NOTES & ERRATA FOR PROJECTS PUBLISHED IN SILICON CHIP (2001)

Digital Reverberation Unit, January 2001: The output resistor from pin 6 of IC3 is shown as 10kΩ on the PC board diagram on page 73 of the January 2001. It should be 150Ω, as shown on the circuit in the December 2000 issue. Also, the wiring diagram on page 68 of the January 2001 issue has the earth and signal connections reversed on the output of the digital reverb board.

LP Doctor, January& February 2001: (1) The LM833 op amps that perform the treble filter and output buffer functions for the right channel are referred to in brackets as IC7a and IC7b. These should read IC9a and IC9b respectively. The left channel IC numbers (IC5a & IC5b) are correct.

(2) The specified fuse is wrong. It should be 150mA slow-blow.

(3) In order to avoid residual mains voltage across the transformer when the power switch is off, the associated .01µF/250VAC capacitor should be reduced to .001µF/250VAC.

(4) The overlay diagram and parts list in the February issue describe the dual ganged 50kΩ front panel sensitivity pot as VR2. It should be VR4. Similarly, the testing procedure under adjustment (4) mentioned VR2 being set at mid-position. This should refer to VR4.

(5) In the text on page 28 of the January issue, the final sentence in the second last paragraph refers to IC5a providing a gentle treble cut at 12dB/octave above 10kHz. Instead it should refer to IC5b (and IC9b). The overlay diagram on page 78 of the February issue shows two trimpots numbered VR8. VR8 shown near IC14 should be VR7. The test procedure (3) on page 82 should read "Monitor Test Point TP4 and adjust VR7 for a 0mV reading." (Not VR8). Table 3 on page 80 of the February issue should have the heading "How to set Different Delays for IC3 and IC7 using Linking on IC20." (Not delays for IC2 using IC8).

PIC Programmer & TestBed, January 2001: (1) The overlay diagram on page 79 shows two resistors with the value 4.kΩ; these should read 4.7kΩ. The circuit diagram on page 78 is correct but shows a 4.7kΩ resistor connected to pin 7 of CON3/4: it should connect to pin 6. The overlay diagram is correct.

(2) The PicProg software described in the article is outdated and will not work on recent model PCs. A suitable alternative is WinPIC, which can be obtained from **http://people.freenet.de/dl4yhf/winpicpr.html**. Before use, configure WinPIC to use an interface type of "COM84 programmer for serial port" and select the correct COM port from the drop-down list. These settings can be found on the "Interface" tab. (11/06)

Midi-Mate Interface for PCs, February 2001: It has been found that the MIDI-in port does not work with all PC sound cards. The simplest solution is to increase the value of the resistor in series with LED1 to 680Ω (from 330Ω) and then fit a 470Ω resistor on the underside of the PC board so that it is in parallel with the series combination of LED1 and the 680Ω resistor, ie, from the +5V rail directly to pin 13 of IC1. (02/03)

Bass Blazer, February 2001: Some filter PC boards (code 01102011) may not have a connection between pin 4 of IC6 and V+. This connection provides power to IC6. If your PC board has this error, use a short length of fine insulated hook-up wire to connect IC6 pin 4 to the cathode end of D9. The relevant PC artwork on our website has been corrected.

PIC Programmer and Checkerboard, March 2001: (1) The text on page 69 (third column) refers to jumper J2 and switches SW3 and SW4. These should be JP2, S11 and S12, respectively. The circuit diagram and overlay are correct. On the PC board, there is insufficient space to fit the 2200µF 25V filter capacitor but a value of 1000µF 25VW will be adequate. Also the 10kΩ pullup resistor for RA4 on the LCD adapter is not low enough to give reliable operation. Use a value of 4.7kΩ instead.

(2) The circuit diagram on page 64 indicates that IC1 is an inverter. In fact, IC1 is a 7407 hex buffer with open-collector outputs. These buffers do not invert from input to output. Some kits for this project have been supplied with a female D socket and "gender changer". This will not work. The specified male D socket must be used.

