Hello, and welcome to ‘The Phantom of the Opera’.

The show opened on October 9th 1986, and has now been running for over 17 years. In August of last year we celebrated our 7000th show! If you watched all the shows back to back (24 hours a day) for all 7000 shows it would take 2 years and 3 days. If you added all the applause during the shows together it would last for 3 solid weeks, 24 hours a day! One of our Orchestra Members (Mr Robert Norris - Cellist) has played 6,954 of the 7000 shows. That’s less than 2½ shows off per year! Approximately 7½ million people have watched ‘The Phantom of the Opera’ at Her Majesty’s Theatre, consuming more than 2 million Ice Creams. Subsequent productions of ‘The Phantom of the Opera’ have been seen on Broadway and in Japan, Austria, Canada, Sweden, Germany, Australia, Holland, Switzerland, Belgium, Mexico, Denmark & Spain. There have also been 2 national tours of the production.

Let me introduce myself. My name is Stewart Arnott, and I am the Stage Manager for ‘Phantom’. That means that I am responsible for looking after all the technical aspects of the show from day to day as well as in the long term.

What do I mean by the technical aspects? That means everything that happens onstage except for the music, the acting, the singing and the dancing. These areas are looked after by our Musical Director, our Resident Director and our Resident Choreographer, while the Company Manager has to balance the interests of the show and all the individuals who work in the theatre with those of the producer’s office, Cameron Mackintosh Ltd. He is the main link between the theatre and the office.

As you can imagine, on a big show like ‘Phantom’ there is a lot of technical stuff to look after, so I don’t do this all on my own. There are five of us in the Stage Management team, and along with the Company Manager we co-ordinate all the other departments to ensure that the show runs smoothly, and above all safely.

Before you read any further, have a think about how many technical departments might be needed and what each one might look after. Compare your answers with the following list of what it actually takes to run ‘Phantom’.
Wardrobe

The Wardrobe department looks after all of the costumes used in the show. This involves organising getting them made in the first place, using them in the show, and cleaning and repairing them. To do this takes 4 full time staff and 16 dressers. There are 260 costumes & 165 pairs of shoes in the show. It takes over 120 hours to make one of the principal bustle dresses. Mr Philip Griffiths holds the record for the longest surviving pair of shoes in the show. He has worn the same pair of ‘Il Muto’ shoes for 13 years. Since the show opened, over 5,400 pairs of tights have been used, the ballet girls have gone through more than 10,000 Pointe shoes, and over 5,400 litres of laundry detergent have been used keeping it all clean!

Wigs

The Wig department organises getting all the wigs made, using them in the show, and cleaning and maintaining them, just like the Wardrobe department. This takes 6 full time staff and 6 assistants. There are 120 wigs in the show. It can take up to 32 hours to make just one wig, with each of the 30,000 to 40,000 hairs being knotted in by hand! The Wig department have to clean and style most of the wigs on a daily basis, which can take up to 8 hours just for one show.

Make Up

Our Make Up department is made up of just 1 person. She has to teach all new cast members what make up is needed for each scene, and provide specialised make up where needed. Then, of course, there is the Phantom. Preparation alone for this can take anywhere up to 12 hours per week. Each evening, before the show, the Phantom sits in a special chair and has his make up applied to transform him from a normal looking person to the disfigured and tormented creature you see onstage. This can take anything up to 2 hours.

Stage

The Stage department look after the stage itself (i.e. the floor), the set, the flying system and all the flying pieces. During the day, they do any maintenance or repairs from the previous show. Then at the beginning of the evening the stage crew join them for the Preset, which is when the stage itself is finally prepared for the performance. They clean the floor, get all the bits of the set in the right place for the start of the show, and prepare some of the effects. During the show, they make sure that all the stage crew are in the right place at the right time, and give us safety clearances over cans. This takes 4 full time staff, 14 crew members, and 8 flymen. Everybody onstage, has a total of 14 tons of scenery and equipment hanging above their heads. There might be some words in this section that you are unfamiliar with, such as ‘flying system / pieces’, ‘flymen’, ‘safety clearances’ and ‘cans’. Try to find out for yourself what these mean.

