

## Using LED lighting to illuminate variety shows

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### Abstract

The research deals with a topic ( Using LED lighting to illuminate variety shows ) and how to distribute LED lighting with cameras in various variety programs.

The research is divided into two main axes:

The first axis: television lighting

Lighting is one of the most important factors involved in the production of the television image, as all the optical images that are produced by cameras depend in their properties on the nature of the light reflected from them, so any television transmission correctly depends on the television lighting sources used and how to use them properly.

Therefore, in this axis, the researcher made several basic points, namely (chromatic temperature, modern LED light sources, knowledge of their working theory, physical and optical properties of LED light sources, as the researcher clarified the advantages and disadvantages of LED).

The researcher also discussed the various tasks of the lighting designer, knowledge of smart lighting, DMX system and lighting control devices.

The researcher touched on how to distribute lighting and divide it into two main types, which are basic lighting and special effects lighting, with clarification of some examples of the sources of this lighting.

The second axis: analysis of the Dome theater

In this axis, the researcher analyzed the Dome theater and how the lighting designer distributed LED lighting with cameras in proportion to the event being photographed, with an explanation of making lighting plants and cameras to distribute lighting and cameras on the Dome theater.

### Keywords:

LED ,lighting ,variety ,shows

### Introduction :

Lighting is one of the most important factors involved in image production, as all optical images produced by photographic machines depend in their characteristics on the nature of the light reflected from them.

The effect of lighting is linked to the idea of the conflict between light and darkness. Lighting has a dramatic description in this way. Hence, if it is correct for us to say that photography is a

dramatic art in the first place, and depends primarily on drama, then the director of photography must take into account the requirements of drama in the artistic work, whether Whether this is in the type of drama or in the literalness of the dramatic structure of the topic.

### **Research Problem :**

The problem is whether it is possible to light an entire variety program, whether basic lighting or special effects lighting, with modern LED lighting to obtain a high-quality image and the correct color temperature.

### **Research Methodology :**

The curriculum is descriptive of lighting sources, their various modern techniques, their distribution, and their suitability to photographic events such as conferences, concerts, and sporting events, with analysis of many different works.

Search goal:

The research aims to know modern LED lighting and how to use and distribute it in variety programs.

### **Research Hypotheses And Questions:**

- What is modern LED lighting technology and its characteristics?
- Is it possible to illuminate an entire program with modern LED lighting, whether this lighting is basic lighting or special effects lighting?
- How to distribute LED lighting to suit variety programmes.
- If the lighting is distributed in a way that suits the television cameras, this will lead to obtaining a high-quality image that does not affect the viewer during the presentation.

### **Research Recommendations**

The researcher recommends the need to be familiar with modern lighting devices in terms of color temperature and light intensity for each source in order to use each lighting source in its appropriate place.

The researcher recommends the need to know how to distribute LED lighting in variety programs and how to avoid any problems resulting from lighting.

### **Research Results**

The development of modern lighting technology has given the director of photography the ability to choose the appropriate lighting that suits the event being photographed.

- The development of LED lighting technology and the lack of defects in it.
- How to distribute LED lighting to suit the cameras in modern variety programmes.

It is possible to illuminate an entire program with LED lighting, whether this lighting is basic lighting or special effects lighting.

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