Filtech for Windows



Filtech For Windows is an advanced Circuit Synthesis program that produces both active and passive filter designs, and Digital designs using an interactive graphical user interface.

Fast And Simple

With no mathematics or manipulation of tables required, the design of complex filter circuits becomes fast, simple and accurate.

You Specify The limits

You only need to specify the frequency limit(s) of the filter, the stop band attenuation required and the maximum acceptable passband ripple. As you enter a specification Filtech For Windows draws boundary lines on a gain / frequency graph indicating the limits of the filter performance. Filtech For Windows completes the filter design including all the component values and suitable circuit topology.

Built-in Circuit Simulator

Filtech For Windows includes a built-in Circuit Simulator which allows the synthesised circuit to be tested immediately, comparing the simulated results with your original specification. Components can be forced to the nearest preferred values if required to check the effect on the filter performance at a glance. Filtech For Windows is capable of synthesising higher order filters including Elliptic types.

Preferred Values

You can even force Filtech For Windows to replace each component value with the nearest preferred value from a user defined range and overlay the simulated performance of the modified circuit onto the theoretical performance and specification graphs. With the choice of Preferred values for Capacitors, inductors and resistors you can selectively choose which or all of the component types to force or leave.

Filter Circuits

Filtech For Windows produces a netlist description of the final filter design. All you have to do to arrive at a complete circuit diagram of the filter is to transfer the component values in the netlist to a copy of the appropriate Schematic circuit. All theoretical circuits used within Filtech For Windows are defined in the users guide.

Overlay Theoretical Circuits

Using an overlay mechanism, you can also include previously stored theoretical circuits onto the current filter graph to display a 'model' graph from which to try and emulate your circuit.

Fully Configurable Interface

Filtech For Windows has a fully customisable display to enable you to configure it to look the way you want. this includes lines thickness' of the filter graphs for each of the many curves available, colours used, fonts and printing style.

Digital and Hilbert Filters

Filtech For Windows now supports Digital IIR and FIR filter types, as well as the Hilbert All-Pass filter type.

Display S-Planes

Poles and Zeros are generated by the synthesis process and displayed using the S-Plane graph. Also included with the S-Plane is a table of the values displayed.

Editable Poles & Zeros

Because the S-Plane is shown as both a table and graph, the poles can be edited interactively to modify the filter design, and new values synthesised with the results shown on the filter graph window. Modified poles and zeros are shown in a highlighted colour for clarification.



Windows Support

Filtech For Windows runs under the Windows operating system which means that it also supports any Windows printers installed and the graphics card of your choice.

Prerequisites For Using Filtech

Filtech For Windows can work stand-alone and with Analyser For Windows if group delay is required.

Features

- Very easy to use!!
- Designs both active and passive filters
- Bessel, Butterworth, Cauer, Chebyshev (elliptic) and Inverse Chebyshev filters
- Digital IIR, FIR filter support for: Rectangular, Bartlett, Hamming, Von-Hann, Blackman, Kaiser, 3 term cosine, 4 term cosine, Exact Blackman, Min 3 term cosine Min 4 term cosine, Parks-McClellan
- Hilbert filters (all pass filter)
- Uses Sallen & key and Biquad filter sections
- Choice of Passive filter topology
- Generates filter designs up to 12th order
- Toolbar driven Specification and Parameters for instant viewing and editing
- Phase (Gain Angle) Graph
- Low pass, High pass, Band pass, Band stop and All-Pass filters
- Graphical display of specification
- Graphical display of parameters
- Built-in filter simulator includes source and load impedances
- Built-in S-Plane diagram for Poles & Zeros
- Editable Poles & Zeros
- Graphical display of Digital filter results, and table of coefficients
- Overlays simulated performance on specification

- Viewing and editing of netlists
- Display of noise bandwidth for Butterworth and Chebyshev designs
- Ability to equalise Butterworth and Chebyshev designs (Add circuits to filter to linearize the phase shift)
- Comprehensive results report
- Optionally forces values to nearest preferred values for some or all components
- Windows Cut, Copy and Paste
- Copy to clipboard of pictures for inclusion in your documents
- Results available as netlist, text listing or on-screen simulation
- Print Preview available for all outputs
- Seamless link to our Analyser For Windows analogue simulator
- Netlist output for direct loading into Easy-PC For Windows PCB
- Context sensitive on-line help
- Full printed Users Guide

For information on pricing contact: Number One Systems. Oak Lane, Bredon, Tewkesbury, Glos. GL20 7LR. UK Tel: +44 (0)1684 773662 Fax: +44 (0)1684 773664 e-mail: sales@numberone.com Further information on all products and prices available at: **www.numberone.com**