



**A REPORT INTO THE TECHNICAL  
ASPECTS OF THE 'REEL LIFE'  
EVENTS OF THE EDINBURGH  
INTERNATIONAL FILM FESTIVAL 2001**

By Michael Wright

This report aims to lay out a detailed specification for the audio-visual lay out used in the Film Four sponsored Reel Life events at the Edinburgh International Film Festival as conceived by myself and the technical team during 2001. I will open with a brief explanation of the events themselves followed by a schematic illustration of the system used. I will then outline the problems with this system and suggest improvements for implementation in 2002.

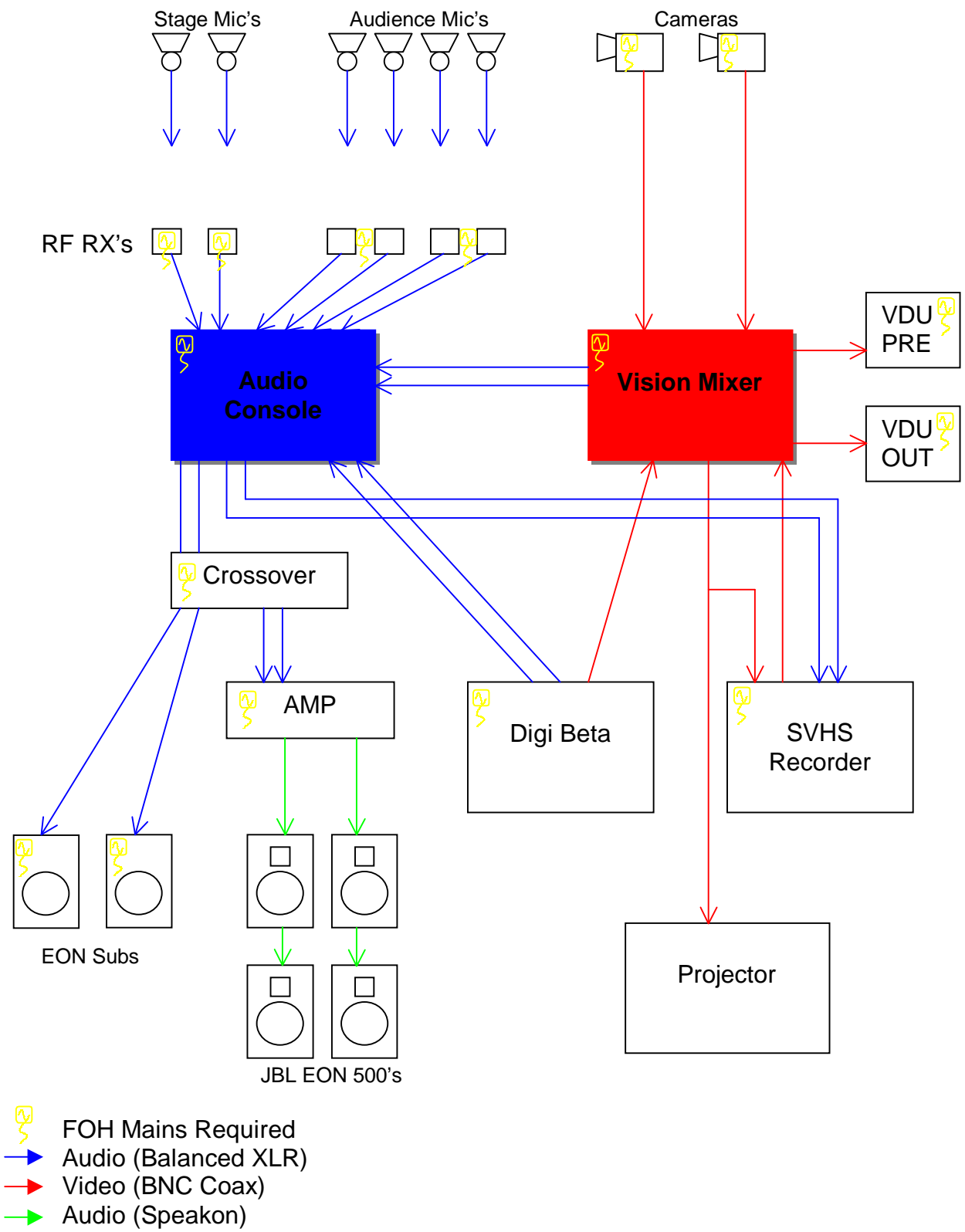
The Reel Life events are effectively a 'meet the talent' showcase for fairly large audiences with specific interests in film. They featured the likes of Sean Penn, Angelo Badalamenti and Emma Thomson in 2001 and it can be seen here that the fame involved deserves a professional and effective presentation. The events follow a fairly standard format, with an introduction by the artistic director followed by a simple question and answer session between the interviewer and the talent. This is projected using a two camera setup with live vision mixing. These questions are interspersed with clips of the talents work, projected onto a screen. This is then followed by an audience question session (one of the key parts of the Reel Life Brief).

