

HF News: January 2009:

This month's Technical Tidbit discusses an easy to use troubleshooting method for system level ESD problems, capacitively injecting current into system cables one at a time.

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Technical Tidbit - January 2009  
Injection of ESD Current Into Cables Using Capacitance  
(a useful ESD troubleshooting tool)

Abstract: When a piece of equipment is subjected to ESD, the cause of the resulting system response can be difficult to find because the ESD event couples to many parts of the system, not just the place where the event happened. A technique is described that allows ESD energy to be coupled onto system cables, one at a time. Doing so can identify sensitive cables that may be contributing to an ESD problem.

The link to the article is:

<http://emcesd.com/tt2009/tt010109.htm>

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What I have been reading, listening to, and watching):  
(PCB related this time)

<http://www.epemag.wimborne.co.uk/solderfaq.htm>  
The Basic Soldering Guide  
This is a skill all of us that do lab work need to master.

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[http://www.elecraft.com/TechNotes/N0SS\\_SolderNotes/Soldering%20Tips%20v8%20B&W%20\(Elecraft\)%2009JAN2007.pdf](http://www.elecraft.com/TechNotes/N0SS_SolderNotes/Soldering%20Tips%20v8%20B&W%20(Elecraft)%2009JAN2007.pdf)  
(PDF file) Another good soldering tutorial, with pictures. The URL is a single line, but may appear as two depending on your mail reader.

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<http://nepp.nasa.gov/whisker/>  
NASA  
Tin Whisker (and Other Metal Whisker) Homepage  
This has been a real reliability problem over the years.

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<http://www.ultracad.com/articles/fusing.pdf>  
PCB Trace Fusing Current

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Website/Links of the month:

I have five YouTube videos now. You can find them at:

<http://www.youtube.com/watch?v=CdJuaNlUTqE>  
Finding PCB Layout Defects

<http://www.youtube.com/watch?v=NrHgQ1SuQGI>  
Jingling Change, ESD, and Scope Probes

<http://www.youtube.com/watch?v=DShYpdoxEkA>  
Oscilloscope Probe ESD Pickup

<http://www.youtube.com/watch?v=ijiJOPQNEjk>  
Switching Power Supply Noise - Magnetic fields

<http://www.youtube.com/watch?v=4GjPaMAS7VA>  
IEEE EMC Symposium in Detroit - Part 1  
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Upcoming Seminar Dates:

High Frequency Measurements and Troubleshooting

- If you have ever had a design problem, this is the seminar!
- Newport Beach, CA March 9-10, 2009
- Oxford University June 2009
- <http://emcesd.com/hfmcweb.htm>

Failure Analysis and Prevention in Electronic Circuits - Advanced Design Troubleshooting for the Lab and Field

- Newport Beach, CA March 11, 2009
- Oxford University Fall 2008
- [http://emcesd.com/pdf/hffa\\_sem.pdf](http://emcesd.com/pdf/hffa_sem.pdf)

EMC Lab Techniques for Designers - Practical Methods to Find and Fix EMC Problems in the Development Lab

- Newport Beach, CA March 12, 2009
- For system, circuit, IC, and Test engineers and technicians
- You can find EMC problems in your own lab with this seminar!
- Bonus: unpublished techniques I use in my consulting business
- [http://emcesd.com/pdf/emc\\_lab.pdf](http://emcesd.com/pdf/emc_lab.pdf)

The Newport Beach, CA seminars listed above are very special

events. Attendance is limited to 5 people to insure a "one-on-one" experience and they are held in a breathtaking setting in Orange County, CA. And yet, these seminars cost no more than most public seminars. Previous people attending have rated these seminars as the best they have ever taken! There are no lengthy forms to fill out, just contact me by phone or email for details or to register.

My public seminars are unique. Ratings by people in attendance place these seminars among the most highly rated technical seminars available. For more information, see my site ( <http://emcesd.com> ) near the top of the home page. Several audio clips are available.

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Have a good month,

Doug