LX

LX is short for ‘Electrics’. That might give you a clue what this department looks after. They look after all the lighting, the smoke, the dry ice, the pyrotechnics (the firework effects in the show), and a number of practical items ranging from small hand lamps to the big chandelier. Their day is similar to the Stage department’s, with the Follow Spot Operators and Stage Electricians joining for the Preset to prepare for the show. This takes 5 full time staff, 6 Follow Spot Operators and 2 Stage Electricians. Aside from over 450 lights, there are 120
candles which come up through the floor, each with an electric bulb which has three smaller bulbs inside, two of which flicker while one stays lit, giving the impression of a candle flame. Phantom has used over 1,000 tons of Dry Ice during the time the show has been here. That’s the same weight as 140 London Double-decker buses.

**Automation**

The Automation department (also known as the Perch, because they operate their machinery from a little shelf perched high up on the wall at the side of the stage!) looks after all the pieces of the set that move by machinery. This takes 2 operators. Some of this runs by hydraulics and some by electric motors. These pieces include all the Candles and Candelabra, the Angel, the two big red theatre curtains that swag open and closed, the Chandelier, and more. Our chandelier has a steel structure to make it strong enough to crash onto the stage 8 times a week. There are 3 large 12-volt batteries inside it to power the lights (which are radio controlled). Together with all of the decorations this makes it weigh just over 1 ton – about the same as a small car. It is raised and lowered on 2 motors located in the roof of the building. These motors work together to make the chandelier drop in 5 seconds at the end of Act I. Since we opened, the Candelabra have moved up and down about 30,000 times. The largest of the 6 Candelabra is over 10 feet tall. As you are watching the show, try to spot what other pieces may be automated.

**Sound**

The Sound department maintains and operates all the sound equipment necessary for the show. They make sure that everyone has the correct microphone at the correct time (not everyone has a mic all the time, and some mics move from person to person throughout the show). They also mix the sound of the show from a desk at the back of the Stalls, and operate various sound effects throughout the show. This takes 2 people, and it is a very demanding job, as they can’t let their attention slip for even a moment, and they have to be able to vary what they do to compliment each singer’s performance. There are 26 Radio Mics, 30 Orchestra Pit Mics, 5 Float Mics and 2 Off Stage Mics. Each of the Radio Mics uses 2 AA batteries per show. Since the show opened, that’s somewhere in the region of 364,000 AA Batteries – If these batteries were laid end to end, they would reach all the way round the M25

**Stage Management**

The Stage Management team co-ordinates all the above departments both in the preparation for the show, and in running it. We are involved in all rehearsals, and we organise all the maintenance and repairs that need to be done on a daily basis. During the show we make sure that all the props are in the right place, and that all the effects happen correctly, and at the right time. Sometimes this takes split second timing. Since the show opened, our props have included nearly 3000 loaves of bread and over 5,500 apples. The Boat is driven from the wings by one of the Stage Management team. If you added all of the Boat’s journeys together, it has travelled the equivalent distance of London to Newcastle. More on the Stage Management team later.
All of the above is what is needed to perform the show, but to keep it running in the long term takes even more people. We use a number of outside contractors to help us look after the heavy machinery and some of the more specialised areas such as props or the flown cloths. Here are just a few:

**Stage Services** and **Delstar** between them look after all the heavy metalwork, the machinery and the motors.

**Terry Murphy**’s look after all the lighter machinery (usually wooden, but not always), and all the scenic artwork.

**Creasey**’s look after the flown cloths. This can be anything from repairing a small rip to making entire new cloths from scratch.

**Jane Slattery** provides and repairs the majority of our props.

**Matt Chandler-Smith** looks after the electronics, such as in the Boat, or the Perch console for the automated scenery.

**Blitz** looks after our Sound equipment such as the microphones, the amps, the sound desk, and the cans. There’s that word again – have you found out what it means yet?

