

Apartment design plan



Contents

- Design budget

Executive Summary

Based on the studio images attached, it is clear that there the studio development is an uphill tasks that requires proper regulation and management of resources. The incoming study provides an overview of the genesis of the Studio House, clearly justifying the choice for technology, material, the design and the cost. The purpose of the study is to analyze how the materials are going to be used to achieve the objectives of space and sound regulation. The goals are to design a cost effective studio, with a recording room, overdue booth, control room, microphone vault, a machine room and a store. The overdue booth will be reinforced with materials that allows for the regulation of sound.

Design strategy

From the design, it is clear that the distribution of sound in the room is properly regulated and controlled. For the practicality of the studio, the design is made in a way that it has the appropriate absorption. Furthered by the decoration furniture, curtains and carpets most of these designs involves simple porous absorbers (Acoustica, 2016). The architecture focused heavily on movement, lighting and utility. There are two floors of the studio house. The ground floor has with it a reception, a lounge, a manager office and a toilet. The upper floor is mainly consisted of recording room, overdue booth, control room, microphone vault, a machine room and a store. All rooms are reinforced for stability of the facility.

The designer also focused on how the studio rooms to be on the upper floor would encourage the regulation of sound from external noise. The wavelength combined with high frequencies would best be regulated by the thickness of the material (Jocaviacousticpanels. com, 2016). In the booth and the recording room, the rooms are equipped with different absorbers that are vital for the regulating frequencies at different extents. The room can be optimized for any type of music, which includes music, baroque music, orchestra, pop-music or speech. The rooms are reflected on the surfaces where the booth is made to have a relatively long reverberation and the absorption of materials. The acoustical properties of the material are measured in a way that the reverberation is close to zero.

Besides, the sound is perfectly distributed based on the concept of reverberation time that is used in the upper floor. The sound is distributed in a way that simple measurements of reverberation time will be sufficient to determine the conditions for use. The distribution of sound in the room has significant advantages in the way that the design is achieved. The sound distribution is based on the sound source from the speakers. The reverberation material regulates the sound levels. In a perfect sophisticated manner, the sound time and frequency is based on the function and the position. The sound is going to be insulation and concentrated to low noise levels from the adjacent rooms. The corrected measured level encourages the development of homogenous structures at low loss factors while concentrating much of the sound in one area.

There are axial, oblique and tangential modes are calculated to realize the best dimensions for room space. The tangential encourages the models and

includes surfaces and cross section. The dimensions for home studio bathroom depend on the sound, studio and exercise rooms. The frequencies are based on the distribution of the modal frequencies relating to the homogenous process of the modes.

The live room is made in modal nature where the room defines a reasonable analysis, complexity and incredibility. The amplifier faces direct towards the probability and drive the axial modes strongly. The positioning of the amplifier is made to reduce the modal pressure at peak while ensuring that the natural frequencies of sound are felt (Howard and Angus, 2009). The architecture ensures that the microphone positioning in the booth is critical. The microphone is placed at a nodal point and responds to that mode at the point of minimal pressure variation. The anti-node and point of the peak pressure is overpowered. The relative quantities of direct and reverberant sound are placed in a way that it helps to minimize or maximize the effect on some of the room modes. The variable pattern microphones are used to produce various results that are switched between figure-of-eight, hyper-cardioid, and the cardioid patterns. The design is also made in a way that the architect that allows for the more tangential modes, where the surfaces of the room are achieved. The amplifiers are angled away vertically and made to drive more numerous and weaker oblique models.

Studio architecture

A number of constraints and challenges face the studio architecture and construction. As evidenced from the design, the architecture favors smaller rectangular and square rooms that pose acoustical problems and might limit constructions options. The space with a high ceiling provides greater

possibilities and better sound recording and monitoring. In a home studio situation, it is difficult to avoid perpendicular and parallel walls. The solution is to position the monitoring location in the corner where there is less risk of standing waves and flutter echo of sounds when it is reflected back and forth across the room (Acousticsciences. com, 2016). However, the isolated partitions have the appropriate fabric or other noise-reducing material that are useful in the recording room. The glass windows have a dual advantage of ensuring that energy is effectively utilized. There is an abstract need to evaluate the acoustic characteristics of the room that are recorded and monitored. The porous absorbers are the most popular type of acoustic treatment that will be adopted for the design. Davis and Patronis, (2006) notes that the porous absorbers are complemented and provided within the surface treatment and room. Given that the walls in the project are dry, the brick and cinderblock will be highly reflective of the surface.

From the design, it is clear that the sound control is the most important factor in the booth and recording room. The position of the equipment is remotely situated within the arms reach, where the equipments are positions in an easily accessible place. The furniture is position in a place where the equipment and the remote control are situated within arms reach. The furniture on Microphone vault, Machine room, control room, booth and recording room is fixed in a way that it does not emit any type of sound that could lead to a destruction.

Design budget

The budgetary estimates for making the studio range from the construction of the studio to the development of the equipment. To begin with, the cost of

building will be separated from the cost of installation. The site costs vary from any particular project related to the needs of the development of the site. The project budget is available where the costs of the construction for the house range significantly. Other costs attached to the construction costs include air condition equipment, lighting and plumbing. The house expands to prevent misfits where the project developer is expected to have enough time to review the plan.

The budget targets generic materials that are going to be used in unexpected ways that is the plywood for the ceilings, bricks for walls, iron sheet for top cover, tiles for the floor. Others include ballast and metallic door and windows, together with panes. The electric wiring, plumbing, gas and internet connectivity will also aggrandize on the cost. The manipulation of a home basic part is based on the budgetary expectations.

The budget

Materials

Costs

Basic

Sand

300

Cement

250

Bricks

400

Ceiling

350

Timber

450

Roofing	500
Fittings	
Plumbing	200
Electric cabling	300
Absorption	250
Paint	200
Furniture	
Tables and Chairs	400
Equipment	800
Internet	200
Labor	
Labor	450
Total	5000

The budget above is brief and easily achievable. The table above has provided estimates of the materials and other logistics used. The largest components are materials while the furniture and fittings comes second. The suggested estimates are related to the revenue, which is part of the spending on construction materials. The construction project encounters

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conditions that require changing to be made the origin contract. Direct labor costs are compiled from labor time sheets for which the contractor's site supervisors are responsible. The supervisors assign appropriate costs codes to activities performed by direct employees on an hourly and daily basis. Material costs are compiled from coded delivery dockets for which the site supervisors are responsible. The plant and equipment costs are calculated from the weekly and monthly invoices registered.

Conclusion

Clearly, the studio is going to be designed using fewer materials; however, the design is made in a way that it will be easier to achieve the required objectives. As noted, the most important objective is ensuring that sound is properly managed, while lighting and space seek to achieve the objectives of space and recording. Besides, the booth and the recording room should have a material that zeros external noise. Hence, selection of material and development of the budget is the most crucial stage of the development.

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