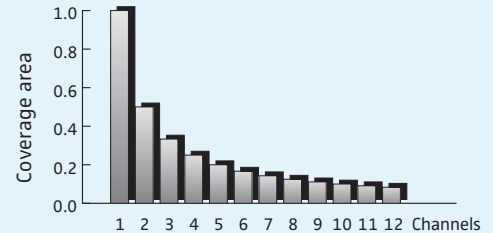


Installation

IR Audio Transmission Technology | Practical Planning

How many radiators?

The area which a radiator can cover decreases proportionally with the number of channels it is transmitting

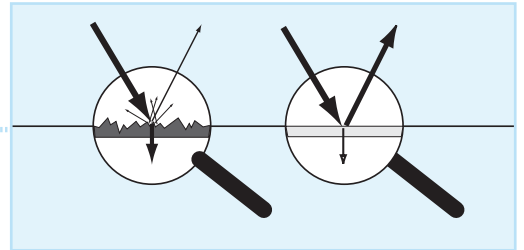


Formula for calculating the coverage area as a function of the number of channels transmitted:

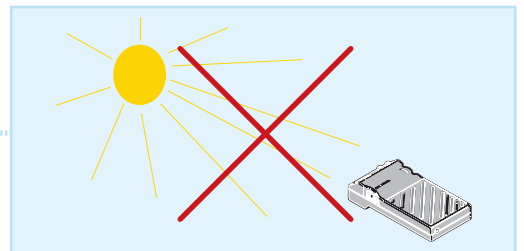
$$A_{\text{multi}}(\text{ch}) = \frac{A_{\text{radiator}}}{\text{ch}}$$

A = surface area
ch = number of channels

Dark and structured surfaces absorb more IR light than smooth and bright surfaces, the number of radiators should possibly be increased

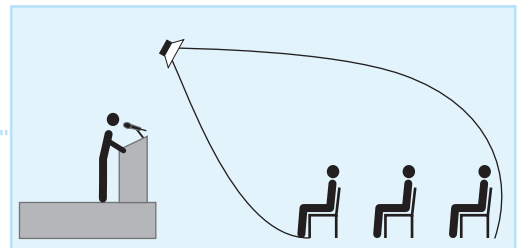


In daylight and very strong artificial light, the number of radiators should be increased. The receivers cannot operate in direct sunlight

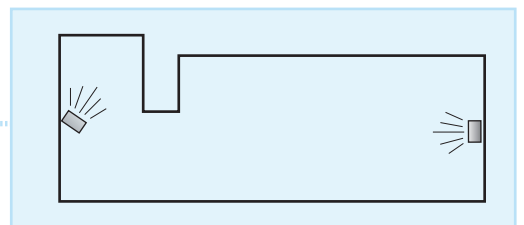


Radiator position?

Install the radiators high up with a slight downward inclination and ensure a free line of sight between each receiver and at least one radiator



Install auxiliary radiators to cover niches and recesses

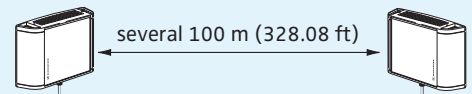


Installation

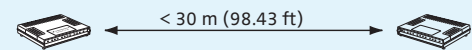
IR Audio Transmission Technology | Practical Planning

Cable length?

When you are using RG 58 co-axial cables, the total cable length of an RF chain can amount to several 100 m (328.08 ft)



For SI 30 / SZI 30 systems, the total cable length should be below 30 m

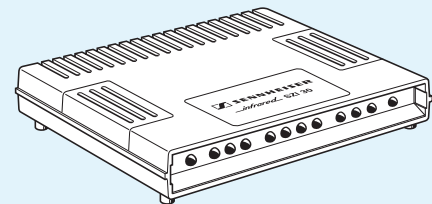


Terminating impedance?

If the last radiator in your RF chain is an SZI 1029 or SZI 1015, you have to connect a 50-Ω terminating impedance

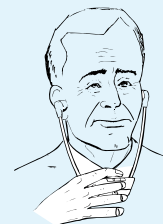


If your last radiator is an SZI 30, you can use its integrated terminating impedance



Checking the IR transmission

Walk through the entire room and partly cover the receiving diode with splayed fingers at a distance of 15 cm. If you hear noise, you should install additional radiators



Cover one receiving diode with opaque tape to decrease sensitivity. If reception remains good everywhere, you will have enough headroom for your event