Even this is not everybody involved in running ‘The Phantom of the Opera’. There are all the people who work in the producer’s office, and a number of theatre staff such as ushers, bar staff, stage door keeper, fireman, and more. Every theatre has its own fireman who is on duty whenever the building is open to the public, and his or her main concern is the safety of all the people using the building.

That’s a lot of people, isn’t it? All in all, it takes just over 200 people to run ‘The Phantom of the Opera’. The Cast & Crew are supplied with bottled drinking water – since we opened we have got through almost two thirds of a million litres of water. The show would not happen if it wasn’t for pain killers! We have consumed more than 84,000 of them.

So, what do I mean when I say that the Stage Management team coordinates all the other departments? Each week, as the Stage Manager, I issue the technical schedule for the following week. This goes to all the departments around the building, and to the producer’s office, and lets everyone know what is happening onstage and in the related areas during the coming week. It also tells the departments what staff will be needed for each rehearsal, etc. Here is a copy of one of our technical schedules. You will see the matinee shows, a couple of rehearsals and what staff are needed, and maintenance by in house staff as well as outside contractors. We don’t mention the evening shows, as everyone knows that there is one each evening!
<table>
<thead>
<tr>
<th>Day</th>
<th>AM</th>
<th>PM</th>
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<tr>
<td><strong>Monday 16th February</strong></td>
<td><strong>10.00am - 5.00pm</strong> <strong>CML AUDITIONS ONSTAGE</strong> Bare stage (Dance floor left down from Sunday concert), bright LX audition state, production desk and lamp, please. <strong>Staff called at 9.45am</strong> 1 Sound</td>
<td><strong>10.00am - 5.00pm</strong> <strong>CML AUDITIONS ONSTAGE</strong> Bare stage (Dance floor left down from Sunday concert), bright LX audition state, production desk and lamp, please. <strong>Staff continued from morning</strong> 1 Sound 1.00pm <strong>To join</strong> 1 S/B LX</td>
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<td><strong>Tuesday 17th February</strong></td>
<td><strong>STAGE MAINTENANCE CALL</strong> <strong>Staff TBA</strong> Delstar &amp; Stage Services in today instead of Monday</td>
<td>**12.45pm Preset for 2.30pm ** <strong>MATINEE PERFORMANCE</strong> <strong>Q&amp;A Session: Glen</strong></td>
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<td><strong>Wednesday 18th February</strong></td>
<td><strong>NO REHEARSAL CALL ONSTAGE</strong></td>
<td><strong>2.15pm – 5.15pm</strong> <strong>REHEARSAL CALL ONSTAGE</strong> Gala, Auction, Chandelier Drop, Firemen, 2nd Panic &amp; Dive Jump <strong>Staff called at 1.45pm</strong> 2 SMs (P,G) 4 Crew 2 Flys 1 Perch 1 Sound 1 Stage LX (Birdcage) 1 S/B LX</td>
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<td><strong>Thursday 19th February</strong></td>
<td><strong>NO REHEARSAL CALL ONSTAGE</strong> Murphy's working on all Foliage all day</td>
<td><strong>NO REHEARSAL CALL ONSTAGE</strong> Murphy's working on all Foliage all day</td>
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<td><strong>Friday 20th February</strong></td>
<td><strong>LX MAINTENANCE CALL ONSTAGE</strong> <strong>Staff TBA</strong></td>
<td><strong>LX MAINTENANCE CALL ONSTAGE</strong> <strong>Staff TBA</strong></td>
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<td><strong>Saturday 21st February</strong></td>
<td><strong>SUGAR SOAPING CALL ONSTAGE</strong></td>
<td>**12.45pm Preset for 2.30pm ** <strong>MATINEE PERFORMANCE</strong></td>
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<td><strong>Sunday 22nd February</strong></td>
<td><strong>NO SUNDAY CONCERT</strong></td>
<td><strong>NO SUNDAY CONCERT</strong></td>
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**NOTES:**
Apart from long term things like cast changes, rehearsals, changes to the show etc., the Stage Management team also plays a big part in making sure that everything happens when it is meant to during the running of the show. There are 5 of us in the team. It takes four of us to run the show, and so the fifth allows for holidays, illness, teaching and so on. The team is made up of the Stage Manager, a DSM (Deputy Stage Manager), and three ASMs (Assistant Stage Managers). The Stage Manager keeps an overall eye on the running of the show, making sure that all the scene changes run smoothly and that all the effects happen, while the ASMs look after the wings. That just leaves the DSM. What do you think his or her job might be?

