

NOTES & ERRATA FOR PROJECTS PUBLISHED IN SILICON CHIP (2020)

Please note: errata apply primarily to the print edition of SILICON CHIP as online issues are normally changed when an error is identified. However some errata may still apply to the online edition; check carefully before making any changes to a project.

Arduino DCC Controller, January 2020: transistor Q1 on the RevF DCC Power Shield PCB (09207181) has the connections to its collector and emitter reversed. To fix this, rotate the transistor 180° relative to the PCB silkscreen markings, swapping the collector and emitter. It may work with the original orientation, but it is not guaranteed. (04/24)

Tunable HF Preamp with Gain Control, January 2020: The PCB overlay diagrams (Figs.2(a) & (b) on p42) show T3 rotated 180° compared to the correct orientation. The PCB photos show the correct orientation of T3. (06/20)

Nutube Guitar Overdrive & Distortion Pedal, March 2020: The Jaycar Cat PS0190 jack socket specified in the parts list is too tall to fit. Jaycar Cat PS0195 is a better fit, but some plastic must be filed off the jack for the adjacent relay to fit properly. Also, it's best to install the 100µF capacitor next to the socket after the socket itself. (07/20)

7-Band Mono or Stereo Equaliser, April 2020: (1) Fig.7(c) is correct for the stereo version, but on the mono version, the negative end of the 100µF capacitor connects to chassis ground rather than V- (these two points are joined via JP2, so the effect is the same). (06/20)

(2) In the first batch of stereo equaliser PCBs sold (code 01104202), the connection between the 220pF capacitor and 51kΩ resistor in the lower right-hand corner of the board went to the top of the resistor instead of the bottom (which was floating). This can be fixed by cutting the track between the two components and running a short wire from the bottom of the resistor to the nearest pad of the capacitor. PCBs sold from November onward lack this problem. (12/20)

(3) An error has been found in the 7-Band Stereo Equaliser PCB (01104202 RevB). There is a missing track between the 10nF and 2.2nF capacitors above IC6 – they should be in parallel, but only one side of the pair is connected. This causes the second-highest band to operate at the wrong frequency. If you have a PCB with this error, solder a short length of wire (eg, a component lead off-cut) between those two pads. This error was fixed with the RevC PCB. (10/21)

Frequency Reference Signal Distributor, April 2020: The MAX4450s are specified in the parts list as being the SOT-23-5 version (MAX4450EUK+T), but the PCB is designed for the SC-70-5 version (MAX4450EXK+T). Make sure to use the latter type. (11/20)

DIY Oven Reflow Controller, April-May 2020: (1) The connections between IC11 & IC12 are shown incorrectly on the CPU circuit diagram, but are wired correctly on the PCB. The correct connections are: IC12 pins 2, 5 & 6 go to pins 5, 6 & 4 on IC11 respectively. In other words, SO connects to SDI_SDI2, SI to SDI_SDO2 and SCK to SDI_SCK2. (06/20)

(2) On p32 of the April issue, in the parts list, the male/female chassis-mount IEC power connector is described as a 15A type, but a 10A type is needed. The catalog code given (Altronics P8330A) is correct, ie, it is the 10A type. (08/20)

(3) In the May 2020 issue on page 90, Fig.11 shows the 20-wire ribbon cable between the control board and LCD screen connected incorrectly. It is shown correctly in the photo at the top of p89, with the red stripe going to pin 1 on both boards. (06/21)

H-Field Transanalyser, May 2020: The frequency counter module part number is miswritten as PJJ-6LED on pages 40, 42 and 44. The correct part code is PLJ-6LED. (07/20)

Car Altimeter, May 2020: The design is missing one schottky diode (D8) which connects from the cathode of ZD1 (schottky anode) to the positive terminal of the battery (schottky cathode). This is needed to charge the battery. It can be added to the underside of the PCB, as shown in the photograph on page 112 of the March 2021 issue. (03/21)

Infrared Remote Control Assistant, July 2020: On page 77, the second paragraph of the text refers to a “47µF series capacitor”. It should instead read “47Ω series resistor”. (10/20)

