Output block

The output block is used to convey to the simulator several details such as which output files to generate, which variables to include in each file, etc. When the program executes successfully, the user-specified output files get created. To view the information contained in the output files (as a plot or a table), the SEQUEL GUI or any other plotting package can be used.

General attributes

* `FileName`: name of the output file (default: `output.dat`)
* `Output Variables`: output variables to be stored in the file.
* `LimitLines`: (integer) maximum number of lines to be stored. This is a "safety feature" to ensure that the user does not unknowingly generate very large files. If the number of lines generated by the program exceeds `LimitLines`, SEQUEL will produce an error message. If there is a genuine requirement of a large amount of data points, the user should increase `LimitLines` suitably. Default: 100,000.
* `Append`: (`yes`/`no`) decides whether the output data for the present output file should be appended to previously existing data (default: `no`).

  As an example, suppose that we have split a transient simulation from t_1 to t_3 to two intervals (i.e., two solve blocks): (a) t_1 to t_2 and (b) t_2 to t_3. We want a variable to be recorded for both these intervals in the *same* output file. In this case, we would make the output file names identical in the two solve blocks and set `Append` to `yes` in the second solve block.

Attributes related to transient simulation

* `FixedInterval`: (real number) if specified, the output variables are recorded at uniform intervals.

  For example, if `50u` is specified, the output variables are recorded every 50 μsec.
* `OutTStart`: (real number) if specified, the output of the output variables are recorded only for $t >$ `OutTStart`.
* `OutTEnd`: (real number) if specified, the output of the output variables are recorded only for $t <$ `OutTEnd`.

  if `OutTStart` and `OutTEnd` are not specified, the output variables are recorded for the entire simulation interval (from `t_start` to `t_end`).
* `Fourier`: (`yes`/`no`) decides whether Fourier components of the output variables should be computed and stored (default: `no`). If `Fourier` is specified as `yes`, the waveforms are assumed to be periodic with the period T computed as the difference `OutTEnd` − `OutTStart`.

When `Fourier` is specified as `yes`, the total harmonic distortion (THD) is also made available (in the `Solver Output` tab) for the variables listed in the output block. The following definition of THD is used.

$$\text{THD} = \frac{\sqrt{X_2^2 + X_3^2 + \cdots}}{X_1}, \tag{1}$$

where X_1, X_2, X_3 (etc.) are the f, $2f$, $3f$ components, respectively, of the concerned variable.

* `NFourier`: (integer) number of Fourier components to be computed.

Attributes related to AC simulation

* `MinPhase`: (real number) If `MinPhase` is specified, the phase data is written to the output file such that the phase angle is always larger than `MinPhase` (by adding suitable multiples of 360°).

* `MaxPhase`: (real number) If `MaxPhase` is specified, the phase data is written to the output file such that the phase angle is always smaller than `MaxPhase` (by adding suitable multiples of 360°).

  Note that either `MinPhase` or `MaxPhase` can be specified, but not both.

* `FreqHz`: (`yes`/`no`). If `yes`, the frequency values are written to the output file in Hz; else, in rad/s (default: `yes`).