

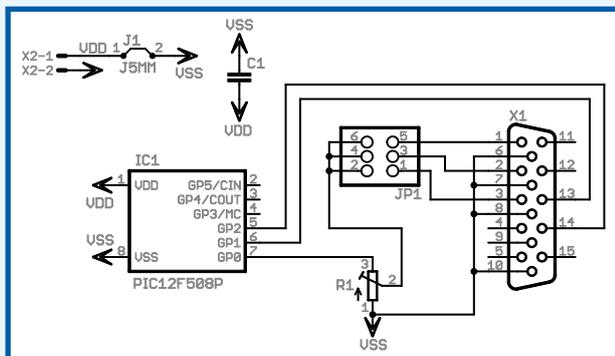
Poor man's VGA Tester

Hi Elektor people — I attach a circuit diagram of a simple VGA Tester. The circuit is suitable for direct connection to a VGA display with a resolution of 480x640 pixels and generates a chessboard pattern. I designed the tester around a PIC12F508. It contains very few components and I believe the circuit speaks for itself. Jumper JP1 permits the colour selection between red, green and blue. By replacing it with three diodes (1N4148), the test picture goes black and white. The video output level is adjustable with preset P1.

The software I wrote for the tester is also simplicity itself. In principle, a loop is executed in which the image is built up bit by bit. The listing contains information regarding the pulse timing, which should enable users to adapt the program to suit other resolutions.

I designed the circuit with the help of MPLAB IDE v7.20 and Eagle 4.16.

Hans Kooij (Netherlands)



Thanks Hans, we agree that your circuit is hard to beat in terms of component count. The signal is composed entirely by the PIC and with some dexterity the tester could be built into a VGA plug. The source code is available for free downloading from our website — the file number is 060215-11.zip.

Phono Splitter — some points to note

Dear Editor — I write to mention a few small errors that apparently have kept in my project 'Phono Splitter' published in the July/August 2006 issue.

- Compensation capacitor C4 should have a value of 47 pF, not 470 pF.
- T1 should be a BC560C like T2 and T3.
- In my prototype, diodes D2 and D3 were types 1N4448, mainly because of their tighter specifications in respect of forward



bias voltage. I would expect 1N4148s to work equally well, though.

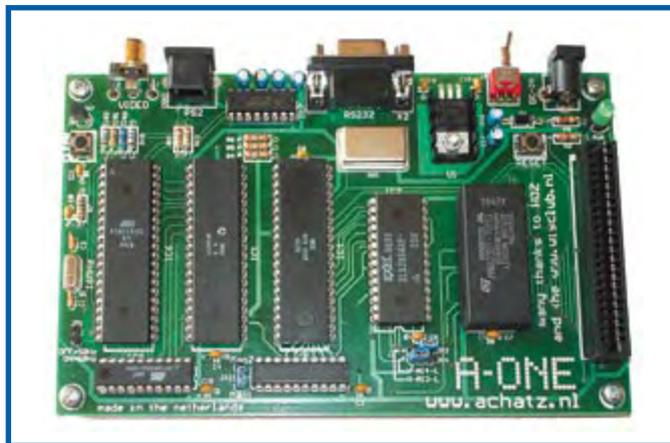
Thanks for publishing my design and hope a few readers benefit from it.

Marcel van de Gevel (Netherlands)

Thanks Marcel, and our apologies for the errors in reproducing your design. With over 100 article files being produced in four languages within a period of about four weeks, the production of our Summer Circuits edition is a tour de force where errors can not be ruled out entirely, particularly when making the drawings.

Apple-01 Replica computer

Dear Jan — just to say that I built a replica of the 30 year old Apple-1 computer (see photo) to get a personal 'OK' from Steve



Wozniak to reuse his A1 firmware on my replica computer which I dubbed 'A-ONE'.

The A-ONE works fine as far as I can check. Here are some data:

- 6502 at 1 MHz
- 6821 PIA
- 32 kB RAM
- EPROM with WOZ-Mon and WOZ BASIC
- GAL for address decoding etc.
- TINY2313 for PS2 keyboard and RS232 (reception)
- MEGA32 for video and

- RS232 (transmission)
- 2 x 22 pin A1 compatible slot

A nice change, I would say, from all that new fangled stuff around.

Franz Achatz (Germany)

Free e-SIM DVD

Dear Jan — I believe 754C1 is the answer to Hexadoku, October 2006 (correct! Ed.). I was looking for something to read at the shop, and found your magazine which I subscribed to in my student days, some twenty years ago. I have already tried some of the programs on the e-SIM DVD, thanks for bringing me back to the days of PCBs and simulations!

Magnus R. Berg (Norway)

Welcome back Magnus, you're in good company here.