

NOTES & ERRATA FOR PROJECTS PUBLISHED IN SILICON CHIP (1994)

40V/3A Adjustable Power Supply, January & February 1994: Some readers have experienced difficulty with the wiring of switch S4 and potentiometer VR1. Unfortunately, with multi-turn pots, the pinouts are not necessarily the same for all brands. Usually, the pin arrangement is shown on the body and the correct wiring can be worked out from this.

Basically, you only need to find the wiper and connect it to the PC board on terminal 21 as shown on the wiring diagram. Terminal 22 goes to one end of the pot. If the output voltage from the power supply is a maximum when the pot is turned fully anticlockwise & a minimum when rotated fully clockwise, connect the wire from terminal 22 to the other end of the pot.

For S4, the switch specified in the parts list is an Altronics S-1394 momentary pushbutton type which has the wipers of the double pole switch at one end rather than the centre as is customary with toggle switches.

If a momentary pushbutton switch with the wipers in the centre of the switch is used, the wiring will have to be changed as mentioned on page 71 of the February 1994 issue.

Finally, the orientation required for S4 on the wiring diagram is with the common terminals facing the mains switch S1.

12-240VAC 200W Inverter, February 1994: (1) Transistor Q16 on the circuit diagram (Fig.4) is incorrectly labelled as a BC338; it should be a BC328. In addition, the transistor marked Q12 near Q13 (Fig.4) should be designated Q14. On the overlay diagram (Fig.5), transistors Q13 and Q14 are transposed, while the .047 μ F capacitor near T2 should be a .0047 μ F capacitor to agree with the circuit. The parts list should also show a .0047 μ F MKT capacitor instead of a .047 μ F capacitor.

(2) the 1k Ω resistor which connects to pin 6 of IC3 on the overlay diagram should be 10k Ω as shown on the circuit. Use of a 1k Ω resistor will cause the inverter to shut down prematurely.

Champ Audio Amplifier, February 1994: The text on page 47 regarding the “blurt” test should read, “You do this by winding the trimpot **anticlockwise** and then putting your finger on the input”.

90-Second Message Recorder, February 1994: The distributor for the ISD audio recorder chip is Adilam Electronics, which has branches in most Australian states as well as New Zealand.

50W Audio Amplifier Module, March 1994: (1) The 22 μ F capacitor connected to pin 8 on the LM3876 is shown reverse-biased on both the circuit and the wiring diagram. The 220 μ F capacitor connected to the negative supply rail is also connected the wrong way on the circuit but is correctly shown on the wiring diagram. Modules that have been running for more than a few hours should have the 22 μ F capacitor replaced.

(2) The LM3876 used in this design has been changed to severely limit its power output into 4-ohm loads. If you want to use a 4-ohm load, the solution is to use the LM3886 which can deliver over 60W. However the supply rails should be reduced to ± 28 V, as recommended in the article for the LM3876 when using 4-ohm loads. (08/03)

Remote Control Extender for VCRs, April 1994: The panel mount DC socket for the plugpack should be an insulating type to prevent the negative pin shorting to the case. This is shown in the photograph on page 21 of the article in the April issue.

Discrete Dual Supply Voltage Regulator, April 1994: The PC board pattern and the overlay pattern on page 31 has an error in that pin 3 of IC1b is not grounded. The board can be corrected by connecting a short link across to the adjacent GND track.

Induction Balance Metal Locator, May 1994: The parts list should indicate 5 rather than 4 0.1 μ F MKT capacitors. The extra capacitor is shown on the overlay but not on the circuit. It is used as a bypass to ground for the +7V supply near VR1. The .001 μ F capacitor shown on the overlay next to VR1 should be .01 μ F.

Fast Charger for Nicad Batteries, May 1994: The circuit (Fig.2) shows a 680 Ω current limiting resistor for LED 1. This should be changed to 470 Ω to agree with the parts layout diagram (Fig.3). The parts list should also be altered.

