Chapter 7. Preventive maintenance

Preventive maintenance is critically important. It can make the difference between having a reliable projector you can depend on indefinitely, and a machine that drives you crazy because of its unreliability.

Belts
Keep an eye on the drive and arm belts. Every so often, remove them and wipe them thoroughly with a dry cloth. This gets rid of any oil or grease they might have acquired. It also gives you a chance to inspect them for signs of deterioration. While the belts are off, clean the pulleys, give the bearings a little oil and rotate them a few times. Before replacing the belts, make sure all excess oil on pulleys and bearings is removed.

Lubrication
Too much oil is the most common problem with projectors. Stray oil can gum up motor brushes, destroy insulation and clog sound systems. For this reason, user manuals used to indicate that all lubrication should be left to trained technicians. As experts are now very thin on the ground, you will have to work out your own lubrication schedule. The information in *Part 5* relating to your projector may help.

Use the highest quality products available. Use minimal amounts. A smear of grease on the drive gear is enough; there is no need to smother the cogs. On a projector that is used only once a week, one drop of oil on a bearing may be too much. The vital thing is to keep checking all moving parts regularly to make sure the lubrication is still there and doing its job. Perhaps once a year clean off all grease and replace it. It's not a bad idea to take the rollers off and clean their bearings too. This gets rid of any dust and grit that may have accumulated. Don't touch sealed bearings. If you are concerned that they haven't been looked at for thirty or more years, refer them to a specialist (see 7. *Resources*). But they are probably still in excellent working order and good for another thirty years.

Cleaning
Cleaning the film path is discussed in detail in the *Procedures* chapter. However, the rest of the projector needs attention from time to time. If unattended, dust can build up in unseen crevices and corners. Overenthusiastic lubrication can result in oil and grease being sprayed all over the interior workings of machines, and dust just loves oil and grease. Keep your projector clean all over, inside and out.

Reels
Metal reels are tough and reliable. They don't warp and they don't break easily. Unless they are badly bent, they don't grab the film. But they are heavy, and if you are screening a big reel the extra load on the projector will not help its performance.

Plastic reels are light and under most circumstances perform very well. But if they are not in good condition they tend to grab film, and this can really spoil your day. Over time, the sides of plastic reels have a natural tendency to move inwards towards each other. You can help prevent this happening by storing reels properly. An empty reel should never be laid down flat, as the top side will gradually droop, narrowing the gap between the two sides. If used on a projector it will grab film and be useless. For the same reason, empty reels should never be stacked flat on top of one another. Reels should be stored hanging vertically. Even better, before you hang them up, cut strips of strong cardboard 18 mm wide and insert them between the sides of each reel, winding them around for at least a full circle. This maintains the gap between the sides.

Rejuvenating reels
Anecdotal evidence suggests that grabbing plastic reels can be restored to usable condition. Cut strips of cardboard 18 mm wide, insert them between the sides of the reel, hang the reel up and forget it for a few months, the longer the better. Distorted metal reels are, unfortunately, beyond salvation.