repair was likely to be expensive and is still thinking about it – or more likely he's replaced the set. At least I got a fiver for my trouble.

That's all for now. Love from H.B. and the animals, including that bad tempered bird! Finally I'd like to send greetings to my daughter Lavinia who lives with her family in Devon, and to Johnny Logan up north. Lavinia writes for a knitting magazine, producing complicated patterns that are far too involved for us TV people to be able to follow.

**Panasonic**

**NEC**

**FIDELITY**

**PHILIPS**

**S&C**

**THORN**

**and many others**



replaced. A tip: tie a piece of string to the aerial cable before pulling it out – this will enable you to pull the new aerial in with ease. Don't forget to adjust the trimmer to match the aerial to the radio. Adjust for maximum signal or noise with the aerial fully extended and the radio tuned to 200m/1.5MHz.

Some radio receivers/cassette players have an input protection diode in the power lead. Always check this as it can go open- or short-circuit.

The problem we had with one radio receiver that kept coming back was loss of its memory store. A poor car battery was the cause of the problem: when the car was started the voltage would fall to such an extent that the memory would drop out. A new battery worked wonders. Some Fiat radios are designed so that they can be removed when the car is left: a standard cell is incorporated to retain the memory. Use only a DVM when checking these cells – a standard meter will draw current and flatten the cell.

The following things can cause faults: a leaky windscreen can allow water into the radio; if the radio is too close to the car heater the output stage may blow; omission of an earth lead, relying on the aerial lead for the power return, doesn't always work.

Finally, watch out for the following types of aerial: wing mounted; roof mounted; door pillar mounted; windscreen; aerials in the wing mirrors; and finally, for oldies like myself, the aerial under the car – who out there remembers that they pick up the ground wave?!

*B.D. Andrew,  
Devizes, Wilts.*

### HANDSET PROBLEMS

The complaint with a 16in. Philips KT3 teletext portable we had in recently was sound but no picture. When we unplugged the text panel the picture appeared. Several migraines later I decided to try to get the teletext supplement for my KT3 manual, something that's not easy. I even-

tually got one however and can already hear the chorus from other engineers saying "I could have told you what that was". Yes, I eventually found that the fuse in the teletext power supply had gone, removing the rail that provides the TV-text switching voltage. But that wasn't the end of the story.

We returned the set to the customer but the very next day it was back in the workshop with the complaint that "text pages can't be selected and the clock keeps appearing on the screen". I was sure that the set had been all right when I'd tested it with our own handset, and sure enough it was o.k. when retested. When the customer's handset was used however things went to pot and after this the set wouldn't work with our unit. Back to the set. After changing the remote control receiver chip to no avail I resorted to shunting the supply rails with 1,000µF electrolytic capacitors. When this had been done the set would revert to the picture mode. It subsequently responded to my handset then reverted to the index page after which no further selection was possible. More migraines.

I decided to scope the output from the infra-red sensor in the set. A nice healthy waveform appeared when our handset was operated but when the button was released a low-amplitude signal was still displayed. Thinking that there was a fault with our handset I pointed it away from the set and even under the bench, but the low-amplitude signal was still present. I then had a sudden attack of intelligence: I removed the battery from the customer's handset, which had been lying on the bench. Hey presto, the signal disappeared. But the set still wouldn't respond to our handset until it had been switched off and on again. Then perfick.

I had wondered why the battery in the customer's unit seemed to be running down quickly. This was why. The unit had been permanently transmitting the clock call signal, thus jamming and confusing the logic.

*Peter Nutkins,  
Charmouth, Dorset.*

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## OBITUARY

Many of our regular readers will be saddened to learn of the death of Les Lawry-Johns in late August. He had been in poor health for some years, but managed to keep on top of his health problems: he died of a heart attack.

Les joined the Royal Navy Fleet Air Arm early in the war and saw service in the middle east. After the war he returned to Gravesend, Kent, where he started a radio and TV sales and repair business. He became well-known in the area as a local character, in particular for being so helpful to all who came to him with their problems. Some might say too helpful, since he was reluctant to

charge fully for his services.

His long Servicing Television Receivers series started in the September 1954 issue of *Practical Television* (as we then were), with the HMV Model 1807. He went on to cover just about every TV chassis up to and including the earlier all solid-state, single-standard colour chassis. His experience was legendary – he could pinpoint just about every stock fault, and many of those who used the advisory service we then ran benefited from his know-how. But above all he introduced humour and the human element into his servicing articles. After all repairers have feelings, and customers often present as many

problems as the sets they want repaired. Les felt, rightly we believe, that this overall view was relevant in writing about servicing matters. In addition to the articles that appeared under his own name, he contributed to the magazine under various pen-names such as S. Simon (Simple Simon!) and Peter Gaymead-Frazer – his sense of humour was never far below the surface. Many contributors made a point of paying a visit to the famous shop in Parrock Street.

His death is a great loss to his family, to his many friends and acquaintances in Gravesend and to the *Television* readers he informed and entertained for many years. **J.A.R.**

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