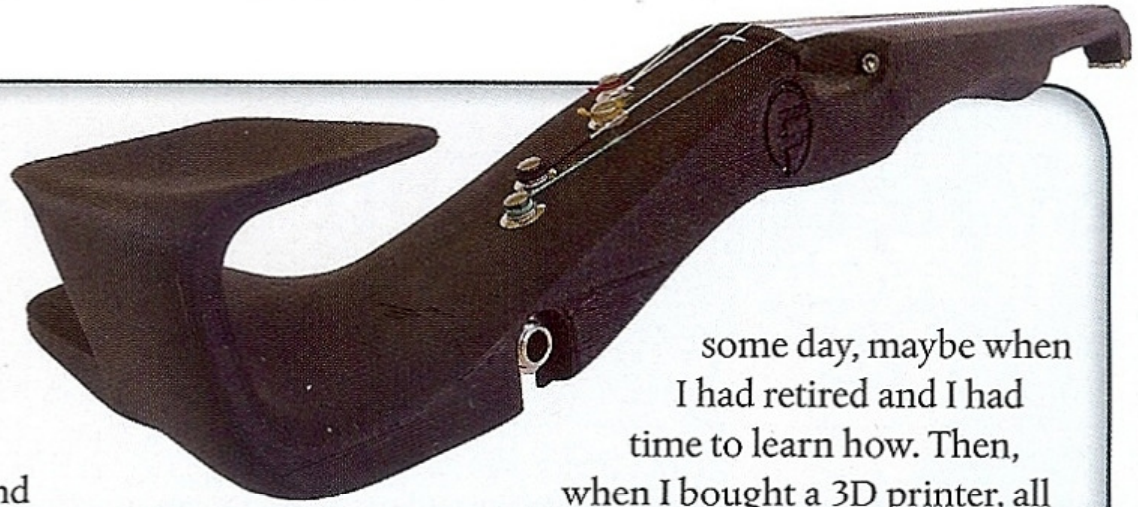
PRODUCT OF THE MONTH

An electric violin that can be 3D printed at home



3D-PRINTED ELECTRIC VIOLIN David Perry – a Suzuki-trained folk fiddler and qualified mechanical engineer based in the US – has designed a print-at-home violin for anyone who has always wanted to make a violin but can't find the time to do it the traditional way. The full-sized, electric instrument can be downloaded by owners of FFF-type 3D printing equipment. For everyone else, the instrument – made from carbon-fibre infused PLA (polylactic acid) – can be bought pre-printed from Perry's website.

The F-F-Fiddle is partially hollow, with an inbuilt chin rest and shoulder rest, and wiring embedded within the body. Users can manipulate the internet model to alter its size and shape, adapt the chin and shoulder rests, and even change the types and amounts of material used in the overall construction, to transform the sound. Perry encourages users to experiment. The printing process takes around 12–20 hours.

'I've always wanted to make a violin, but I'm no woodworker,' says Perry. 'I planned to make one some day, maybe when I had retired and I had time to learn how. Then, when I bought a 3D printer, all I had to do was model a violin on my computer! The most exciting thing is that I can share my work: my tools are digital, so I can publish projects on the internet to allow others to make things they hadn't thought possible.'

The first model took Perry around 40 hours to build. It took him another couple of months to fine-tune the design. 'Most of the changes were to aid assembly and playability,' he says. 'There are still a number of things to improve, but my biggest priorities are to bring down the cost of the parts and make the instrument more comfortable to play and tune.'

OpenFab PDX F-F-Fiddle $150–$725
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