Colour Maximite 2, July & August 2020: The SD card socket specified for this project (Hirose DM1AA-SF-PEJ(21)) is being discontinued by the manufacturer. Instead, use the DM1AA-SF-PEJ(72) or DM1AA-SF-PEJ(82) which cost the same and fit the existing footprint on the PCB. (02/21)

Arduino-based Digital RF Power Meter, August 2020: In Fig.5, IC1 is labelled IC4. Also, the capacitor referred to in the text as COBP is actually CLPF. (09/20)

Velco 1937 Radio Chassis Restoration, August 2020: In the circuit diagram on page 85, the 100nF capacitor below valve V4 should be shown connected to the other end of the 1MΩ resistor, ie, to the AGC line. (10/20)

Four USB Power Supplies for Laptop Charger, Circuit Notebook, August 2020: Instead of 220 μ F choke, it should read 220 μ H choke. (10/20)

USB SuperCodec, August-October 2020: (1) On page 74 of the October 2020 issue, in the testing procedure, the text states that the ± 9 V rails should each measure between ± 8.5 V and ± 10.5 V. However, the resistor values specified could result in readings as low as ± 8 V (typically around ± 8.2 V). This is normal, and the circuit will operate as designed. Also note that the L1 and L3 part numbers given for Digi-Key in the parts spreadsheet are a bit larger than the ones used in the prototype; it is better to use the parts from Altronics or Jaycar if possible (which were the ones tested). (11/20)

(2) In the Fig.13 circuit diagram on p88 of the September 2020 issue, pin 12 of IC7 (SDOUT) should not be shown connected to pin 9 of IC6. Instead, it goes to the I2S_ADC1 connection at the right edge of Fig.12 on p86. (03/21)

History of the Australian GPO, September 2020: On page 40, the article states that the Australian mains voltage standard was changed in 2000 to 230V AC +6%,-10%. It was in fact changed to 230V AC +10%,-6%. (11/20)

Shirt Pocket Oscillator, September 2020: The inductors specified for L1 are both too big to fit easily in the space available. The Murata 17156C is a good fit, with the slightly cheaper and slightly larger Murata 22R156C also being a reasonable choice. (11/20)

D1 Mini LCD Backpack with WiFi, October 2020: In the circuit diagram (Fig.1), the connections to pins 7 & 8 on the LCD module via CON1 are swapped. The drain of Q1 should go to pin 8 (LED) while pin 7 is the display SCK line and also connects to pin 10 on the LCD module and on to the D5 pin of MOD1. (01/21)

Ultrasonic Cleaner part 2, October 2020: in the winding instructions in Fig.9, the reference to pin 19 should say pin 8 instead. (03/26)

Digital Lighting Controller Pt2, November 2020: On page 101, the parts list correctly includes a 27 Ω 1W resistor for the Micromite master unit but incorrectly lists it as 25 Ω 1W for the CP2102 Adaptor module (it should also be 27 Ω 1W). (12/20)

Tiny LED Christmas Ornaments, November 2020: The parts list incorrectly lists the Bauble PCB dimensions as 91 \times 98mm when the should instead be 52.5 \times 45.5mm. Also, the Cane PCB is incorrectly listed as 84 \times 44mm when it should be 84 \times 60mm. (12/20)

Two LED Christmas Stars, November 2020: In the parts lists on page 41, there is no such part as a 75HC595. It should read 74HC595 instead. (01/21)

Balanced Input Attenuator for the USB SuperCodec, November-December 2020: The photo shown halfway down the lefthand column on page 71 of the December 2020 issue, showing the wiring to the power connector, is incorrect. The positive (red) wire should be shown going to the bottom-most pin in the socket, with the black (negative) wire to the top. Also, in the circuit diagram on pages 50 & 51 of the November 2020 issue, the centre (ground) pin of CON3 at upper right should only be connected to the junction of the two zener diodes, the negative end of the 100 μ F capacitor next to switch S1 and the negative ends of all relay coils. The junction between this ground and the other grounds in the circuit is on the main SuperCodec board. (01/21)

Vintage Battery Radio Li-ion Power Supply, December 2020: On page 28, the text refers to a 220 μ F capacitor being charged via a 220 Ω resistor. The capacitor value is actually 10 μ F. (02/21)