Subject: $90 solder
Posted by gofar99 on Wed, 01 Nov 2023 02:34:14 GMT
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A $90 piece of solder. Pretty much everyone knows that solder the size of a large grain of rice doesn't cost much let alone $90. However, that is what a piece that size just cost me. It illustrated a point that I warn everyone about all the time. If you build a project the first thing you should do when it is finishes is to turn it upside down and shake it. Then most of the time all the small pieces of clipped wire and tiny bits of solder will fall out. I do that all the time but this time a small piece apparently didn't fall out. It hid for well over a year inside a phono preamp. It reared its angry head when I was doing some testing of the response. Then zap! Instant oops. Unfortunately, this is a disaster to PC based USB connected scopes. If the interface device survives then the PC won't. Over the past 15 years or so I have wiped out two PCs and two interface devices. The last time I was able to get the PC repaired under warrantee. At that time, I decided that using a costly PC (like the HP OMEN I have) to do potentially harmful testing did not make a lot of sense. So, I got a $90 mini-PC to handle the chores. Yes, they tend to be minimalist and have rather low specs, but they work fine in this application. Clearly it was a good thing as my rice grain size piece of solder shifted inside the phono preamp and zapped the B+. This in turn puts a serious spike on the ground and is way over the front-end rating of the USB ports. Fortunately, this time it was not too high for the interface device. So, a new mini-pc is on the way and my main PC is safe. I really like the PC scopes as they will do all sorts of things that I need when designing and building DIY gear. The "real" scopes I have are much harder to use and the displays don't compare with the 27 inch one on the PC scope. So, be sure to shake your projects and hopefully this will not happen to you.

Subject: Re: $90 solder
Posted by Wayne Parham on Wed, 01 Nov 2023 14:06:39 GMT
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Oh my God, Bruce, I can so relate!

Subject: Re: $90 solder
Posted by johnnycamp5 on Sat, 18 Nov 2023 16:19:21 GMT
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Only once for me-

A lead though.... not solder. It laid over the bottom of a bridge rectifier (on the underside of the PCB where I couldn't see it) and made the white smoke. This was only AFTER (not before) i did the shake it upside down routine Bruce was talking about.

:roll:

Subject: Re: $90 solder
Posted by Silver on Thu, 30 Nov 2023 21:45:28 GMT
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A $90 mistake

A $90 lesson

However you "shake it", you can turn the loss of $90 into a good thing.

Actually, I never knew that could happen. Now, I won't make that mistake.

Do I owe you $90?

Subject: Re: $90 solder
Posted by gofar99 on Sat, 02 Dec 2023 02:25:38 GMT
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Hi,  It never occurred to me that you could fry a PC via the USB ports.  I cooked two of the scope interfaces but not the PC in past. Annoying but not very costly. Then I cooked the third one and it decided that my then Alienware needed to be sent to heaven.  That was not funny.  It took a new main board and power supply to straighten that out.  It is now a Supermicro server type PC.  It was not the disaster it could have been as the PC was getting long in tooth and I need one to use with my main stereo.  It did provide the opportunity to convince the spouse that a new PC was in order.  Thus the HP OMEN I am using now.  A really capable machine (8 core I7, 32 gig, 2X 1TB SSD, Gforce RTX 3500)  With care it ought to last a few years.  Now for a second positive result.  The $90 mini PC turned out to be slower and less capable than the one that got fried.  I ordered a refurbished HP G800 mini from Amazon for $110.  An I5 4 core, 16 gig with 500 g SSD with WIN 10 pro (new load).  It is really a very capable device.  I have gotten refurbished PCs before and if you are careful about the source they are fine.  The only thing that was a possible negative was that it has display port outputs (2).  A $6 adapter to HDMI and all is well.  It would be a fine PC for nearly any sort of use except gaming.  Now the question is what to do with the slow mini running WIN10Pro?  I suppose I could imbed it in an audio preamp ....but why?

Subject: Re: $90 solder
Posted by Wayne Parham on Sat, 02 Dec 2023 16:33:47 GMT
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What a journey!  Life always reminds me that it's a marathon, not a sprint!