NOTES & ERRATA FOR PROJECTS PUBLISHED IN SILICON CHIP (2023)

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.

Heart Rate Sensor Module review, February 2023: For safety reasons, the module should be used with a battery-powered computer that is not connected to the mains, or any other equipment, during use. We also advise that the 'patient' avoids contact with any other equipment while the ECG probes are connected. (03/23)

Active Mains Soft Starter, February & March 2023: in the right-hand column on page 71 of the March issue, it says to use red or black wire for Active. It should have said red or brown. (05/23)

(2) the 15V zener diodes should be 1N4744 types, not 1N4742 (the 12V equivalent). (01/25)

Advanced SMD Test Tweezers, February & March 2023: the Fig.1 circuit diagram (p46, February) labels pins 24 and 25 of IC1 as AN11 and AN10 instead of AN7 and AN6. (06/23)

CD Spot Welder, March & April 2022: in Table 1 on p28, the second entry for the 39mF capacitors had the wrong Mouser part code/link. It should be https://au.mouser.com/ProductDetail/871-B41231A5399M000 (not -002). (10/23)

Automated Test Bench Swiss Army Knife, April 2023: (1) the lid cutting diagram, Fig.2 on p64, has the vertical location of the rectangular cut-out too low. The top of the cut-out should be in line with the centres of the upper holes marked "A", not 5mm below that line. While not critical, it could also be moved 1mm to the right. (06/23)

(2) In the production of the original (RevA) PCBs, one row of pins (20 to 38) on the ESP32 socket was reversed. RevB boards are not affected. Rewiring pins 20-38 of the socket is the most straightforward means of rectifying the problem. Please contact us for instructions if you have one of the original PCBs. (06/23)

Wideband Fuel Mixture Display, April-June 2023: some PCBs supplied have diode D2 incorrectly labelled as D5. On those same boards, the 100nF capacitor just below IC3 lacks a proper pad to solder its lead to on the underside. It can be bent over and soldered to the pad for the nearby 100nF SMD capacitor on the underside. Also, in Fig.15 on p75 of the June 2023 issue, the mauve "A/F" wire to the multimeter should connect to MV+, not MS+ as shown. (09/23)

GPS-Disciplined Oscillator, May 2023: some PCBs we sold had manufacturing errors with the four pins of REF5 (plus one nearby) shorted to the ground plane. If you have one, you can either drill those holes out slightly larger to break the connection to the plane and solder the wire link on the top, or contact us for a replacement board. (03/24)

Vintage Radio, Astor APN, May 2023: there were some errors in the published circuit diagram for the set, mainly regarding the connection of capacitors #35, #36, #38 and resistors #6 & #10. The circuit diagram has been corrected in the online version of the magazine and has been made visible in the free preview of that issue on our website. (07/23)

Loudspeaker Testing Jig, June 2023: the 1kΩ resistor connecting to LK1 that filters the phantom power for the microphone should be 100Ω, not 1kΩ. It might work with 1kΩ, but it will depend on the microphone. Also, because pin 2 of XLR socket CON10 ("HOT") connects to the IN- signal and pin 3 ("COLD") connects to IN+, the microphone phase will be inverted. To fix this, swap the wires to pins 2 & 3 of header CON11 on the PCB. Finally, the labels of transistors Q1 & Q2 in the circuit diagram (Fig.3) were swapped, but are correct on the PCB overlay and PCB. (07/23)

Reciprocal Frequency Counter, July 2023: (1) on the PCB, test point TP3 actually connects to pin 12 of IC1a (same as TP2), not pin 5 of IC2a as shown in the circuit diagram. If you need to monitor the COUNTEN signal, probe the Arduino Nano D3 pin. (09/23)

(2) the lowest frequency the Counter can measure is 2Hz, not 10mHz. Also, below 10Hz, its readings may not be very accurate. (07/25)

Arduino LC/ESR Meter, August 2023: there are two errors in the wiring diagram, Fig.3. (1) The wires from A0, A2 & A3 on the shield should go to A1, A2 & A3 on the Arduino, respectively, not A0, A1 & A2. (2) The connections to switch S1 for the 10kΩ resistor and grey wire that goes to the GND terminal on the Arduino should be swapped. The leftmost and rightmost connections for S1a in Fig.2 should also be swapped. (10/23)

Watering System Controller, August 2023: (1) the original v1.2 version software had two serious faults. It was not driving the correct I/O pins as shown in the circuit diagram and a calculation error could cause it to water on the wrong day. V1.3 fixes those and adds a new SMTP relay service for sending emails (SMTP2GO), as some users have had difficulty opening a free account with SendGrid. Also, several minor changes were made to improve the web pages generated by the firmware. The new firmware is available for free download from our website. If upgrading an existing installation, you can just overwrite the four files in the WebMite's internal file system, then type RUN "RETIC.BAS" and press Enter. The "settings.dat" file will automatically be upgraded. (11/23)

(2) a bug in the WiFi stack in the original WebMite firmware can cause spurious reboots of the Controller. We recommend you update to the latest firmware version (released January 2025) which fixes this problem. (02/25)

(3) the optional 24V transformer is incorrectly specified as Jaycar MT2112. It should be Jaycar MT2084 instead. (04/26)

30V 2A Bench Supply Mk2, September-October 2023: in Fig.6 on page 76 of the October 2023 issue, the ribbon cable should loop through the top of the connector and terminate at the bottom, not the other way around, as was shown in the diagram. (11/23)

1kW+ Class-D Amplifier Pt2, November 2023: in the Fig.15 wiring diagram on p78, the brown wires connected to the IEC mains input socket should be light blue (Neutral), and the light blue wires should be brown (Active). That means the connections to the A & N terminals of the switchmode supplies from the IEC socket should also be swapped. (01/24)

16-bit Precision 4-input ADC, November 2023: the name for the second library on p48 under “Arduino software libraries” should be “Rob Tillaart” and the link should be https://github.com/RobTillaart/ADS1X15 (11/23)

Modem/Router Watchdog, November 2023: the V3 software, available from our website, fixes some bugs and includes some improvements. If the first NTP check failed, it would always reboot the router, and a delay has been added shortly after booting to make it easier to break into the MMBasic command prompt using CTRL-C. A problem with the uf2 file has also been fixed. Finally, if loading the firmware manually, run the “AUTOSAVE” command before pasting the program into the terminal. (01/24)

Coin Cell Emulator, December 2023: in the circuit diagram (Fig.1) on p73, pin 2 of IC2 should only connect to the 22Ω resistor above and the output network below. On the PCB, it does not connect to the 10kΩ resistor and 100nF capacitor at its left in the circuit, nor should it. (01/24)

Ideal Diode Bridge Rectifiers, December 2023: 1.5mm diameter wire is too large for the SOT-23 version PCB pads; use 0.7-1.0mm diameter wire or lead off-cuts. (03/24)