

ViewMaster

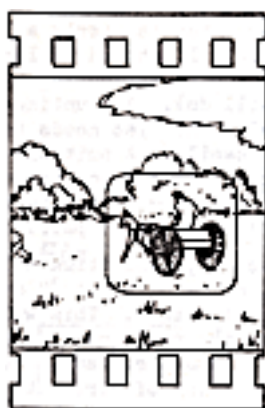
Standard 35mm ViewMaster

The ViewMaster system has been the only large-scale successful commercial development of the stereo hand viewer since the Holmes stereoscope. For about half a century the familiar discs have found a ready sale throughout the world, mainly among children. The reason for this success is the low cost of the viewer and the fact that any child can operate it and see a set of seven stereo pairs by simply pressing a lever.

Stereoscopists have not been very enthusiastic about the ViewMaster, however, because the pictures are small and cannot compare in quality with the 35mm stereos. Even so, envious eyes have been cast at the very simple viewer which any Tom, Dick or Harry can operate immediately without difficulty. The reaction of many people when confronted with a 35mm stereoscope for the first time is one of cautious curiosity as if it were an intelligence test. (It requires a third hand to change the slides). For this reason many stereoscopists have toyed with the idea of adapting the ViewMaster for use with 35mm stereo pairs. This could be done but a new design would be required giving rise to complications, which would defeat the purpose of the exercise.

This subject was revived recently as a result of a conversation on that intriguing question, "How much of the film we buy reaches the stage where it is worth mounting and exhibiting?", and the short answer is literally, "Precious little!". The other question, which is not so often asked, is "How much of the film do we throw away?", and once again we get the same answer. This means that it is common practice to preserve a lot of processed film, which will not be used.

A study of such a collection will show that a number of stereos fail because the main feature is too small in relation to the full frame. This often occurs with human figures. Others have interesting detail, but fall short of the required standard by reason of composition faults, blemishes etc. Now, if these stereos are viewed on a light box or a mounting jig which has the



outline of the ViewMaster format marked on it, exact size, these under-sized features can often become excellent subjects filling the frame. The outline of the ViewMaster format is given at its correct size in Fig 2. If you wish to make the experiment with your unemployed film, trace the outline on a piece of clear plastic and use it on the light box or jig.

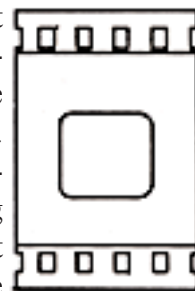


Fig 2

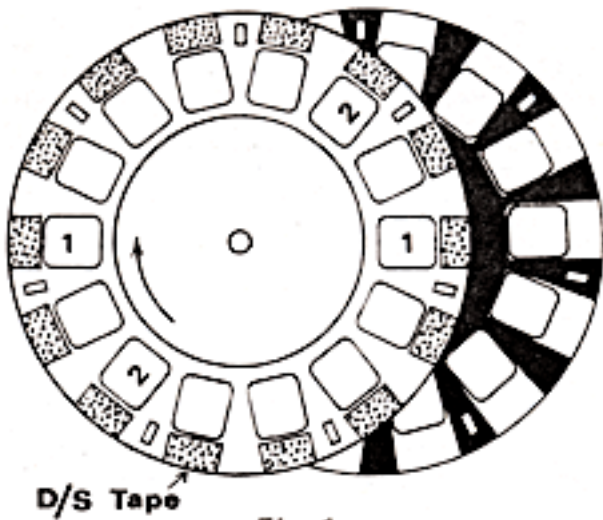
The next stage is to get these miniature masterpieces mounted on a ViewMaster Personal reel. The cutter is unsuitable as it can only be used in conjunction with a ViewMaster camera. Paul Maddison solved the problem by patiently cutting the picture to size using a surgical scalpel (Stereoscopy No.18 p19), but this is too demanding for general practitioners. It was therefore decided to ignore the orthodox mounting method and work on one side of a split reel. After much experimenting the following system was devised. It looks more complicated than it is, and the chips can be mounted quickly and easily.

