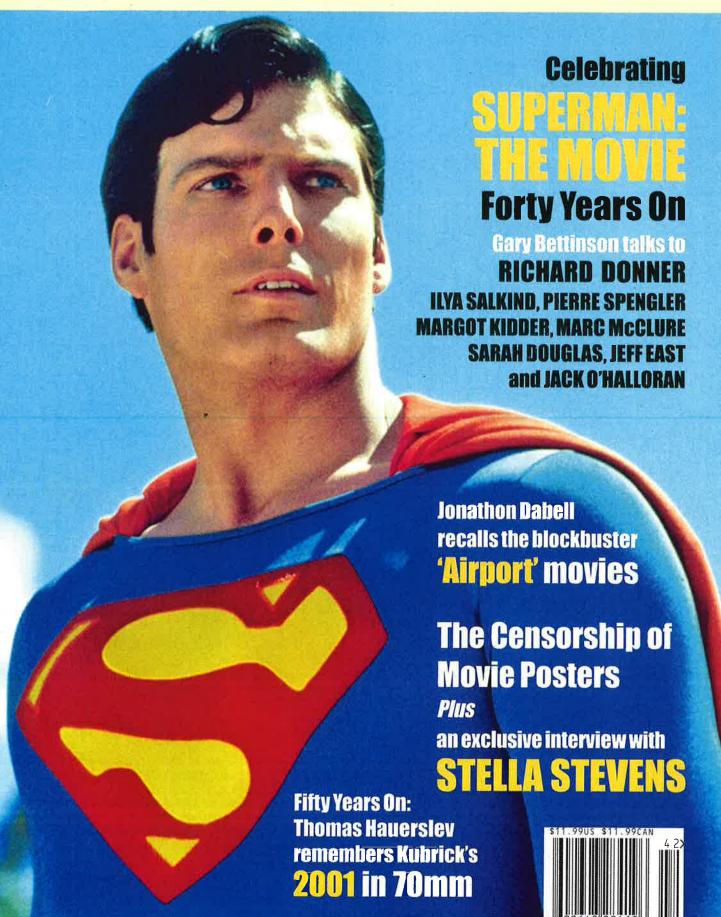
THE ESSENTIAL GUIDE TO MOVIES OF THE '60s & '70s

CINEMA RETRO

UK: £6.95 USA: \$11.99 CAN: \$11.99

ISSN 1751-4606 Vol 14: Issue 42. 2018 Special UK Import Limited Edition Read in Over 20 Countries Worldwide



A 50th Anniversary Celebration by Thomas Hauerslev

> "Kubrick changed with 2001, once and for all, the genre of science fiction. It is a philosophical film - Kubrick takes a bow to the unknowable creator of the universe. And the more intelligent a person, the clearer it is that there is so much more that we don't understand. Kubrick expressed great respect in 2001 and what is so interesting is that when the film came out, people over forty could not deal with it, generally speaking Whilst young men made the film into a success."

(Jan Harlan, in conversation with the author, 2016)

2001:
A Space Odyssey
in 70mm and Six-Track Stereo

That happened to me as well when I was 15. I didn't realise this until years later, but seeing 2001: A Space Odyssey in 70mm with six-track stereophonic sound back in 1978 in Copenhagen turned out to be an experience which has stayed with me ever since. I was fascinated with the story, which at first didn't make much sense, but it inspired my appetite and curiosity sufficiently for me to go and see it again the following day. In the following forty years I must have seen it between twentyfive and thirty times. 2001 has been a constant source of inspiration. The music. The photography. The dialogue. The mystery. The special effects. A talking, heuristically-programmed algorithmic computer (named HAL). It's a great film, because - as director Terry Gilliam says it gives no answers. You have to figure everything out for yourself. Use your imagination. It is a great conversation piece. Everyone who has seen it seems to have an opinion about it. This text summarises some of the countless details about Stanley Kubrick's film which I have come across since, with special focus on the photography and projection technicalities.

