

● In the past three columns, this department has discussed the different phases of putting on a presentation, from the technician's side. After the first column was written, this topic was discussed with an executive of a large company which made presentations regularly to employees, other executives of the company from overseas, and clients. Our friend suggested that it might be a good idea to discuss briefly in more detail a few of the more critical items that would help make a better setup, a more expedient operation, and a faster tear-down. Here are a few which were *not* mentioned in the previous columns, and one or two I did.

FILM PROJECTOR

First, a quick look at the film projector. The choice, in general, is between a manual load and an auto-load model. The decision depends to a great extent on the film to be shown, and how adept the projectionist is in handling an emergency. If the films are all on one reel, and the film can

be set up before the meeting gets under way, either projector can be used. With the manual type, the film can be threaded, focused, the sound level set, and run back to the beginning. With an autoload, the front, or head end, must be clipped straight across to allow it to thread smoothly. Most projectors come with a cutter to take care of this. Once the film has begun to run, is focused, and the sound set, it, too, can be reset to the start. (With a manual projector, of course, the switch must be put back in the forward position.)

The problem of choice takes on a different appearance when one looks at the mechanics of the projectors. If the person running the films knows how to thread a manual projector easily and properly, there is no problem. If not, the film can come loose, lose a loop and flutter on the screen, or cause warbling sound. A good technician knows how to handle this problem. Normally, this won't happen if care is taken and the film tried before the show starts, but if there is a bad sprocket hole which doesn't show up until the first play begins, it might lose the loop. When this occurs, it is safer to stop the projector momentarily, fix the loop quickly, and resume. Some projectionists like to adjust the film while it is running, with a quick finger touch. This method is quicker, certainly, and looks better, but don't try it yourself unless you know what you're doing. Otherwise . . .

A problem could also arise if only half the film is played or if the film breaks in the middle. With a manual projector, the technician removes the film (provided he or she knows how) quickly, runs it past the break, adds a piece of tape to hook one end to the other after the sprockets, and continues the film. On an autoload, this quick patchwork takes a bit more work. Since the machine is made for loading film automatically, the path is built to prevent the film from slipping out accidentally. It is this same safeguard that makes it more difficult to remove the film before the reel is finished.

A good technician might know to remove the cover over the exciter lamp, to open the sprocket covers, etc.—it just takes more time. When the film is spliced together, there are other complications. The autoload machine is made to load from the front, and from the head end of the film. Quite a bit of know-how is necessary to re-

thread the machine manually. It might be easier to feed in the supply end and let the reel run through before the splice is made. However, cutting a straight end could lose a frame or more of the film picture and sound. Tricky, eh?

One more problem to think about, as far as choice is concerned, comes with knowing there will be more than one film. The first can be put on at the outset. How does one handle the others? With a manual projector, there is no problem. The first film is removed, another take-up reel put on, the second film threaded and cued up (quietly) and the show goes on.

When there is self-threader, however, the film's leader end must go through before the first frame is in position. If the machine is in the same room as the meeting, the manual unit gets the definite nod. It's easier to handle for one who is familiar with it. (Incidentally, it also helps to know how long the films are and how many so the proper takeup reels can be provided, both for size and quantity.)

SLIDE PROJECTOR

When it comes to the slide projector, there are also some things to think about. If the slides will fit into one standard universal drum (assuming the projector to be the carousel type), the greatest safety is achieved with the grey drum. It will permit use of metal and plastic mounts as well as cardboard. The black carousel and the 140's are intended for thin plastic or cardboard respectively and will not handle the thicker mounts. The standard types of projectors will also be less of a problem, usually, even with cardboard, in the event one corner of the mount lifts off or curls slightly. The wider spacing permits a bit of leeway, The thinner slits do not, and a poorly mounted or bent cardboard will jam.

It is also better to use the auto-focus models so that slides will focus automatically. When cardboard and glass mounts are mixed, there is sometimes (usually) a variance in the focus. If the presenter does not mind adjusting the focus manually from his remote control, fine; then it makes no difference in the choice of mount, or machine. It is much smoother, most times, however, for the machine to focus automatically. There is also a model and a control which gives the

presenter the option of manual override even with an autofocus. This could be the best, yet. (Incidentally, glass mounts, either in metal or plastic, keep the slides from curling as they are sometimes wont to do in cardboard, and will protect the film from finger handling.)

SCREENS

The location of the screen and the shape of the room make a big difference. If the room is narrow and long, a beaded screen is probably good. This type gives a very bright reflection, but in a narrow angle. The audience should normally sit no farther than 25 degrees to either side of the center line. Beyond this, the intensity falls off. (You will notice a similar effect, although at a different angle, with a rear screen, where the slide seems uniformly bright as you sit in the center, but falls off on the side opposite as you're moving either to left or right of center.)

With a lenticular or Ektalite screen, the angle can be spread to about 30 degrees at either side of center. Using matté material, however, allows for about 45 degrees on both sides of center, and thus offers the widest seating spread of all. This means that (with the front row about twice the width of the image away from the screen, and the last row about six times away) the front row should only be as wide as about two image widths for a beaded screen and the back row about six times as wide. For a matté screen, the front row can be as wide as about three times the width of the image, and the last row as wide as twelve images.

LENSES

The simplest though not very practical, way to get the right lens for a projector is to take a series of them with you when you set up. For the slide projector, for example, you could take a 3 in., a 5 in., a zoom to cover 4 in. to 6 in., a 7 in., and a 9 in. size. There are also 8 in., 8½ in., and other lenses available. To be safe, you might get all of them just to have "in case." If you do the same with your film projector, your supply of lenses will take up more room than your equipment!

In most instances, the zoom and the 7 in. for the slide unit as well as the zoom and 2 in. for the film projector will suffice. If you will look at available charts you will find that for throw distances of 13 ft. to 94 ft., the 7 in. slide lens matches the 2 in. film lens, considering the requirements for screen width. Thus, if you project 2 x 2 in. slides from a distance that will fill a screen width, using a 7 in. lens,

the film will provide a similar size image with a 2 in. lens.

Where the size of the screen or the projection distance are such that a different size lens is required, trial and error on the site might be necessary until the projectors are positioned properly. However, it might help to determine beforehand what range of lenses, at least, you might need.

The formula says to multiply the projector aperture width in inches by the projection distance in feet, and then divide by the lens focal length in inches to arrive at the screen width in feet. To put this a different way, the lens in inches can be found by multiplying the aperture width (inches) by the throw distance (feet) and dividing by the screen width (feet). For the 16mm film projector, the aperture width is 0.38 in., and it's 1.3 in. for the slide projector. Using this calculation, you will be very close to the figure you want to determine the screen width you should have, the lens you'll need, or the throw distance you require for the equipment you will use. Remember that the longer the lens, the smaller the image will be from the same location, or the farther back you can go for the same size image. This reminds me of a poem I found a long time ago but can't remember where (apologies to the publication) written by Donald Canty:

*When you want to say a lot,
Put a short lens on the shot.
If you want to frame it tight,
Use the longest lens in sight.
If your actors move about,
Now in focus, now they're out,
To a shorter lens you yield
To increase your depth of field.
If the object seems too small,
Or you see far too much wall,
Then this lesson you must learn,
To a longer lens you turn.*

The poem is actually aimed at photographers, but parts hold true as well for projection.

Using these hints as guidelines, it might be a little easier to figure out what equipment to purchase, rent, or take out of stock for a presentation, what screen to choose for material and size, what lenses to take, and the extras you can find helpful to set up, run, and take down a show as if you really know what you're doing . . . professionally. ■