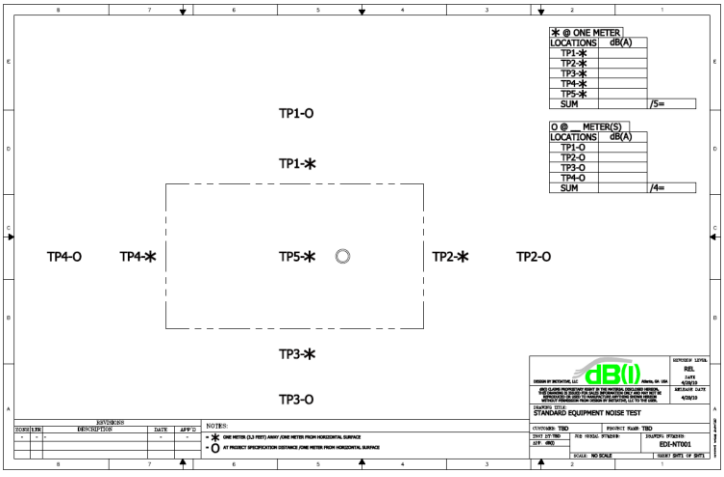
Engineering Design Instruction – Noise Test (EDI-NT 001)

Date – 4/20/10 Author Chris Hough

This EDI covers, equipment noise tests at client premises in operational conditions.

Minimum instrument requirements IEC 651, IEC 804 Type 2 IEC 1260 Class 2, 1/1-1/3Octave Band Analyzer accuracy +/- 1.5 dB(A)

1) Establish background noise level with equipment to be measured under <u>non operating conditions</u> at instrument settings: Current date & Time – LA - 1/1 Octave - Slow response - In range, at test points TP1* through 5* and TP1-0 through 4-0 as detailed on form EDT-NT001 which is to be used to record data, in addition to electronic records held within the instrument.
2) Note any adverse influences: such as close proximity of buildings, reflective hard surfaces, other noise sources, permanent or sporadic. Take individual octave band readings from offending equipment as necessary for later analysis as required.
3) Photograph general proximity and any special notations from point 2 above and equipment under test.
4) Run equipment to be tested under normal operating conditions, record noise level at instrument settings: Current date & Time – LA - 1/1 Octave - Slow response - In range, at test points TP1* through 5* and TP1-0 through 4-0.
5) Using (additional to Test 1) form EDT-NT001 for Test 4, sum overall dB(A) weighted average and divide by 5 and 4 respectively as detailed. Note any obstacles that prevent the unmodified use of Form EDT-NT001.
6) Calculate 'free field condition expected noise level' at project specific distance from equipment using plane source method.
7) Determine effect of background noise 'free field condition expected noise level'
8) Determine effect of non free field conditions as far as practicable on actual readings at project specific distance.
9) Compile compliance or non compliance report as applicable reviewing performance against project requirements. Report to detail downloaded octave band data recorded with test instrument.



Form EDT-NT001