

Program

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| Accumulated Cycles | Calculates the number of stress cycles under a resonance for a swept sine test. Predicts Q of a structure |
| Altitude (ISA) | Displays Pressure, Temperature, Density and Velocity of Sound for a given Altitude. |
| Beam Resonance | Determines the resonant frequency of simple beams and plates of different cross sections & support methods. |
| Body Displacement | Determine the maximum displacement available for a given test load using an Isolation system. |
| Classical Shock | Calculates and graphically displays the velocity and displacement for a given shock pulse |
| Charge Converter | Calculates the output sensitivity (low Z, voltage) given the (high Z, charge) accelerometers sensitivity. |
| Convert-X | Over 700 conversions Length, Mass, Volume, Pressure, Force, Torque, Velocity, Acceleration, Power etc etc |
| Damped Sine Pulse | An Excel Spreadsheet which demonstrates the effect of Q / damping on a resonant beam |
| Decibel Calculations | Calculates the number of dB from two known levels, or determines level if the other level and dB value is known |
| Equations of Motion | Calculates unknowns values given 3 of the variables s u v a t e.g. $a = (v-u)/t$ $u = v-at$ $s = ((u+v)/2) t$ |
| Fixture Plate Mass | Calculates the mass of a structure such as a complex jig or fixture. Uses defined plates and selectable materials |
| Force Calculations | force = mass x acceleration : Given any 2 of the 3 variables the unknown will be calculated. SI and Imperial units |
| Humidity Conversions | Converts quantities such as mixing ratio, Specific humidity, Mixing ratio, Volumetric humidity, Vapour mole fraction |
| Humidity Plus | Based on BS 1339 Sonntag and Bögel polynomials: Also includes functions by Wexler, Greenspan and Hardy |
| Listing VAT Calculator | A calculator which displays the functions and operands as they are entered (like a till roll) & VAT / GST calculations |
| Material Database | A database and editor, which can be used for reference information and contains preloaded data and your own |
| Mechanical Shock | Three Mechanical Shock programs which cover : Drop Shock : Free Fall : Equivalent drop height |
| MIDI Keyboard Player | Illustrates the doubling effect of "octaves" and gives an insight to musical notes, notation, and instruments |
| Third Octave Filters | Calculates and displays the standard third octave and tenth decade frequencies referred to in EN 61260 |
| Octave <> Decade | Converts decades to octaves, octaves to decades and slopes, dB/octave to dB/decade, dB/octave to dB/decade |
| Ohms Law | Calculates all combinations of Volts, Amps, Ohms, Watts and displays the mathematical functions |
| Plate Resonance | Determines the resonant frequency of rectangular and triangular plates using different support methods |
| Pressure to Altitude | Calculates Altitude from Pressure by iteration of the functions defined by ISO 2533. SI and Imperial units |
| PSD Unit Conversion | Converts PSD / ASD units such as: g_n^2/Hz , $(m/s^2)^2/Hz$ and $g_n/Sqr(Hz)$. |
| Random Calculations | Calculates and displays the total acceleration rms, displacement and slopes for a given random profile |
| Random : Unknown | Calculates undefined variables of a random profile (PSD, Slopes, Frequencies) : Units can be g_n^2/Hz or $(m/s^2)^2/Hz$ |
| Random : rms to PSD | Calculates the PSD in g^2/Hz or m^2/s^3 from the total acceleration rms and the upper and lower frequencies |
| Reference Help Index | Help and reference files : An Introduction to Vibration, Selecting a Vibration Test System, Terminology etc |
| Series + Parallel | Calculate up to 6 Resistors, Capacitors or Inductors in series or parallel. Includes Dunkerly's Equation & RMS Sum |
| Sine Calculations (x2) | Calculates Frequency, Displacement, Velocity and Acceleration for sinusoidal vibration tests. SI and Imperial units |
| Sine Tones on Random | Calculates & displays the total acceleration rms, displacement and slopes for a random profile with up to 12 sine tones |
| Sine Profile Editor | This program allows the entry of a swept sine test, which can then be validated and displayed. SI and Imperial units |
| Sine Slopes | Calculates undefined variables of a swept sine test (Acceleration, Slopes, Frequencies) : Units can be g_n or m/s^2 |
| Sine System Limits | Given the system limits (Force, Displacement Velocity Acceleration, Armature mass), maximum load is determined |
| Standard Atmosphere | Given Altitude, Velocity, Ref. Length: Calculates, Temperature, pressure, Mach no. Reynolds no. Laminar flow etc |
| Sweep Rates | Calculates octaves, decades, sweep rates and number of cycles per sweep for logarithmic or linear sweeps |
| Tolerance ±dB ±% | Determines the upper / lower abort levels for a vibration test or anything that requires a tolerance in dB or percent. |
| Transmissibility | Plots the transmissibility curve for a given resonant frequency and Q ($\zeta = 1/2Q$) : Excel spread sheet contains f(x) |
| Waveform relationships | Displays the relationships such as peak, peak to peak, rms and average values for sine and triangular waveforms |

For more detailed information on all the programs visit www.vibkit.com

Included in **VIBKIT Plus** is the ultimate Humidity Calculator **Humidity Plus**

- Easy to use programs
- Help files
- Glossaries of terms
- Illustrations
- Examples
- Also included are: "An Introduction to Vibration Testing" and "How to Select a Vibration Test System" and more