

Program	
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	Calculates Frequency, Displacement, Velocity and Acceleration for sinusoidal vibration tests. SI and Imperial units
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, Temp. Pres. Mach No. Reynolds No. Laminar flow etc etc
Sweep Rates	Calculates octaves, decades, sweep rates and number of cycles per sweep for logarithmic or linear sweeps
Tolerance $\pm dB$ $\pm \%$	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