12/24 Hour Giant Clock, March 2001: (1) The 10µF capacitor on the overlay adjacent to ZD1 should be a 100µF as shown on the circuit. Also the LDR should be RD-3480 not RD-3485. The description for easy daylight saving setting is incorrect. Changing to daylight saving requires the hour switch to be pressed once to set it to the next hour. Returning to standard time requires the hour switch to be pressed until the previous hour is selected.

(2) As published, in the 24-hour mode the clock changes from 23.59.59 to 24.00.00. This is now changed to the correct 24-hour transition from 23.59.59 to 00.00.00. The upgraded software is called clock1.asm and clock1.hex and is available at **www.siliconchip.com.au**

Minimitter, April 2001: PCB size is 122 x 60mm, not 153 x 60mm.

Intelligent Battery Charger, April 2001: To order the PIC go to **www.angelfire.com/electronic/hayles**

PowerPack, May 2001: The PC board number should be 11305011.

Two White LED Torches, May 2001: The AA-cell version PC board number should be 11205011.

4-Digit Counter, May 2001: The text on page 41 describes the SET switch as SW1. It should be SW2. Similarly, the INC switch is referred to as SW2 and it should be SW1.

Multi-Purpose Fast Battery Charger II, June & July 2001: (1) This charger is not suitable for charging cells and batteries with capacities below 1.2AH and voltages below 6V. AA and AAA Nicad and NiMH cells should not be connected to this charger as the "No Batt" LED will light due to the cell voltage rising above 2V with initial charging. However, the charger will charge a 6V AA Nicad battery pack successfully.

(2) In some cases transistor Q2 turns on slightly even though the unit is not in Refresh mode. The cure is to place a 1N4148 or 1N914 diode in series with Q2's base (anode toward pin 10 of IC1). This diode can be installed in place of the link connecting pin 10 of IC1 to the base of Q2. (3) When charging older cells either singly or in series it is important to ensure that their contacts are clean to prevent voltage drops across these connections. High resistance connections will prevent the charger from operating correctly as it will detect a high voltage per cell and simply indicate "no Battery". In addition the connecting leads from the charger to the cell or cells must be rated at 7.5A or more and be no longer than necessary to prevent voltage drops.

DI Box, August 2001: Tip contact and integral switch contact in the DC jack socket on the circuit on page 14 are shown reversed, ie, the tip contact should go to switch S1 while the integral switch contact should go to the battery negative. The wiring diagram on page 16 is correct. The parts list on page 19 does not include VR5 which should be a 16mm 10kΩ linear potentiometer. Also the testing instructions on page 19 do not tell how to adjust VR5. To do so, connect a DMM across the bass pot VR2 and adjust VR5 for zero DC voltage. This eliminates any DC current through the bass control and stops it from becoming noisy.

Low Ohms Adaptor For DMMs, Circuit Notebook, September 2001: The circuit on page 68 shows a GND terminal on the LM317. It should be labeled ADJ.

LED Number Display, Circuit Notebook, September 2001: The circuit on page 69 shows the 4511 7-segment decoder pins correctly but the labels for LE (latch enable) and LT (lamp test) have been swapped.

PC-Controlled Mains Switch, September 2001: (1) To avoid the possibility of electric shock from contact with the power plug's pins when it is disconnected, a 100kΩ 1/2W resistor should be connected across the Varistor. This will discharge the 0.1µF 250VAC capacitor. To improve the voltage isolation of the PC tracks around the optocoupler, it is recommended that neutral cure silicone caulking compound be applied to pins 4-6 of OPTO1 and the nearby component pads.

(2) One of our readers has written new and improved software for this project. The new software runs on the latest versions of Windows and features 14 programmable on/off times. Mackenzie Platt has kindly made it available for free download from his website at **http://members.optushome.com.au/video1/macksprograms**. (04/06)

Sooper Snooper, September 2001: Depending on whether the Snooper circuit is built for electret microphone, dynamic microphone or RF pickup, the 4.7kΩ resistor should be included or omitted, as indicated in the article. However, if the 4.7kΩ resistor is included, the 1µF capacitor should have its negative electrode connected to base of Q1. If the 4.7kΩ resistor is omitted, the 1µF capacitor should have its positive electrode connected to the base of Q1, as shown on circuit but incorrectly shown on the wiring diagram. Alternatively, fit a non-polarised 1µF capacitor instead.