The venues are all within the UGC multi-screen cinema in Edinburgh and come from one of three screens, with seating capacities varying from 250 to 530. The screens are standard scope format with no masking and are front projected. Each screen has two cleaners electrical sockets, one at the screen and one at the entrance. On the two smaller screens used, the entrance tunnels are at the side, with a central ramp in the larger screen.

The basic specification for the technical team can be broken into three sections:

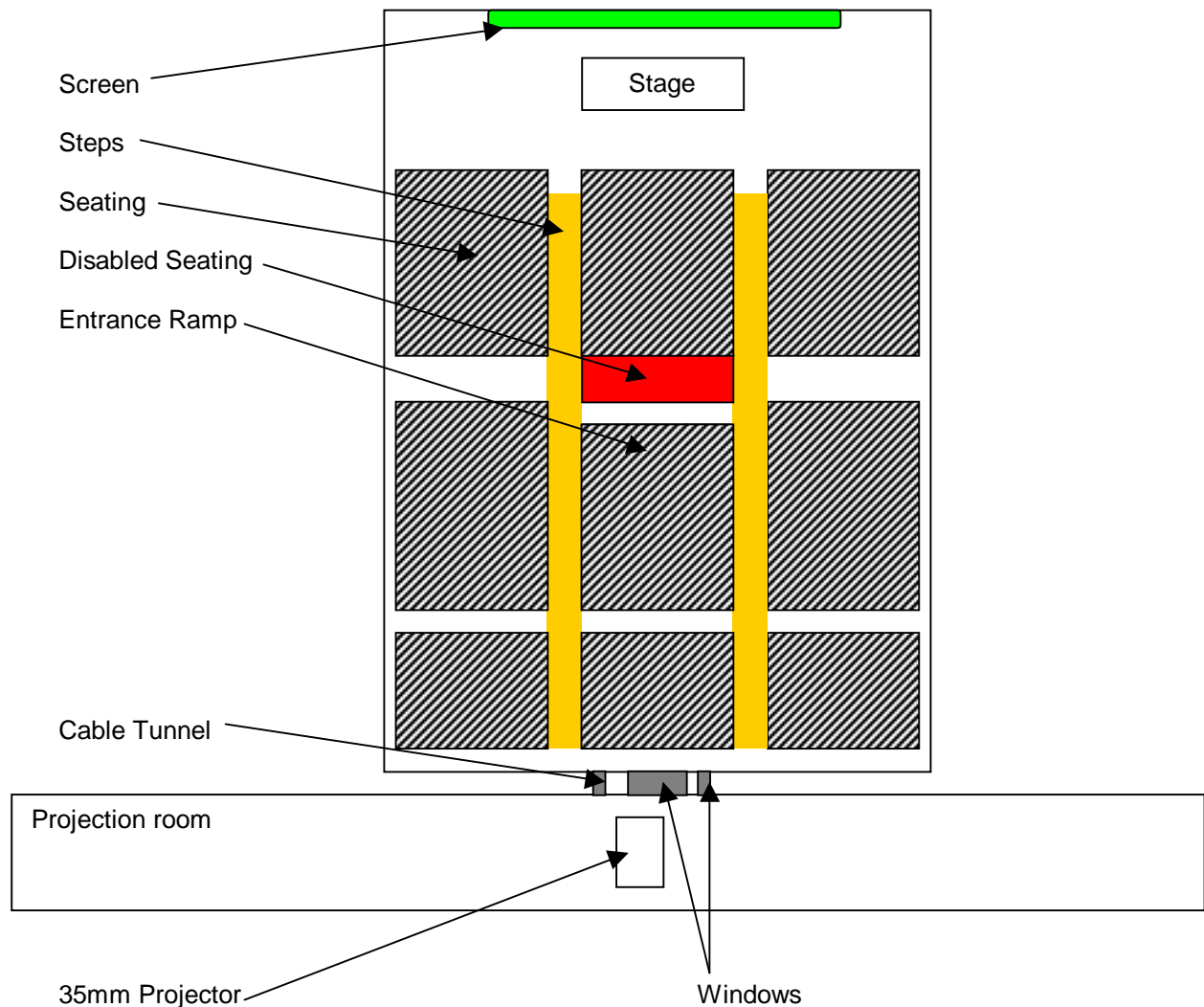
- Talent 2 to 5 radio clip mikes, 2-3 cameras with mixing
- Audience 4 roaming radio mikes
- Auditorium DigiBeta projection and audio amplification

Below is a schematic diagram of the set up used, this was the normal rig as there were changes in brief for each event. All the control and source gear was on a moveable trolley that was wheeled between screens:



**Basic technical layout for Reel Life events**

Next I will give a basic idea of the layout of the largest screen where the highest profile events were held:



***UGC Cinema, Edinburgh. Screen 7, seating 526***

As can be seen from both these diagrams and considering the short install and strike times available (usually about 2 hours in, 1 hour out), this is a very difficult system to configure effectively. The first real problem that we encountered was mains power. There are no less than 16 units (plus at least two high power lights) requiring mains power at front of house and this was achieved with just two standard mains outlets. Not only does this represent a considerable health and safety risk, it also ran the risk of tripping the system at any time resulting in a complete failure of the event. Luckily we found no phase problems with running the projector and sources from separate power loops. The second major factor was the lack of space, it is the festival and UGC's policy to provide disabled (wheelchair) seating with at least two places having an adjoining seat. In two of the three screens where access was only possible by the entrance ramp, we had no option but to use some of this space for our 2m long desk (even this was too small). It was also important to avoid blocking the view of any seats with our equipment and this proved a

major headache with the two tripod mounted cameras. Despite using only small Mini DV cameras, usually placed one to the far left of the auditorium and one in the centre, we found this unavoidable. One camera placement can block up to 8 seats in the rows behind and both cameras had to be manned.

I have already mentioned the problem of the lack of space but this manifested itself in another way. Because of the lack of auditorium room, we found it necessary to place all four speakers and two subs in front of the screen. These were laid out as a stereo pair on either side of the stage. If the speakers were placed too close to the front rows, it was impossible to give a satisfying level to those sat at the back. However, if we placed the speakers too far back, feedback became a major problem with the two stage mics. The feedback problems were compounded by the design of the auditorium. The entrance tunnel, especially in the two smaller screens where it directly faced the speakers, is perfectly designed to trap, amplify and re-broadcast all the resonant frequencies it possesses! There is an audible delay from the solid doors at the back of the tunnel but these cannot be left open. One solution we tried for this was to isolate the heavy frequencies by using the spectrum analyser on a laptop and try to take these out with the desk's eq. The problem we encountered here was that the Spirit Folio desk used had only limited three band eq with no Q control. It was thus very hard to leave a satisfying quality of sound without feeding back.

In terms of the actual mix, there were few problems except when five stage mics were required. This necessitated a sub mix for the audience mics supplied by a small Spirit Notepad mixer and sent in as a stereo mix to the main desk. Video wise, the vision mixing was simple and well presented with easy accommodation of three cameras and the Digi Beta. The problem came with outputs. The Panasonic vision mixer is set up to work in either SVHS or Composite video with one mix and one preview out. Although there were enough input channels to cope with the scenario, the one mix out was not enough to feed the projector, VDU and SVHS recorder especially considering the 50m cable run to the projection booth. We tried using both the SVHS and BNC outputs with the projector output taken from the through of the VDU but this resulted in a complete loss of sync on the SVHS machine which recorded the events on. The solution to this was simply to use an active video distribution amplifier but this required yet another mains outlet (last count 17 plus one lamp!).

This has covered the main technical points of the rig but there are many human factors which affected the running of the events. Firstly, there was a severe lack of skilled manpower involved in the setup. With myself as the only qualified engineer on the team, it was extremely difficult to supervise the inexperienced volunteers whilst meeting the very tight deadlines. The lack of supervision amongst the volunteers could have caused serious problems with such simple things as cable runs and health and safety. The second major factor was (as always!) the talent. It is simply not possible to run a sound check when the artists arrive 15 minutes before the event, especially as there was always a last minute panic to complete the set up. Thirdly, when it came to the audience questions, there was not enough liaison between the host and

our team to provide adequate information to the audience about the factors involved. In auditoriums of this size with only four microphones, there can be a short but unavoidable wait before the person asking the question gets a microphone. It has to be communicated to the audience by the host that they must have a microphone even if they are sat on the front row. Having four people handing out microphones in the audience is an excellent system, as long as they have had time to communicate before the event to sort out their areas of responsibility.

There are of course solutions to all the above problems. The human element is outwith my control and responsibility lies higher up the pecking order. Within the technical domain however, there are several simple steps that can be taken. Firstly, although having all the equipment in one place on the trolley is very usefull, there are simply not enough mains points within the auditorium to cope. The simple solution to this lies in the fact that each projector in the booth has a power board with a three phase output. Three phase to single phase 240V boards are readily available from PA hire companies and one of these units would solve all these problems making one of the most time consuming jobs a simple plug and go operation. The problem of feedback has several solutions. Firstly a proper sound check would go a long way. Secondly a desk with either a parametric EQ on the output or even better a fully parametric on each channel (A Yamaha 01V would be perfect) would solve all the problems. Alternatively, there are several feedback killer devices available but these tend to have a detrimental effect on the overall output quality and are only really for monitor use. Thirdly, it must be accepted that some seats need to be taken out of the ticket allocation to provide space for speakers to be placed further up the auditorium. They can be placed high enough on there stands to cause little destruction and the higher they are the further up the auditorium they will project. Using the cinemas own sound system is another possibility but this will need considerable investigation.

Hopefully these suggestions will help to make the reel life events at the 2002 festival even more successful than those in 2001 and will again encourage the big names to which they play host to spread the word and make the events even more exciting in the future.