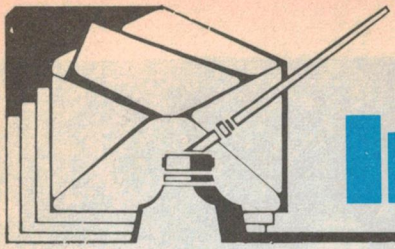

Information centre

8-channel remote control

I want to build the 8-channel remote control unit, as described in your June 1987 issue. I have since found that all the parts used in this unit are readily available and relatively inexpensive — except that is, for four IC's: the Plessey SL486, SL490, ML923, ML928. I have tried various distributors, all without success. Would you please tell me where they can be obtained. Also the 6.8uF electrolytic capacitor, used or the preamplifier board.

I am also a user of the UHF 28 aerial described in the magazine about two years ago, and find its performance very good. I have found that at least two capital city TV stations broadcast on UHF Band 5, as well as VHF. I think it would be great if you could modify/design an antenna for UHF Band 5, because there is a lot less interference on UHF when compared with VHF. There are over 40 country stations broadcasting on UHF Band 5, as well. (T.B.W., Ballarat, Vic)

• The Plessey ICs are available from Jaycar Electronics' kit department. If a 6.8uF capacitor is not available for the preamplifier circuit, there should be enough space on the PCB to wire two 3.3uF capacitors in parallel for a 6.6uF result — near enough.

Although we have not tried it, there is no theoretical reason why you cannot physically scale your UHF antenna to receive the Band 5 TV stations. Just reduce the element length and spacing in the inverse ratio of the frequencies.

Video Fader

When using the Video Fader built from a Jaycar kit in conjunction with a Canon VM-E1 video camera and Philips video cassette recorder VR901, the following occurs. The picture has shakes, and horizontal ripples, as the fader is turned to fade-out. The picture loses colour and tears, followed by black horizontal lines over the entire screen. The horizontal lines fade out as the fader control is turned to full fade-out.

The same happens in reverse as the fader control is turned to fade-in. Adjustment by trimpot VR2 makes no improvement to the irregularity. (A.C., Bossley Part, NSW)

• The Jaycar kit department advises that Jaycar occasionally supply the kit with a 74LS00 (IC2) rather than the 7400 we specified. However the former may not be able to sink enough output current. As a result the sync pulses can get distorted, which results in a shaking picture.

The best cure would be to replace the 74LS00 by a 7400. However if the 7400 is difficult to get, IC1 and IC3, 74123, may be replaced by 74LS123 type ICs. This would reduce the loading on IC2.

Super bass filter

I refer to your article in the February 1980 issue, about the "Super Bass Filter" that is used in the sub woofer design of July –August 1982. Can you tell me if the roll-off point (upper end) can be varied, over the range 400 — 100Hz, by the addition of a suitable pot?

• The filter concerned is a third-order filter. This means that in order to make the roll-off variable, you would have to vary three resistors or three capacitors. This is not really feasible using available components.

You could move up the roll-off point by decreasing the values of capacitors in switch position 4. Half the given values would double the roll-off frequency, etc. This is quite a rough way of calculating but it will serve the purpose.

VZ-300 expansion problem

From your "Circuit & Design Ideas" in the May issue I decided to make the "16K memory add-on for the VZ-300 computer". I thought it worth taking a chance on, and at the worst I might not be able to make it work. For it to kill my computer was more than I bargained for.

Your Notes & Errata in the August issue say this might happen if the circuit is constructed in the way shown. I have changed the internal RAM chips (4116) but the fault of garbage displayed did not change. I realise that it is not your usual policy but I would be very grateful if you could comment, from advice you may have received, as to which chip or chips in the circuit are likely to have been damaged by the addition of this expansion. I hope you can help. (W.E.P., Christchurch NZ)

• We haven't had any further advice, but from your description that the unit now displays "garbage", it sounds as if either the 6847 video display controller chip (U15) or the 6116 video RAM (U7) may have been damaged somehow. Or perhaps the 74LS245 bus buffer U14, if there was a bus conflict. A remote possibility is that the Z80A CPU itself has been damaged. Sorry, but it's hard to offer more help than these suggestions.

CD compressor

Referring to the CD Compressor project described in the May 1986 issue, I require the NE572 Stereo Compandor IC. Could you please advise where I should be able to get this crucial part. (D.P., Devonport, Tas.)

• The NE572 Stereo Compandor IC is currently still available from Jaycar Electronics, with stores in Sydney, Melbourne and Brisbane.

Multi-sector burglar alarm

I have recently constructed the Multi-Sector Burglar Alarm, described in the January and February 1985 issues, and I am experiencing difficulty in getting this project running. I have thoroughly checked all wiring and construction details.

I find that with a 47k loop attached to all inputs, inputs 2, 4, 6 and 8 will only trigger the alarm when short-circuited and then only after the alarm has been allowed to remain in the on state for at least 60 seconds.

The LEDs for inputs 1, 3, 5 and 7 remain on, even when this loop is attached. I found that when I make and break the loop to inputs 1 and 3, the LEDs flash at the time of making and breaking contact. The LEDs inputs 5 and 7 are not effected in this manner, but remain on at all times. (N.A.S., Morphett Vale, SA)

• The problem is almost certain to be concentrated around the input stages. The most likely thing to