MP3 Jukebox, September/October 2001: Since publication of this project, version 2 of the Winamp software has been superseded by version 3. Unfortunately, Winamp version 3 is not suitable for use with the MP3 Jukebox. However, the last release of version 2 (v2.8.1) can be downloaded from **http://classic.winamp.com**

Synchronous Clock Driver, Circuit Notebook, October 2001: The circuit on page 37 has a number of errors. IC1 should have the positive rail to pin 14 and 0V to pin 7, while pins 4 & 6 have been transposed. On IC4, pins 3 & 11 have been transposed. In the text, the last line of the second last paragraph should read "with the clock signal to IC4". The second line of the last paragraph should read "pins 4 & 10 of IC1". And the reference to R1 should be R2, in the last paragraph.

Programming Adapter For AVR Microcontrollers, October 2001: (1) Fig.1 on page 69 shows the optional programming indicator connected to ground. The LED polarity should be reversed and connected to +5V.

(2) The software referred to in the article, avr_isp.zip, is no longer available from the Atmel website. A suitable alternative is "Ponyprog", available for download from **http://www.lancos.com/prog.html**. This program also supports Windows NT/2000/XP and can program many of the newer AVR devices. To configure Ponyprog to work with the ISP Programmer, set it up for the "AVR ISP (STK200/300) parallel port interface" as described in the included documentation.

Audio/Video Distribution Amplifier, November 2001: (1) The 12 47kΩ resistors for the audio distribution outputs should be changed to 1kΩ to avoid undue treble loss due to long cables. Though not essential, to ensure an extended bass response down to 20Hz with all six outputs in use, increase the output coupling capacitors from 0.39µF to 1µF.

(2) There is an error in the underside copper pattern for the PC board which causes both audio outputs from the fourth socket pair from the right-hand end (looking from the rear) to deliver the R channel output signal. The problem can be fixed fairly easily. Remove the board assembly from the case and turn it upside down with the output connectors on the top. Then locate the fourth audio output pair from the left, and verify that the pads at the lower ends of the two output series resistors (originally 47kΩ, now 1kΩ) both have tracks connecting them to the upper ~R' signal line track - unlike all the other output pairs. Cut the track on the right, and using a short length of tinned copper wire, connect the resistor pad to the lower `L' signal line track instead.

(3) As presented, the audio stages have a gain of 2 which will result in excessive audio level with some CDs and DVDs. To restore the gain to unity, remove the 100kΩ feedback resistor from pins 2 & 6 to the 0V line. This makes the op amps in IC2 operate as voltage followers, with unity gain.

Pardy Lites, December 2001: The resistor following D1 should be 820Ω instead of 4.7kΩ. Both the circuit on page 68 and the PC board on page 69 have this error.

Ultra-LD 2 x 100W Stereo Amplifier, November & December 2001, January 2002: In the “Switching On The First Time” section (pages 71 & 72) of the third part of the series, a step-by-step procedure was presented for connection and testing of the various components of the system. A slight error in the sequence prevents the DC fault protection test from operating successfully.

As described in the second paragraph of “STEP 9”, 2 x 1.5V cells are used to test the operation of the DC fault protection circuitry on the Loudspeaker Protection module. However, the negative speaker lead from the amplifier must remain connected to the Loudspeaker Protection module during the test.

Without this connection, there is no earth return path back to the power supply, so the protection circuit will be inoperative.

Note that it is still important to disconnect the positive lead from the amplifier during this test. As one hapless constructor discovered, if the positive lead is left connected and power is accidentally left on, connecting the battery will instantly destroy one or more of the amplifier’s output transistors, along with their associated emitter resistors! (04/07)