Many people think that everyone backstage simply gets on with their job and everything magically coincides to create all the effects. For some things this is the case; but anything that happens in view of the audience in the way of the set, the lighting and the special effects is cued by one member of the Stage Management team, the DSM (Deputy Stage Manager). The DSM spends the whole show in Prompt Corner at the Prompt Desk. The Prompt Desk is a little console downstage left which is equipped with cans, cue lights, and the Prompt Copy. The Prompt Copy is a folder with the musical score of the show in it, and against the music are written all the specific cues that the DSM has to give in order to make the scene changes and the special effects happen. Everyone who needs to take a cue is either on cans where they will get a verbal cue, or by a cue light which will tell them when to do their cue.

Cues are given in the form of a ‘Standby’ and a ‘Go’. Many of the cues are numbered. For example, the cues for the lighting run from LX Q 1 (which is all the lights that it takes to light the stage while the audience are coming in and getting ready to watch the show) through to LX Q 205 (which is the House Lights coming back up again at the very end of the show). For them, a standby would go like this: ‘Standby, please, LX Q 30.’ (or whatever number we were up to). The same goes for all the other departments whose cues are numbered (‘Standby, please, Fly Q 30’, or ‘Standby, please, Perch Q 30’). The reply in all cases is ‘Standing by.’

For cues that are given by cuelight, the DSM will give the standby by pressing a button, which lights up a flashing red light at the Prompt Desk and wherever on or around the stage the cue is going to be operated from. When the operator is ready, he or she will press a button, which stops both red lights from flashing so that they glow steadily. This lets the DSM know when everyone is ready.

When the time for the cue comes, the DSM will say on cans ‘LX Q 30, Go.’ (Fly Q 30, Go.’ Etc.) On the word ‘Go’, the operator does the cue. For those who take their cues by cuelight, at the cuepoint (the moment when the cue should be done) the DSM presses a button on the Prompt Desk, which lights a green light both at the Prompt Desk and where the cue is to be done. This tells the operator to do the cue. By getting people to respond promptly to their ‘Go’s we can achieve the split second effects in the show. Some of these are so subtle that the audience shouldn’t even be aware that there is an effect. See if you can spot any of these effects.

Here are is a page from the Prompt Copy, showing you how the cues are laid out.
IF STAIRTRAP DOESN'T OPEN
INFORM DRESSER & WIGGIES
TO GO TO OP WING

LXQ 104  SHADOWGRAPH LIGHT
FLYQ 30B  REAR WALL INTO DECK
LXQ 105  LX U.S FOR BODY DROP
FLYQ 3I  IL Mito BACKCLOTH↑
F/O  BODY DROP ↓

IF  STAIRTRAP OPENS, STAIR RAIL AND WALL SET

LXQ 106  DIM LIGHT DSL + DSR
F/O  FADE TO BLACK

FLYQ 32  OPERA ROOF CUT OUT↑
FLYQ 32A  IL Mito CLOTH ↑
WINCH Q 9  BOXES TO FULLY OFFSTAGE
PS PS 712 - 000

ON 3RD BEAT OF BAR
LXQ 104  SAY LXQ 105  FLYQ 31  GO
VIZ AS SHADOW FILLS BACKCLOTH
OP FLYS Q LIGHT ONLY (FLYQ 30B) GO

AS BALLET GIRLS UP INTO ATTITUDE
LXQ 105  FLYQ 31 (*OP FLYS*)  GO

ONCE BODY DROPPED - TRAP CLEAR
STAIRTRAP (*TRAP*)  GO

RAOUL & CHRISTINE EMBRACE
LXQ 106  GO

PLEASE REMAIN IN YOUR SEATS DO NOT PANIC
FLYQ 32 (*OP FLYS*)  GO
SIMPLY AN ACCIDENT - GO
LXQ 107  FLYQ 32A (*OP FLYS*)  GO

IMMEDIATE FOLLOW ON
WINCH Q 9  PERCHQ 19  GO

'UXQ 103'...

