Hochschule, Zurich

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ALITY CONTROL

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OUR ACOUSTIC ENVIRONMENT

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Table 4

Change in Sound Level	Change in Perceived "Loudness"
3 dB	Just perceptible
5 dB	Noticeable difference
10 dB	Twice (or $\frac{1}{2}$) as loud
15 dB	Large change
20 dB	Four times (or $\frac{1}{4}$) as loud

Table 5 permits the addition of decibel readings. Thus, suppose the first machine produced a reading of 90 dB, and the second machine yielded a reading of 85 dB. What would be the reading with both machines running simultaneously? From Table 5 we note that for a difference between the two of 5 dB we should add 1.2 to 90 dB, giving us a resultant of 91.2 dB. If we had three sound sources in a common enclosure, we could use the table to obtain the sum of the first two, and then use again the table for getting the resultant of the first two plus the third.

Table 5 Addition of Decibel Readings for Two Sound Sources

Difference between Two dB Readings	Add to Larger dB Value
0.0 dB	3.0 dB
0.5	2.8
1.0	2.6
1.5	2.2
2.0	2.1
2.5	2.0
3.0	1.8
4.0	1.5
5.0	1.2
6.0	1.0
7.0	0.8
8.0	0.6
10.0	0.4
13.0	0.2
15.0	—