

- **New Quarterly Updates Split, Windows 7 & Vista Installs**
- **User Editable Uncertainty Budgets**

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The SureCAL[®] Circle

The Quarterly Updates

In response to customer feedback, we've separated system updates from procedure updates. This should help customers running older versions of Test Manager, from V5.0 thru V5.2. One disk will update your CP library files. The other disk will update Test Manager System files.

Separate update CDs makes it **safe to install the SureCAL Procedures Quarterly Updates on any version of SureCAL**. The SureCAL Procedures Updates will not change your Test Manager version. Updating your CP library files shared on a network is a onetime operation done at any station configured to run from the network. Test Manager System updates are "installed" at each station by a separate CD, and won't waste time with re-updating your networked procedures files.

When you receive an update to Test Manager, it will be labeled Test Manager Update Software Install Disk. Note that "Software Install Disk" means it is a full install of Test Manager so you can discard the previous installation CD. Keep the new Install Disk in a safe place. It can be used on a new PC when your present PC is at the end of lease to install SureCAL, or it can be used to update a previous version of Test Manager.

Windows 7 & Vista Installations

Windows 7 requires permissions for USERS to be modified, (even when logged on as admin), to folders: Program Files\SURECAL and Program Files\HTBwin83.

If you have a 64 bit Windows PC, the folders SURECAL and HTBwin83 are under Program Files (x86).

To modify permissions:

- Right Click on HTBwin83 folder
- Left click Properties, Security
- Highlight **USERS**
- Verify "**full access**", if not:
- Left click **EDIT**

Again Highlight **USERS**

Check "**full access**"

Click **APPLY**

Repeat for SURECAL folder

Now you can install procedures.

Launch SureCAL

Click "**Tools**", "**Install New Procedure**", browse to **Procedures Quarterly Update CD**, and click **OK**

Click "**HELP**", "**Multimedia Help**"

Click on Video Help links to watch demos on what's new. Windows Media Player should launch these files from your PC, no internet connection required. Links to printable PDF help files and tech notes are also provided.

V5.2 Software Prerequisites

MS C++ Redistributable 2008

MS J# Redistributable 2008

MS .NET Framework 2.0

MS .NET Framework 3.5

NI-488.2 for Windows, Version 2.7.3

User Editable Uncertainty Budgets

SureCAL has added a user editable uncertainty budget to the Fluke 9640A reference source cal procedure.

The uncertainty budget can be viewed with Excel, approved, or modified by you. in the data directory under the name CID-H1-FLU009640A.XLS. When the automated procedure is launched, the budget file is opened and the program reads the Type B components. It reads the choice of sample size for Type A repeatability from the profile, which is editable via the edit profile icon. Your combined UNC is reported to the data sheet.

UNCERTAINTY BUDGET:			
Component	B1	B2	B3
Samples	5		used when sample=1
Description	UII Repeatability	5790A Accuracy	Typical Type A
Units	dBm	dBm	dBm
Sensitivity	1	1	1
Distribution	Normal (1σ)	Rectangular	Normal (2σ)
Rel Standard UNC (%)			
	6.15946E-06	0.00A	Normal(3σ)
	3.39561E-05	0.00A	Triangular
	1.61242E-05	0.00A	Uniform
			4.62000E-05

The challenge of the Fluke 9640A was no standard using OEM published specs achieved a 4 to 1 accuracy ratio in all cases.

The answer is to report measurements with measurement uncertainty. The

software also takes uncertainty into account before reporting Pass/Fail results.

If the measurement is within Min Max limits it would be reported as a PASS, but if adding (or subtracting) the measurement uncertainty causes the measurement to cross a min max limit, the "PASS" becomes an ambiguous pass or "PASS?"

Likewise, a FAIL becomes ambiguous when the uncertainty added to the measurement causes the value to cross min max limits into a pass condition. An ambiguous fail is reported as "FAIL?"

What do ambiguous results mean? An ambiguous pass is still a pass, and an ambiguous fail is still a fail. But any ambiguous result flags a condition where improving measurement uncertainty would have a positive effect on results confidence. UNC is reported as 2 Sigma, the measurement confidence, or mathematical probability of preventing a false pass is set at greater than 95.45%, achieved only when "PASS" is reported with uncertainty accounted for.

Running the default uncertainty budget with the 9640A procedure, the report honestly indicates ambiguous passes at those test points where the uncertainty of the measurement approaches the spec of the instrument.

User Editable Uncertainty is a new tool to reflect your improved measurement uncertainty by any means you see fit. Simply document those improvements in CID-H1-FLU009640A.XLS. Be sure to save your budget log to a new filename. Then change the budget log filename under edit profile.

NCLSi in Washington DC

August 21-24: Come see us at NCSL International for 2011 at the Gaylord National Convention Center, National Harbor, MD. We will be at booths 400/402/404/406.

<http://www.surecal.com/>