The DVS-Series of Voice Evacuation Control Panels (VECP) are designed to meet all your Voice Evacuation needs.

Speaker placement - Guide:

~ Locate speakers wherever conventional horns would be mounted. They should be near pull stations, exits, and main corridors. Additional speakers should be placed in any meeting area of 10 or more and isolated areas such as computer, power and storage areas.

~ All occupied areas should be within 50ft. of a speaker.

~ Bathrooms and small closed rooms should have speakers mounted near the doorway, to provide adequate levels inside, as doors and walls will attenuate the sound level about 10dB.

~ There will be better intelligibility with more speakers, each at a lower wattage, than there will be trying to blanket an area with fewer-louder speakers.

~ Speakers, unlike horns, have multiple level settings. They can be tapped typically from 1/4 to 2 watts, depending on system needs.

~ A typical one-watt speaker can cover about 2,000 square feet, at 75dBA.

~ Wall mounted speakers provide better intelligibility, and a louder sound level per watt than do ceiling mounted speakers.

System design - Guide:

~ NFPA guidelines require a level of 15dBA above the average ambient sound level, or 5dBA above the maximum sound level. The minimum is 75dBA, and the maximum is 120dB.

~ Sound level measurements should be taken with a Sound Pressure Meter set to the 'A' weighted scale, slow-response, held at 5’ above the floor, or approximately at the ear level.

~ Sound pressure drops 6dBA every time the distance from the source is doubled, while the level increases 3dBA whenever the wattage is doubled, in a typical indoor system.

~ A rule-of-thumb power requirement is 3/4W per speaker.

~ The actual power requirement is calculated by adding up the individual speaker's wattage. Multiply this by at least 1.2 (+20%), to allow for a margin of error and further expansion of additional speakers.

~ In high-noise environments, a varying tone signal will penetrate the ambient sound better than a single tone. In some applications, a Slow-Whoop signal can be heard through a noise level that is an average of 10dB higher than the tone.

~ For more than one speaker loop, multiple amplifiers, or zone splitters may be used. This allows for zoned paging, and for 'Floor-Above and Floor-Below' announcements.

~ Speakers are connected to the VECP and each other using paired wiring. Speaker loops are wired like all Fire Alarm related devices, using in-out supervised connections, with a EOLR in the last device on the loop. Twisted pairs are not required but are recommended. Typically, FPL red-jacketed fire alarm wire can be used.

~ Speaker wiring that is run in the same conduit with addressable loop wires (SLC), should be shielded twisted pairs, with the shield connected to the Negative of the power supply, not earth or chassis ground.

These guidelines can be used to help in determining your system requirements.
These are only guidelines and should not be considered absolute design criteria.
Consult the SigCom Tech Support, the appropriate regulations such as NFPA-72, 101, and your local Authority Having Jurisdiction (AHJ).