

# The Sizing of Live Band and PA System Based on Hall and Total Pax

by Wedding in Charlie (WiC)

Hall Size (Area, m <sup>2</sup> )	Total Pax (Audience)	Suitable Band Size (Performer, P)	Min. Stage Size (depth, m) x (length, m)	PA System Setup for the hall coverage	Coverage Proficiency	Summary of the PA system coverage
≤ 100	≤ 50	1P	1.2 x 1.5	1 speaker (15") ≥ 700W + 1 speaker (8")	Minimal 🙄	Suitable for solo act/speech
≤ 200	≤ 100	2P	1.2 x 2.0	2 speakers (15") ≥ 700W each	Moderate 👉	For acoustic duo/small gatherings
≤ 300	≤ 150	2P	1.2 x 2.0	2 speakers (15") ≥ 700W each	Minimal 🙄	Further audience may experience lesser bass intensity
≤ 500	≤ 200	3P	1.5 x 2.4	2 speakers (15") + 1 sub-w	Good 👍	Standard for light live acts
≤ 500	≤ 250	3P	1.5 x 2.4	2 speakers (15") + 1 sub-w	Moderate 👉	Further audience may experience lesser bass intensity
≤ 500	≤ 300	3P	1.5 x 2.4	2 speakers (15") + 2 sub-w	Good 👍	A balanced L&R and proper bass intensity
≤ 700	≤ 350	4P	1.8 x 2.7	4 speakers (15") + 2 subs ≥ 1,500W	Good 👍	A balanced L&R and also longer coverage
≤ 700	≤ 400	4P	1.8 x 2.7	4 speakers (15") + 2 subs ≥ 1,500W	Moderate 👉	Further audience may experience lesser bass intensity
≤ 700	≤ 450	4P	1.8 x 2.7	4 speakers (15") + 2 subs ≥ 1,500W	Minimal 🙄	Add delay speakers if room is long-shaped
≤ 700	≤ 350	4P with drums	2.0 x 3.0	4 speakers (15") + 2 subs ≥ 1,500W	Good 👍	A balanced L&R and also longer coverage
≤ 700	≤ 400	4P with drums	2.0 x 3.0	4 speakers (15") + 2 subs ≥ 1,500W	Moderate 👉	Further audience may experience lesser bass intensity
≤ 700	≤ 450	4P with drums	2.0 x 3.0	4 speakers (15") + 2 subs ≥ 1,500W	Minimal 🙄	Add delay speakers if room is long-shaped
≤ 900	≤ 500	5P with drums	2.0 x 3.0	2 line-arrays + 4 sub-w	Good 👍	Good for full bands in mid-large halls
≤ 900	≤ 550	5P with drums	2.0 x 3.0	2 line-arrays + 4 sub-w	Moderate 👉	Add delay-speakers if room is long
≤ 900	≤ 600	6P with drums	2.0 x 4.0	2 line-arrays + 4 sub-w or more (2 x 12")	Moderate 👉	Cost-effective full-band setup for mid-large events
≤ 1,000	≤ 660	6P with drums	2.0 x 4.0	2 line-arrays + 4 sub-w or more (2 x 15")	Good 👍	Ideal for concerts or large events
≤ 1,200	≤ 800	7P with drums	2.5 x 4.0	2 line-arrays + 6 sub-w or more (2 x 15")	Moderate 👉	Full concert setup; may add delay-speakers to improve

## Technical Notes (to help better comprehension of 'live sound')

- "Minimal 🙄" often means the PA system is slightly pushed over in its coverage of the whole hall (somewhat lacking at the rear area).
- Clients have the option to enhance the PA system coverage by adding more delay-speakers (provided also having spacious sides of the hall).
- Inside high-ceiling halls, line-arrays speakers are more effective in distributing its sound production; it is better in wide and long-range coverage.
- Alternatively, delay-speakers are recommended for an ultra-wide or deep (long) halls with lower ceilings.
- Speakers without subwoofers operate as full-range systems, typically covering 45Hz to 20kHz, delivering up to 130dB SPL at 1 meter with 700W power.
- Having drums doesn't always mean 'loud in sound' or having irritating noise level because the speaker volume & equalization (EQ) can be adjusted properly.
- In fact, having a drumset i.e. having cymbals would help create suspense, excitement, and also add dynamic depth to the music performance.