

Re: They call it 'Earth hour'

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- *From:* flyguy <flyguy@xxxxxxxxxxxx>
 - *Date:* Sat, 28 Mar 2009 09:12:02 GMT
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Davoud wrote:

Dr J R Stockton wrote:

Can some manufacturer of 32768 Hz watch/clock crystals be persuaded to offer in addition similar 32857.7 Hz crystals (check figure first)? Then a little deft work with a soldering iron should make your chosen clock sidereal.

A soldering iron in a wristwatch? One who succeeded at that would probably get the Nobel for deftness. If you aren't familiar with that particular prize it's because they don't often award it.

Alternatively, one of the pins of a standard crystal circuit is driven from the chip and the other goes to a chip input. With the aid of a phase-locked loop and another frequency source, such as an adjacent mean-solar clock, and having removed the crystal from the would-be sidereal clock, drive that input with a waveform at the above frequency and sufficiently[*] similar in shape to what it usually sees.

A wristwatch that also requires a backpack is not exactly what I was looking for :<)

I have essentially done that in the past, on the 10 MHz crystal of a device sold to me by an occupant of an adjacent newsgroup, so that its frequency precisely matched an external standard. He kindly offered to provide the necessary hole for the back panel, for me to install.

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It would seem a nice project for a local electronics group.

Yes. We don't have as many local electronics groups in the USA as we once did. A lot of members were ham radio operators, and the Internet is killing ham radio here—or so a ham told me.

[*] vaguely should suffice.

Davoud

The old ham transceivers used plug-in crystals that were the size of a large postage stamp. They used to remove the crystal from its case and carefully plane or shave a few thousandths of an inch off one surface to reduce the mass so it would resonate at a higher frequency. Anyone that could do that with a watch crystal would have to be a nano-technology wizard. However most cheap clocks and watches use ceramic resonators for their frequency standard and those devices don't lend themselves to the old ham trick.

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