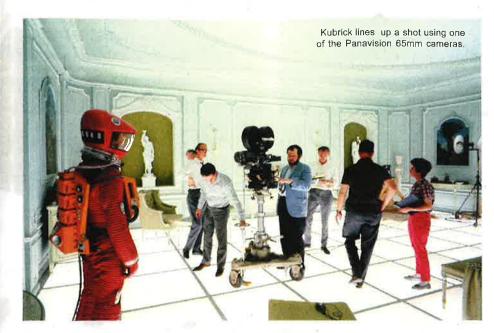






Above:

Filming 'The Dawn of Man' sequence on a huge set at MGM's Borehamwood Studios just outside London. The impressive backdrop images were 10 x 8 plates shot by Keith Hamshere in South Africa. His full story of working with Kubrick can be seen in issue #34.



Stanley Kubrick's "Journey Beyond the Stars" was announced by MGM's President Robert H. O'Brien in 1965, and in December the same year photography began in England at Shepperton Studios and MGM Borehamwood. Originally Kubrick wanted to shoot 2001 in the widescreen format of 1,85:1. In one of their countless technical discussions, cinematographer Bob Gaffney talked to Stanley Kubrick about other possibilities: "I said, you've got to make it visceral. If you are going to put people in space there's nothing bigger than 70mm wide screen to do that and Cinerama is even better because it would be curved, and he agreed." (Bob Gaffney, in the book 'Stanley Kubrick' by Vincent LoBrutto, Faber and Faber 1997):

MGM and the Cinerama Corporation jointly produced the film, and 2001 was photographed on 65mm film in Panavision's Super Panavision 70 system. Large film, large lenses, large cameras. Generally two film standards were available to film makers: 35mm and 65mm film. The latter is between about four times larger in negative area, and offers unparalleled sharpness, which adds to the illusion of reality. The negative is approximately 48.5mm x 22mm in size, and each frame is five perforations tall compared to four perforations on 35mm film. Negative stock 65mm wide is used in the cameras, which is then printed onto 70mm positive stock for use in cinema projectors. The extra 5mm of width is added to make room for the magnetic oxide strips, which carried the soundtrack. Super Panavision 70 was the premier "roadshow" exhibition standard of the 1960s.

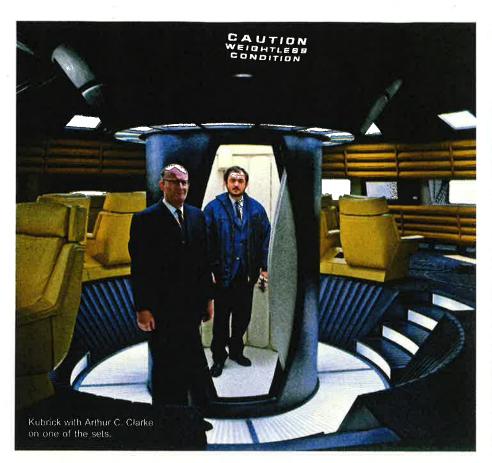
Stanley Kubrick typically used his own film cameras and lenses on his films. 2001 was different, as he had no 65mm cameras, and had to rent equipment from Panavision, through Samuelson Film Service in London. According to Sir Sydney Samuelson, "He took Panavision equipment on sufferance. I bet he and [Panavision founder] Bob

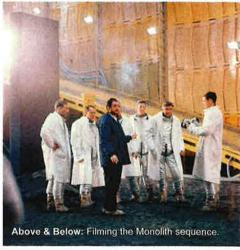
[Gottschalk] did not discuss anything at any time about the film - he would have dealt with Bob's staff rather than meet him; I think I could be pretty sure of that. And, for 2001 Stanley said, 'I shall want the equipment for about four weeks beforehand, and I shall want alternative lenses at each focal length. And I will choose which I'm going to use'. That meant equipment was going to be supplied through us. Now you would expect to supply the equipment free of charge for a week - that's enough time (normally!) to check out all the lenses, all the focus scales, everything; every kind of check that you want to make. But Stanley wanted it for four weeks. And I suppose Bob approved: 'Well, it would still be good to have a Stanley Kubrick picture...whatever kind of a sod he is, it will be prestigious to have a Stanley Kubrick picture...shot in Panavision 65mm'."

