

GENERAL ACOUSTIC RULE

When you double the distance from the speaker you lose 6 DB in sound level
example speaker level set at:

110 DB at 1 metre
104 DB at 2 metre 6 DB loss
98 DB at 3 metre 6 DB loss
92 DB at 8 metre 6 DB loss
86 DB at 16 metres 6DB loss
80 DB at 32 metres 6DB loss
74 DB at 64 metres 6DB loss

Also to be taken into account is the sound dispersion of a Horn Speaker this would effect the overall sound quality.

The page has to be 10 DB above background noise level to be heard, as a rule of thumb in a standard warehouse with two fork lift trucks working approx 50 metres apart you would expect the background noise level to be between 70 – 75 DB, needing the page level to be 80 – 85 DB, I would strongly recommend that speakers were not set to 110 DB and at 1 meter as this would be too loud for people in the area and would be a health and safety at work issue.