Topic 007

Stage Lighting - Introduction

Traditionally when we speak of stage lighting we usually think of lighting as applied to 'legitimate' stage productions that take place in an actual theatre. As performing arts and entertainment developed throughout the 1900's, stage lighting became far more than 'just lighting plays'. New lighting specialties were born and new lighting standards were set for; opera, ballet, modern dance, live concerts, ice shows, industrial shows, television and other 'live' presentations. STAGE LIGHTING has to do with the controlled and applied use of light to move an audience emotionally and involves far more that just lighting the stage for visibility.

Today modern performance facilities are just as varied as the styles of performance that take place inside them. Facilities include many types of theatres, auditoriums, concert halls, arenas, stadiums, shopping malls and other conventional and non conventional venues.

Most commercial events (theatre, dance, opera) usually take place in an actual theatre. This is a very good thing as usually a theatre is the only controlled environment able to withstand the very demanding requirements of staging, audience comfort, acoustics and hopefully proper lighting.

More and more today producers are taking the show out of the theatre and into the arena. The much larger arena audience can generate far more revenue for a single show, however conditions in most arenas are usually much less than ideal. In order to provide the audience with the best lighting (and sound) possible in these problematic spaces, a tremendous amount of equipment is often required. A simple show in a theatre might require 24-100 lighting fixtures. The same show in an arena might require 300-500 fixtures. Arena shows have become very hi-tech, energetic and highly creative in recent years. New tools including the automated lighting fixture and the color changer has brought a new dimension to stage lighting design, never before seen.

Today the stage lighting designer has evolved into the ENTERTAINMENT LIGHTING DESIGNER. This new generation of designer will usually work in a wide variety of venues, performing continuous miracles for an endless number of different events. Following is a general overview of basic lighting methods for a number of performance and non-performance related industries. For information, we also include: display lighting, architectural lighting, landscape lighting, photographic lighting and museum and gallery lighting.

Theater Lighting

Lighting for the theatre usually means design for a wide range of different types of productions, presented in theatres or spaces designed to function as a theatre. Productions may include dramatic plays, comedies, tragedies, musicals, concerts and reviews. The 'typical' theatre may range from a traditional proscenium type of theatre, to a 'thrust', a 3-sided stage, a 4 sides stage or no stage at all. Seating may range from 200 seats in a small school theatre to over 2500 seats in a large municipal auditorium.

Small productions in community halls might use 12 - 20 lighting fixtures. A typical professional production might use 48 - 200 fixtures. Today it is now not uncommon for the large 'mega-musicals' to use 500 fixtures or more. The Broadway production of 'Lion King' apparently used 700.

Theater Hanging Postions:

Effective stage lighting depends very much on the equipment mounting positions that are available in a space. Most theatres usually have permanently installed lighting positions (or pipes). Several positions are usually installed above the audience for front lighting the stage (sometimes called 'Ceiling Coves'). Other auditorium lighting positions usually include 'Box Booms' (vertical pipes adjacent to the proscenium) and a 'Balcony Rail'. All lighting located in the auditorium is referred to as 'FOH' lighting (Front of House).

Other positions are installed above the stage and usually consist either of a fixed pipe grid or a system of motorized (or counterweight) pipes. Lighting distances (to the stage) typically will range 30-80 feet for equipment mounted above the audience, and 20-40 feet, for equipment mounted above the stage. Additional lighting fixtures are often used on the floor to 'uplight' backdrops, or as footlights (less often in recent years). The use of Box Booms, Tormentor Booms and portable Stage Booms as a method of mounting fixtures, is also quite common.

Theater Lighting Techniques

Most theatre lighting methods are 'loosely' based on the McCandless method; first light the actor for visibility, then light the scenery, and backgrounds for atmosphere and interest. McCandless also put forward a simple method of AREA lighting for the proscenium stage. This method divides the stage into a number of smaller areas and then provides each area with 2 front lights mounted some distance apart. Fixtures must be accurately placed to give appropriate lighting angles and direction of light to the actor. Areas must also be controlled in size, to avoid

unnecessary 'spill' light on adjacent areas or scenery. A front light at 70 degrees (horizontal) to an actor may be well suited to a dramatic production, while a lower angle of 50 degrees might be better suited for a comedy. If the actors are all wearing hats, then a front light of no more than 45 degrees may be necessary, in order to provide more light to their faces.

Theater equipment Types:

The designer must carefully chose fixtures that work efficiently from a specific lighting position (distance). For most general stage lighting applications the designer will work with only about five (5) basic equipment types. Each type however is available in a number of different wattages, lens diameters and beam spreads. The basic equipment types used in theatre lighting are: The FRESNEL, ELLIPSOIDAL and PAR spotlight, the BOX FLOODLIGHT and the STRIPLIGHT. Typical wattages are 500-2000 watts. The FOLLOWSPOT is also sometimes used for very stylized plays or comedies.