

NOTES & ERRATA FOR PROJECTS PUBLISHED IN SILICON CHIP (1990)

Active Antenna, January 1990: the overlay diagram on page 20 has the labelling for Q1 and Q2 swapped around. Q2 is near the LED while Q1 is closest to the tuning capacitor, VC1.

Phone Patch, January 1990: there are three errors on the PCB wiring diagram shown on page 32: (1) the resistor connected to pin 10 of IC2 should be 100k (not 10k Ω); (2) the 1 μ F capacitor connected to pin 17 of IC1 is shown with reversed polarity (the negative lead should go to pin 17); & (3) D7 is shown with reversed polarity (the cathode should go to the base of Q6).

Ask Silicon Chip, March 1990: the formula given for parallel resonance on page 102 is incorrect. The equation should read $F = 1/2\pi\sqrt{LC}$.

Digital Waveform Generation, Computer Bits, March 1990: CRO photograph Fig.6 on page 82 is upside down. In the program listing on page 83, "50fsec" should read "50 μ sec". Although the "u" is part of the normal IBM character set, it became an "f" after passing through the magazine's typesetting process. If the sample time for this program really was 50 femtoseconds, it would be something of a breakthrough in computer technology!

VOX With Delay, April 1990: there are three errors on the overlay diagram on page 33. First, the 47k resistor shown connected to VR2 should be a 4.7k Ω , as shown in the circuit. Second, the 100 μ F capacitor located just below IC3 should be a 47 μ F capacitor although this value is not critical. Finally, the 47 μ F capacitor located just above IC4 should be a 4.7 μ F capacitor.

16-Channel Mixing Desk, February, March & April 1990: on the preamplifier overlay diagram (April, p73), IC5 is incorrectly shown as a 555 rather than a 7555. The lower 6.8k resistor connected to pin 2 of IC6 on the effects overlay (April, p78) should be a 2.2k resistor as shown on the circuit (March, p63).

The circuit for the equaliser/VU display (March, p66) shows a 1 μ F capacitor from the wiper of the master fader VR13, while a 4.7 μ F capacitor is shown on the overlay (April, p73). Either value is satisfactory although 1 μ F is specified in the parts list.

On the same circuit (but p67) are shown two 10 μ F capacitors at the 5V rail near LED1. Only one is used, as shown on the overlay diagram. Also the 10 μ F capacitor at pin 4 of IC18 on page 67 is not used. Therefore, two 10 μ F 16VW capacitors can be omitted from the parts list.

Also on the same circuit, a 1k resistor is shown at pin 6 of IC16 but a 3.9k resistor is shown on the overlay diagram. Either value is satisfactory, although 1k is specified in the parts list.

Still on the same circuit, a 10k resistor is correctly shown between pin 7 of IC9b and pin 5 of IC10b. However, the PCB has the resistor connected from pin 7 of IC9b to the cut side of the frequency control pots. To correct the problem, remove the 10k resistor and connect it beneath the PCB between the 33pF capacitor at pin 5 of IC10c and the 220pF capacitor at pin 7 of IC9b.

In the text on testing the preamplifier (April, p80), the output of IC3b will not be at 0V as stated but close to +15V or -15V, depending upon the setting of TRIM1.

Finally, there is an error involving the procedure for connecting a link between PC pins marked "X" on the diagram of Fig.6 (see text, April, p80). The left hand "X" is correctly shown at the top of the PCB on Fig.6 (p73) but the right hand "X" is incorrect. It should be shown located one pad to the left so that it connects to the 560 Ω and 1.8k parallel resistor combination.

0-100V 1.5A Dual Tracking Power Supply, April 1990: there is an error on the wiring diagram on page 55. The lines to points C and D on the PC board should be swapped over. As depicted, the polarity of the output terminals, and the two associated 470 μ F capacitors, will be reversed.

Also the 0V output terminal is not connected to 0V on the PCB. It should connect to the 0V PC stake on the PCB near the 1000 μ F capacitors. In addition, the diode next to D11 on the PCB should be marked D13 and the two 1.2k resistors in series with the ADJ terminal of the LM337T should be 0.5W, as specified in the parts list.

In the parts list, the 0.8mm enamelled copper wire for the four inductors, L1 to L4, should be 0.5mm, as referred to in the text & circuit diagram.

High Energy Ignition System, May 1990 (and May & June 1988): a letter concerning this electronic ignition on page 91 of the March 1993 issue suggests the use of a plastic case with a metal lid, to eliminate problems with punch-through of the transistor insulating washer. We strongly recommend against this approach as the high voltage on the case lid could give a nasty shock to an unwary user. To help prevent arcing and punch-through, we recommend that the holes in the case for the TO-3 transistor be lightly chamfered to remove any swarf. The use of two insulating washers is also a good approach.

High Energy Ignition System, May 1990 (and May & June 1988): we recommend against using sport ignition coils such as the commonly available "GT40". These coils draw more current than the original vehicle's coil and may seriously overheat.

UHF Remote Switch, August 1990 (and December 1989): in some cases, the MC145028 decoder (IC2) may not operate correctly since the specified oscillator components cause it to operate at 770Hz which is outside its recommended frequency range of 1kHz to 400kHz. The solution is to change the timing components so that the oscillators operate at about 2kHz.

For IC1 in the transmitter, replace the resistors at pins 11 & 13 with 220k and 100k resistors respectively and change the .01 μ F ceramic capacitor at pin 12 to a .0022 μ F polyester type. For IC2 in the receiver, change the resistors at pins 7 & 10 to 39k and 180k respectively. The capacitors at pins 7 & 10 are unchanged.

3-Digit Counter, September 1990: the three transistors are shown on the parts list as BC328 but on the circuit diagram as BC558s. Both types will work but the BC328s are preferable, having a lower saturation voltage, giving more consistent brightness in the three displays.

IR Remote Control Extender, September 1990: some constructors are experiencing low sensitivity with the circuit. When re-transmitting an infrared remote control signal, the red acknowledge LED flashes to indicate reception of this signal. However, the infrared LED (IRLED1) may not provide a satisfactory output for some or all of the remote control functions.

This problem is caused by the the AGC of IC1 being shut down by the signals sent by some infrared remote controls. To solve this problem, the 0.15 μ F capacitor at pin 8 of IC1 should be changed to a larger value. Some experimentation may be required to find the best value, which should be in the range from 6.8 μ F to 22 μ F (use an electrolytic). The positive terminal of the capacitor connects to pin 8 of IC1 and the capacitor should be rated at 16VW or higher.

This modification is only recommended if there is a problem with the InfraRed Remote Control Extender when it is used with your remote control unit.

DC-DC Converter for Car Amplifiers, December 1990: diodes D5 and D6 are shown on the circuit diagram (Fig.1) with incorrect polarity. The overlay diagram (Fig.3) is correct.