With the exception of one screening, in the cinema I have only ever seen 2001 in the original 70mm six-track version. In later years, I have also seen the digital version on a couple of occasions. I still prefer the 70mm version, and especially, first-release prints from 1968/69 if possible. The first 70mm prints are by far the sharpest, and the most enjoyable. Every detail is visible on the big screen. The drawback of seeing those first-release 70mm prints these days are the missing colours, which have faded over the years. Eastman Kodak's 70mm prints from those days seem to lose their colour layers unevenly. The yellow and cyan dyes disappear faster than the magenta layers, and the overall image looks pink, or sometimes brown.

Normally 70mm prints were contact printed from the original camera negative, creating the best possible exhibition prints. This is a very risky procedure, as the negative may be damaged during printing. If this happens, replacements must be retrieved from an internegative, thus making the print a little more grainy. Many 70mm films were first-generation prints in the 1960s, but this









did introduce a lot of wear and tear on the priceless 65mm negatives. This was especially noticeable on the most popular titles like 2001: A Space Odyssey, Lawrence of Arabia, My Fair Lady and many more, which were printed several hundred times.

When film historian Robert Harris restored Lawrence of Arabia and My Fair Lady, also photographed in Super Panavision 70, the negatives almost fell apart when they opened the film cans. It is essential to keep the original camera negatives and sound elements safe. Instead of using the original camera negative, laboratories have now made copies of the negative and use those to make the prints.

This would be the normal laboratory procedure today:

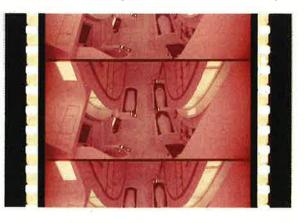
- (1) Cut edited original camera negative (OCN).
- (2) Copy OCN to 65mm 5-perf Interpositive (IP).
- (3) Copy IP to 65mm 5-perf Internegative (IN).
- (4) Copy IN to 70mm 5-perf release prints.

Super Panavision has a wide aspect ratio (AR) of 2.21:1, which means a 22.1-meter wide screen would be 10 meters tall if projected properly. 35mm film is a little different and with a different AR of 2.39.1. The largest image area on 35mm film is almost square in shape. In order to present

2001 in general release, it was necessary to make a 35mm IN reduction from the 65mm OCN master. The procedure of copying the OCN mentioned earlier was necessary for the general 35mm release in cinemas not equipped for 70mm projection. A special lens from Panavision reduced the 'flat' 65mm negative to 35mm introduced an 'anamorphic compression' on the film print to make it fit the square area. When viewed on the rewind table, 2001 in 35mm looked squeezed, and a special projection lens was needed in the cinema to de-compress the picture on the screen (the same principle as CinemaScope).

In an ideal world the audiences would be able to see the entire image area on the screen. However, since 2001 was produced in 70mm Cinerama, and was shown on the big curved screen all over the world, some of the image area was cropped. If any film is shown on a flat screen, most of the image is shown.

However, because geometry of projection dictates that a masking plate in the projector is required to follow the curvature of the screen, the masking plate needs to be 'butterfly'-shaped. If not, the light would spill out on the black masking, ceiling and floor and distract the audience. But that was not the only problem, as Douglas Trumbull explains: "The film was shot in Super Panavision for projection on the curved Cinerama screen but the unique format wasn't accounted for during the years of production. During the entire production, we never once viewed footage on a curved screen or in the format. So, in a sense, the movie was not made with a curved screen in mind. In some of the Cinerama theatres there was a serious projection problem, because the projection booths were mounted up too high and you had a horrible sort of curved, keystoning effect: the titles would come out badly curved and it looked very distorted." (interview in Cinefantastique, June 1994).



Left: A section of a 70mm print.



Above: A section of a 35mm print.

Personally, I prefer seeing the film on a huge Cinerama screen which curves around you. A first-person experience and a perfect illusion of reality — almost three dimensional, without annoying glasses. It is just not the same on a flat screen. The cropping or distortion on curved screens never seemed to bother the audience, however. For many years it was rumoured that special rectified 70mm prints were available to compensate for the cropping on deeply curved screens. A rectified print will look normal on a deeply curved screen, I have been unable to verify this claim, and it remains a total mystery.