This circuit has caused confusion to many constructors because of its method of dV sensing to end the fast charging mode; it will not work unless it is actually charging cells. If you attempt to test the circuit without a nicad battery load, the output voltage will rise until pin 7 reaches +4.25V whereupon the circuit will switch off.

For further background on this circuit, refer to the article on using the TEA1100 IC on page 6 of the September 1994 issue.

Multi-Channel Remote Control, May 1994: The Vcc (supply line) to a number of ICs (IC4, IC6, IC8, IC9, IC10 & IC11) is open circuit on the PC board, as supplied by the author. This presents a problem when using the outputs for latched operation.

To correct the error, wire a link from pin 7 of IC2 to the pin of C7 (.0047 μ F) which is closest to the outside edge of the PC board. A corrected PC pattern is available if necessary.

Some codes may not operate correctly due to the thresholds being quite critical on IC12a. This causes the rate pin (RB) of IC1 to pulse erratically and therefore IC1 is not able to receive a valid code. To correct this problem, replace R5 with a trimpot and adjust it so that the voltage on pin 6 of IC12b is halfway between the voltage at pin 5 when transmitting a valid code with link SW13 (on the transmitter board) in and when transmitting a valid code with link SW13 out.

The author has experimented with this and with a supply rail of 6.39V, the value for R5 worked out at 6.8k Ω . The voltages on pin 5 varied between 2V-3V and so the threshold was set for 2.5V.

Coolant Level Alarm, June 1994: The circuit on page 21 has an error in that the indicator lamp is connected to the decoupled +12V supply line; ie, after D2. It should go to the +12V line from the ignition switch, as shown correctly on the wiring diagram on page 22 of the issue.

4-Bay Bow Tie UHF Antenna, July 1994: Readers who are having difficulty purchasing 4.74mm dia, 0.91mm wall thickness aluminium tube for this project should note that it can be purchased through their local Alcan Aluminium Centre.

The reflectors and dipoles may be made from thicker tubing or rod; eg, 6.35mm diameter with suitable adjustment being made to the dipole mounting clip dimensions. The reflector, dipoles and the connector harness pieces could also be made from 4.74mm diameter aluminium rod. For the harness pieces, this material will need heating and hammering on an anvil in the areas where holes have to be drilled. The connector pieces could also be made from 3.2mm aluminium rod which is readily available from CIG welding centres.

Dual Diversity FM Tuner, Pt. 1, August 1994: The varicap diode D5 is shown on the circuit the wrong way around. It is shown correctly on the wiring diagram in part two of the article (September 1994) on page 68.

Nicad Zapper, August 1994: Experience has demonstrated that this circuit does not dump the capacitors' charge reliably if the supply rail is less than about 12V. Also, the test procedure involving a 2.2 Ω dummy load should be changed to 0.22 Ω .

Some variants of the MTP3055 have also proved to be unreliable. We recommend the MTP3055E, made by Motorola. Less well-known brands can be suspect.

Minivox Voice Operated Relay, September 1994: Diode D1 is shown with the incorrect polarity on the overlay diagram on page 33. Diodes D3 and D4 on the overlay are incorrectly identified. D3 should be D4 and vice-versa. Diode D3 (labelled D4) is also shown reversed on the overlay diagram. The Cathode (K) marking on D4 (actually D3) near the Q1, should be changed to Anode (A).

Super Bright LED Brake Light Array, Circuit Notebook, November 1994: We suggested a modification to this circuit whereby the flashing LED (LED 14) could be replaced by a standard LED to provide a non-flashing display. The designer has pointed out that this will cause the circuit to destroy the middle column of LEDs when power is applied. To avoid this problem, LED 14 should be replaced with a 470 Ω 1W resistor, if you want a non-flashing display.

Clifford the Cricket, December 1994: The 2.2 μ F electrolytic capacitor is shown reversed on the circuit diagram (Fig.1) but is shown oriented correctly on the parts overlay (Fig.2). Also, the 68k Ω resistor on the parts overlay should be a 10k Ω value, as shown on the circuit diagram and parts list. (07/05)