Splitting the reel

This takes up to ten minutes. The title side, marked "P" and "V", is to be separated from the other side with the metal lining. Have a kettle of boiling water standing by and insert the point of a penknife between the edge of the title side and the other side, making sure that the metal lining is separated from the title side. Lever it gently and make more insertions to start the splitting. With a little coaxing from the steam kettle, the apertures can be separated and then the centre will come away cleanly. Where the parting is not easy, apply the steam - forcing will tear the surface paper. Put the discs under a pile of books for a few minutes to straighten. The title side disc will be used for mounting.

Preparing the disc

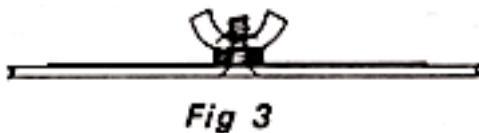
Takes up to five minutes. The apertures are numbered on the printed side, and it is essential to use this numbering to ensure that the chips are mounted the right way up. Find a printed 1 at the top left corner of an aperture and pencil an arrow pointing upwards on the reverse side of the disc immediately behind it. Mounting is done on this reverse side and starts at the aperture marked with the arrow and continues on alternate apertures around the disc. 1/2" double-sided



tape is now fixed to the outer edge of each aperture and trimmed to the edge of the disc, Fig 1. Make sure that the seven slots are free from tape. Do not remove the tape cover at this stage.

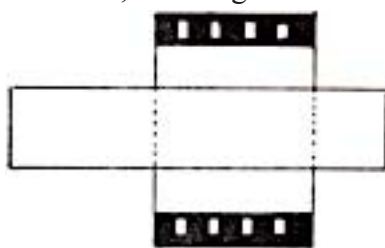
The Light Box

The mounting is done on a light box, which is simply a box covered with white translucent plastic. It should be large enough to house a 100w lamp at the side of the box with reflecting material beneath the screen, (crumpled kitchen foil will do). A mounting stereoscope can be fitted, but it is not essential. The disc needs to be held firm, and some provision for it to turn easily. A suitable jig is shown in Fig 3 and can be made in a few minutes. If the box has other uses, make the jig on a separate piece of plastic and tape it to the box. The prepared disc is now fixed in the jig ready for the first pair.



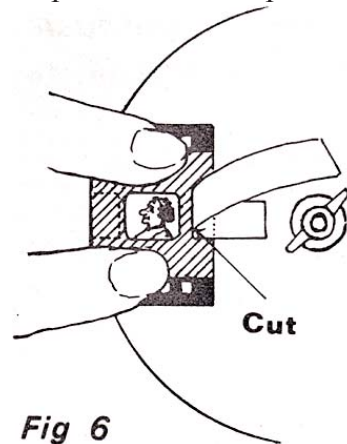
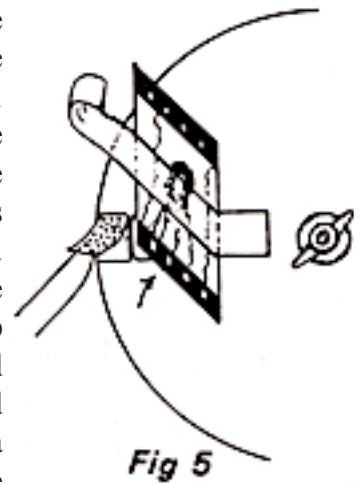
Mounting

Can be done in 45 minutes. Take the two chips and stick a length of sticky tape across each on the emulsion side, allowing about 3/4" overhang on each side.



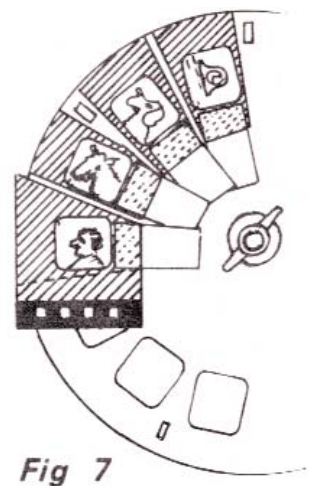
Ensure the tape covers the subject, Fig 4. This will come as a shock to some who are accustomed to treating the emulsion side of film as a no-go area for anything but the softest of brushes. The tape won't hurt it and when it is removed, it will take a lot of dirt with it. Now, posi-

tion the chip over the aperture and press the tape down on both sides. Be careful to press the tape well down along the inner edge of the chip as it is to act as a hinge. Now, free the outside edge tape and lift the chip so that the double sided tape below can be bared with the point of a penknife, Fig 5. Let the chip fall back into place and seal down.