BUQUET'S BODY DROPS IN.

THE SYLVAN GLADE
FLIES OUT.

SEGUE NEXT SCENE

FIRMIN
Ladies & gentlemen,
please remain in your seats.
DON'T panic.
It was an accident...
Simply an accident...
You will see above each cue a brief description of what the DSM looks for or listens for in order to give the cue. The cue may be taken from the words being sung or a certain note in the music, for example, so the DSM has to listen for the cue; or from the choreography, so he or she has to watch; or it may be from a certain movement (usually an upbeat) from the Conductor, so he or she has to watch a monitor beside the Prompt Desk, or it may even be when one piece of scenery has reached a certain place. Notice that in the far left hand column, the details of what should happen on each cue are written out. This helps the DSM know what will happen when each cue is called. It also helps us arrange any changes, should we need to, if something goes wrong. And yes, things do go wrong! When they do, it is my job to decide what we are going to do to keep the show running, and to make sure that the information gets passed to everybody necessary to make the changes.

At the end of each show we send a report to our main office telling them all sorts of things about each individual show, such as what time we started and finished, who was off sick or on holiday, which understudies went on for them, whether anything untoward happened during the show, and what the audience’s reaction was. Here is a copy of a Show Report. All the shows are numbered, starting from Show No.1 on October 9th 1986 (Opening Night).
Despite having repaired last night's problem with the mounting for the open limit on the No.1 OP Slider, the No.1 Sliders failed to register open again on the Perch console during the 1st Journey this afternoon. This turned out to be a problem with the open limit (not the mounting) on the No.1 PS Slider. We tried, but were unable to repair this for today, and so until the LX Dept and Stage Services have time to work on this on Monday, the No.1 Candelabra have had to be cut from the show.

One of the security cages around the Chandelier flash bulbs had not been secured in the Preset, and so the decision was taken not to fire the flash bulbs at the end of Act I. We still had the Bowen flash onstage and the flash from the lights in the front of the Pit though. LX Preset error.

Otherwise a technically smooth performance.

Each day, in setting up for the show, we run a Safety Check. We open all the traps, move all the winches, and run all the automated equipment. Then we move on to the Preset. After you have seen the show, you will be able to watch the Preset for the evening, and a member of the Stage Management team will be with you to answer any questions you may have. The Preset you will see does not contain a Safety Check, as we will already have done this before the Matinee. You will see everything else, though. We clean the stage with buffing machines, like you see in shopping malls. Then we put everything in place for the start of the show. The various bits of set are put where they need to be, and some of the effects are prepared. Next, the relevant flying pieces are brought in. The Stage Management team then puts all the final touches in place, and lastly, the Stage Manager goes round and touches up all the fine details to get things looking just right.

Here are some things for you to look out for during the Preset. You will see the Drapes being set by the Stage Crew. This is dangerous work, and everybody involved wears a harness to catch them if they should fall. Watch for the stage being buffed. Look out for the difference before and after. Before, the stage will be dirty and dusty. After, it will be clean and glossy. The Drop Cloth (the cloth which falls and nearly kills Carlotta early on in the show) will be rolled up and prepared for nearly killing Carlotta yet again! Some of the Pyros will be set in their little traps in the stage ready to explode later, and the big Chandelier will be flown back down to the stage ready for the show. Then the Stage Management team will finish things off with the final touches.

I hope you have found this interesting, and I hope you have learnt something about life backstage on a big show like ‘The Phantom of the Opera’. You may already have some questions you would like to ask (write them down now so you don’t forget them!), and you may have yet more questions once you have watched the show. I hope you enjoy the show when you come to see it, and we look forward to meeting you in the Question And Answer session afterwards.