The film was premiered on 1 April 1968, A few days later Stanley Kubrick cut 19 minutes from the film, and the running time settled to 141 minutes plus ten minutes of overture, entr'acte and exit music, divided into ten reels of 70mm film (16988 feet / 5178 meters). All 70mm prints carried six magnetic tracks, with five discrete channels behind the screen (left, half left, centre, half right, right) and one mono effects channel for the loudspeakers in the auditorium. In foreign countries, the film was subtitled or dubbed into the language

When 2001: A Space Odyssey was released in 1968, it was customary in the film industry to keep the crew credits as brief as possible. Aside from Kubrick himself and co-screenwriter Arthur C. Clarke only some twenty-seven crew members were credited at the end of the film. Over thirty years later in 1999, Stanley Kubrick's assistant Anthony Frewin, who worked on the film, wrote a full list of cast and crew for a special showing of 2001 at the National Film Theatre in London, The very comprehensive and detailed list even included the leopard trainer (Terry Duggan), aerial wire work (Eugene's Flying Ballets) and stills filing clerk (Keith Hamshere).

2001: A Space Odyssey has remained a popular film for fifty years. Essentially it has never been out of circulation and it remains one of the most valued assets in the pre-1986 MGM library, now owned by Warner Bros. It has been re-released several times, most famously around 1977-78 with a tagline quotation from director George Lucas: "Before Star Wars there was... and will always be Stanley Kubrick's 2001 A SPACE ODYSSEY". For the re-release in 2001 itself, the soundtrack was cleaned up and given a Dolby Stereo treatment to remove high-end tape hiss, which had been in the soundtrack since the first release. Incidentally, this release of 2001 became the last film to carry magnetic soundtracks. Since then, all 70mm prints have been with a DATASAT/ DTS time code. Thanks to the film's popularity Warner Bros. continues to strike new 70mm prints, which are still shown regularly in cinemas across Europe, Australia and in the USA. Some people are willing to travel long distances to see the film one more time in 70mm, which for many enthusiasts is the only way to

"Good day, gentlemen. This is a prerecorded briefing, made prior to your departure and which, for security reasons of the highest importance, has been known on board during the mission only by your H-A-L 9000 computer. Now that you are in Jupiter's space, and the entire crew is revived, it can be told to you. Eighteen months ago, the first evidence of intelligent life off the Earth was discovered. It was buried forty feet below the lunar surface, near the crater Tycho. Except for a single, very powerful radio emission aimed at Jupiter, the four-million-year-old black monolith has remained completely inert, its origin and purpose still a total mystery."

Thomas Hauerslev www.in70mm.com







Left & Above: Props from the Pan Am spaceship and Hilton space station which have survived and are owned by the Kubrick family.

Right: Kubrick on the space station set,

When the film was released, MGM supplied detailed presentation directions to theatre operators and projectionists.

2001: A Space Odyssey
Essential Presentation Procedure

The Running time of 2001: A Space Odyssey is 2 hours 20 minutes, plus 10 minutes of OVERTURE, ENTRACTE and EXIT MUSIC.

Thus:-

FIRST HALF 1 hour 26 minutes PLUS 3 minutes OVERTURE music SECOND HALF 54 minutes PLUS 2½ minutes ENTRACTE and 4½ minutes EXIT music

ENTRACTE and 4½ minutes EXIT music

OPENING REEL 1AB

Play OVERTURE music (3 minutes) with full

House lights on.

Dim House lights towards end of overture allow for Censor certificate and open full
screen on LION TRADE MARK

INTERMISSION is at end of Reel 6AB Start closing curtain on INTERMISSION title . not before

SECOND HALF of picture opens at Reel 7AB

Play ENTRACTE music (2½ minutes)
Dim House lights and start curtain in good
time to open full screen for first scene in

CLOSING
THE END title is at the end of Reel 10AB

Start closing curtain on the last but one title "Made at MGM British Studios Ltd., Boreham Wood, England". Bring House lights up on THE END title and play EXIT music of $4\frac{1}{2}$ minutes.

Thank you for your co-operation METRO-GOLDWYN-MAYER

