

**ENGINEERING AND EQUIPMENT
SERVICES**

2010

COPEN & LIND
CONSULTING

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Engineering and Equipment Services

At Copen & Lind Consulting we bring a unique perspective to equipment selection, bidding and installation. We look at media production facilities as organic wholes not just a collection of rooms and equipment. We are dedicated to creating facilities and equipment packages that meet the needs of novice users, as well as experienced producers and staff, in a cost effective manner.

Equipment Package Design, Bidding and Installation

We consider that the essence of good equipment selection and installation is the creation of a flexible, smoothly functioning equipment package that performs well, functions as an integrated system and anticipates future growth and upgrades. To meet this goal our Engineer, Paul Lind takes a "systems approach" to the design of the equipment package by:

- Designing the equipment package on a room-by-room sub-system basis with careful attention to flexibility and compatibility with the technical and physical system as a whole.
- Selecting similar types of equipment for different areas to simplify use, training and maintenance. For example, the same make and series of audio board (with a different number of channels) might be installed in the Edit Suites and in the Control Room.
- Making equipment choices guided by knowledge of current equipment trends and the track records of specific pieces of equipment in similar media production environments.
- Assuring that the selected equipment package avoids unneeded or overpriced equipment and unnecessary "bells and whistles".

We put an emphasis on the planning phase as we believe that careful and considered pre-planning allows for the creation of an efficient and integrated equipment package and a smoothly running technical facility. Our engineer is committed to working closely with the client's representative to assure that the equipment decisions meet all technical and budgetary requirements. In addition it is a general part of our practice to work with one or more of the staff during the entire installation/ testing process. This results in the staff member(s) being

trained in overall design concepts and rationales, cable construction, basic equipment maintenance and equipment operations.

During the design process a plan is developed for equipment placement and wiring. The placement of equipment is carefully considered so that producers will find comfortable and efficient access to the functions while working with a large array of equipment. Schematic diagrams/wire maps are developed for each room or sub-system to document the installation and to aid in future maintenance and upgrade.

We also custom design, as needed, consoles and workstations to house the equipment. Our consoles are designed to allow for ease of use, training and maintenance and with an overall aesthetic appeal that is in keeping with the design of the rest of the facility. These custom consoles, made of laminate and wood with metal rack rails, are less expensive than the prefabricated metal consoles that are often found in production facilities. The custom consoles include the capability to be rolled out, away from the wall, to simplify wiring and equipment maintenance while occupying the smallest amount of physical space.

Ongoing Engineering Services

On an as-needed basis, or on a scheduled basis, usually monthly or bi-monthly, our engineer can be on-site to assess current functions, deal with any equipment problems that have arisen, calibrate and align systems, alter configurations to meet new needs, discuss equipment upgrades and facility improvements, and to select, bid-out and install new equipment as needed. Between site visits our engineer is available via phone to help diagnose problems and to determine effective solutions.