Next, hold down with two fingers on either side of the sticky tape and pull the tape back from the outer edge until just clear of the inside edge of the aperture, and slice it off with a razor blade. The chip is now sealed both ends, Fig 6. It now remains to trim of the top, bottom and outer edges.

Use a small pair of scissors and work over the light-box. Do the top and bottom edges first. Finally, trim the outside edge by turning the disc over and carefully cutting the film to the edge of the disc. Make sure no small sliver of film protrudes over the edge as it will stop the reel from turning in the viewer, Fig 7. Repeat this operation on the other side after positioning the chip to make a good "window" and the mounting is complete. Make sure at this stage that the mounting is accurate as the chips can be removed and remounted quite easily.



Turn the disc clockwise on the jig, pass over the adjacent aperture and use the next for the second stereo pair, (No. 2 on reverse). When the disc has been mounted with the seven pairs, cut a circle from a gummed label and stick over the centre of the disc after removing it from the jig. Make a final check to ensure that no ends of film are unsealed and the edge of the disk is free from any rough edges of film, and

the seven slots are clear. The disc is now ready for sealing.

Sealing

This takes up to ten minutes. Take the unmounted disc and put a layer of gum, (not instant adhesive), over the centre circle. Hold this and the mounted disc by the extended finger tips of each hand and bring them together so that the edge notches and the seven slots round the edge of the disc coincide. Press the gummed centres and manoeuvre the discs so that the slots line up accurately - the gum will give plenty of time to do this. Use the lightbox for this operation. When dry, the reel needs sealing at the edge. Use suitable quick drying glue and apply sparingly between the outer edges with a cocktail stick or similar, and press together as the gluing proceeds. If the glue is free of "strings" there should be no danger of smearing the chips, but it is easy enough to mask the apertures to make sure. The reel is now ready for use in the viewer.

The result is really impressive. The small size compared with the 35mm originals is not noticeable. Size is relative and any format and size become the norm when used continuously, in fact, the feature looks bigger because it fills the frame. Head and shoulders portraits come out remarkably well and it is soon realised that many are candid camera shots with the subject quite oblivious of the camera. This is because the shot was taken at a distance. To get the same subject / frame ratio in 35mm stereo, the camera would have to close in to the point where the subject would become aware of it and turn instinctively towards the photographer. The depth quality of these close-ups is natural without distortion.

The high quality of the picture compared with that taken with the ViewMaster camera suggests that it would be worthwhile to make ViewMaster format stereos by masking the viewfinder of the 35mm camera. Candid shots could be taken deliberately, and a wide range of small features normally out of range for the full 35mm format could be exploited, e.g. birds, animals, items high up on buildings, etc.

Finally, the great advantage of the ViewMaster viewer is that it is cheap and available world-wide. This means that the "35mm ViewMaster" could be forwarded to anyone in the certain knowledge that a viewer could be purchased or borrowed by the recipient. This overcomes the great handicap that ortho-

dox stereo has been subject to since the passing of the Holmes viewer, and stereo viewing would not be confined to stereoscopists. Stereo workers who use their skill to further some other interest or hobby could profit from the ubiquity of the ViewMaster by circulating "35mm ViewMaster" reels in their clubs.

This article has been recreated from the words and drawings of Arthur Girling which were printed in the October 1982 issue of the ISU magazine *Stereoscopy*. (No. 20)

The article came about as a result of a visit that I made to Arthur's flat, where we carried out the experiments described - I still have some of the split reels...

I have transformed it into this Adobe Acrobat form at this time because the personal reels are out of production and hard to find, and I believe that the method could easily be adapted to die cut card or thin plastic discs if someone were to produce them.

And there is a second incentive for reviving the idea.

As part of the Stereo Active Mounting (SAM) system, Jacob van Ekeren has produced a prototype ViewMaster mounting jig which would work perfectly with the methods outlined in the article.

Of course, this method is slower in use than the genuine ViewMaster method, but there are no new reels. We all hope that they will become available again, but who knows when?

This system, with a supply of blank reel sides, could be used with both ViewMaster camera output and standard 35mm stereo camera output as demonstrated in the article.

So, now all we need is a supply of the blank reel sides. Anyone volunteering to get the die made?

Bob Aldridge
Chairman
The Stereoscopic Society

