Agilent

Filter Tuning Software

N4261A

Product Overview

- Reduces filter tuner training times
- Decreases average filter alignment times
- Increases tuning consistency

Agilent Technologies

Gain significant improvement in your filter tuning process

Instead of relying on incremental hardware improvements to increase manufacturing throughput, Agilent's Filter Tuning Software is the industry's first commercial solution that helps manufacturers of high performance bandpass filters gain significant improvement in personnel training times and decrease average filter alignment times while improving consistency. Agilent's Filter Tuning Software makes it easy for inexperienced filter tuners to rapidly tune multiple-pole filters after only brief instruction.

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Reduce filter tuning training times

Agilent's Filter Tuning Software provides an easy to interpret filter tuning environment that allows users with no experience to effectively tune filters. Traditionally, a filter tuner is required to understand the relationship between the frequency or time domain trace and the filter. The training required to establish this relationship takes weeks to accomplish. With Agilent's Filter Tuning Software, this training time is significantly reduced because the need for a filter tuner to understand these traces is reduced. The software's graphical user interface (GUI) guides the tuner through the tuning process until the filter is effectively aligned.

Decrease filter alignment times

The tedious and time-consuming process of aligning filters is now easier and more efficient for new filter tuners than ever before. Agilent's Filter Tuning Software uses visual tuning indicators to show when the individual resonators and couplers in a filter are tuned to specifications. These indicators provide the information necessary to know when and how to tune each filter element. This, in effect, reduces the number of times that each element has to be re-tuned before the filter meets specifications.

Increased tuning consistency

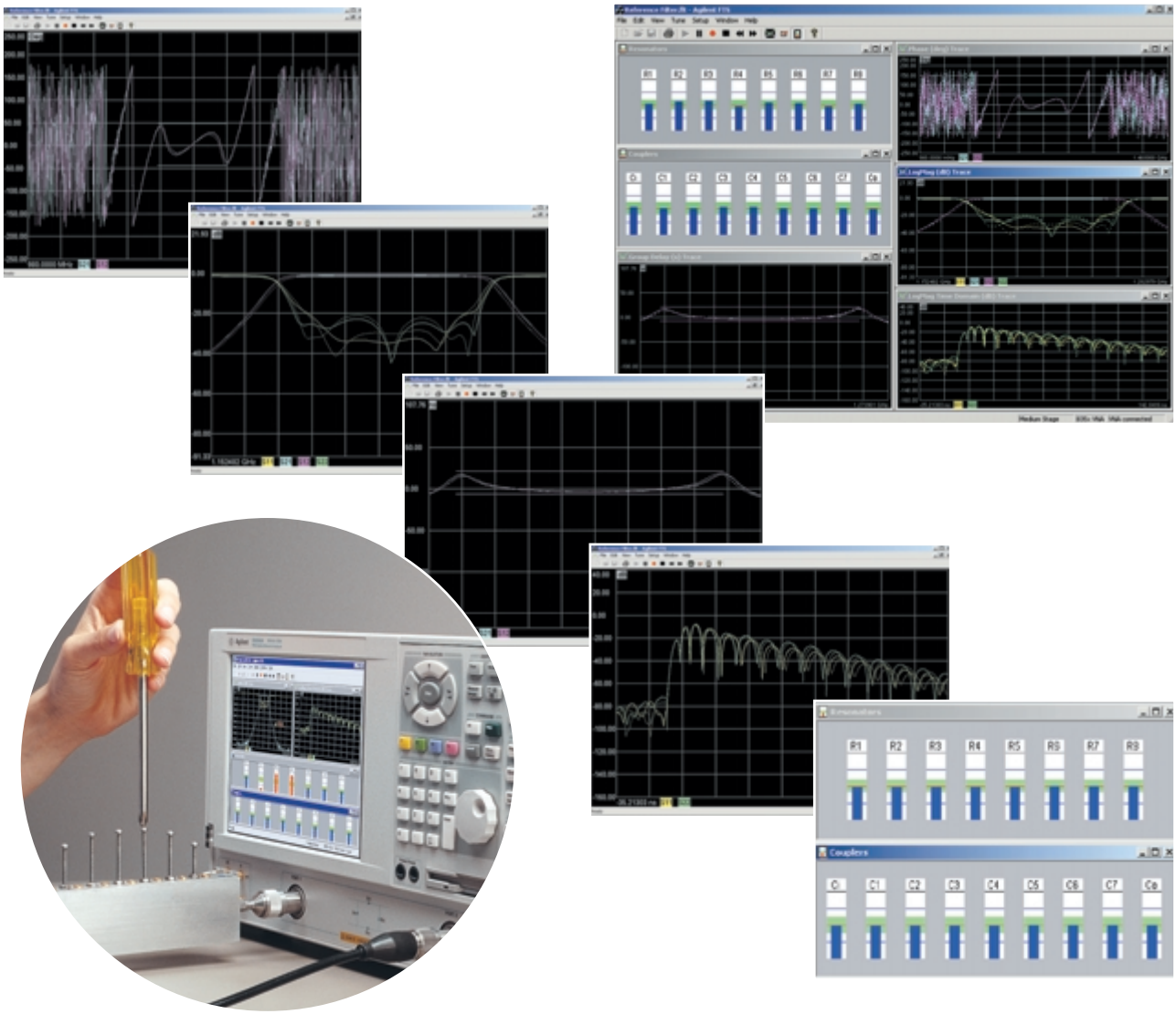
As filters are being tuned, they are compared to a previously saved reference filter. The tuning indicators show the deviation from this reference filter. As a result, filters tuned with Agilent Filter Tuning Software, even by inexperienced tuners, will closely match the characteristics of the reference filter. This allows manufacturers to set tighter filter tolerances for increased performance.

