

SUPER QUICK START CHEAT SHEET

Audio EQ Cookbook HP15c CE software pac

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Pre-requisites

Calculator in 15.2 mode (this program is huge, can't be run in default mode)

Registers

R9 : Sampling frequency in Hz

R.0 : Center/Cutoff frequency in Hz

R.1 : Q . If necessary, it can be calculated as a function of bandwidth via **GSB B**

R.2 : A . Can be calculated as function of *Gain in dB* and S via **GSB A**. If not needed, set to 1.0.

Run Main Biquad Coefficients Generation Program

GSB C

Return Frequency Response at arbitrary frequency f_x in Hz (Program C must be run first)

GSB D (place f_x in x-register, desired *filter type index* in y-register)

Memory Layout (after execution)

Matrix A [4 3]

Matrix B [9 3]

Matrix C [3 2]

Matrix D [4 2]

Matrix E [9 2]

See user's guide for definition of the output matrices and filter type indexing.

Register states after execution of Prog C and D

Registers	Description
R9	Sampling Frequency F_s
R.0	Center/cutoff frequency f_0
R.1	Quality Factor Q
R.2	Gain in linear form A
R.3	$\sin(\omega_0)$
R.4	$\cos(\omega_0)$
R.5	α
R.6	$A-1$
R.7	$A+1$
R.8	$2 \cdot \sqrt{A} \cdot \alpha$
R.9	Bandwidth
R6	f_x/F_s
R7	Desired filter type row index for matrix A
R8	Desired filter type row index for matrix B