Familiar filter tuning environment

Agilent's Filter Tuning Software comes complete with a familiar network analyzer look and feel to accompany the new GUI. For users wanting a traditional tuning environment, Agilent Filter Tuning Software incorporates S-parameters and limit lines into the interface giving a total representation of the filter's characteristics. Unlimited trace windows can be used with up to 4 traces and their corresponding reference traces. Limit lines allow for pass/fail testing of filters. Other trace formats available include time domain, phase, group delay, and linear magnitude.

Embedded help

The embedded help system provided by Agilent Filter Tuning Software allows users to easily find information on the topics of their choice. Key words, located in the help index, generate information on a variety of subjects. Filter tuners can find help on subjects such as setting up a reference filter or creating limit lines.



Network analyzer compatibility

Agilent's Filter Tuning Software works in conjunction with the Agilent PNA series, 8753, and 8720 family of Agilent network analyzers.

- For the PNA Series

Agilent's Filter Tuning Software works internally from the PNA series network analyzer. No external PC is required. Simply install the software into the analyzer and plug the USB hardware key into the USB port. If the software is run from an external PC, a LAN connection from the PC to the network analyzer is necessary.

- For the 8753 and 8720 product families (rev 7.68 firmware and above)

Agilent's Filter Tuning Software runs on a PC using a Windows 2000® or Windows NT® 4.0 operating system. A GPIB connection from the PC to the network analyzer is necessary. Additionally, the specific network analyzer must be capable of measuring 2-port S-parameters simultaneously.

Product configuration

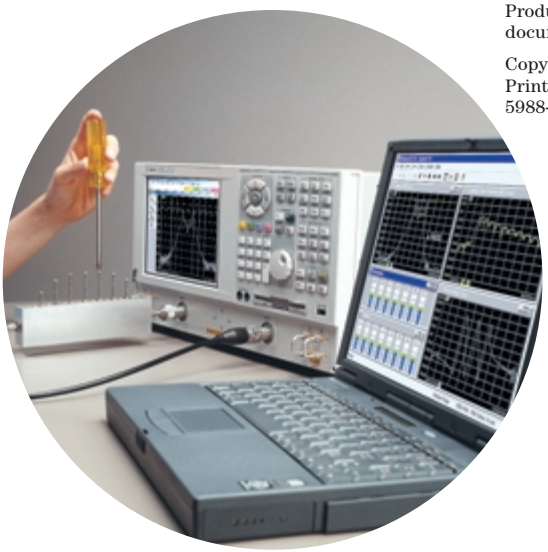
Select one of the following options when ordering Agilent's Filter Tuning Software. These options are hardware keys that are required to run the software on your network analyzer or PC.

Option	Description
N4261A-UL7	Parallel port hardware key
N4261A-UL8	USB port hardware key

PC requirements for Agilent Filter Tuning Software

If you are operating Agilent Filter Tuning Software from an external PC, the following PC components are required:

- Windows 2000 or Windows NT 4.0 operating system
- 266 MHz or higher CPU
- 64 MB of RAM
- 20 MB available hard-disk space
- Agilent or National Instruments GPIB card for 8753 and 872x analyzer or a LAN network card that is supported by Windows 2000 or Windows NT 4.0 operating system for PNA series analyzer
- Either a USB or parallel port for the hardware key



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