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A Very English Musical

Dreamworks Theatricals' *Shrek the Musical* has finally arrived in the West End at the Theatre Royal Drury Lane, following its opening on Broadway and a two-year tour of America. But like all fairy stories, the details change with the telling and the English version is, well, just that little more English than the original. Julie Harper reports . . .

Production photography by Brinkhoff Mögenburg

Dreamworks Theatricals and Neal Street Productions' *Shrek the Musical* has finally arrived in the West End at the Theatre Royal Drury Lane, following its opening on Broadway and an ongoing tour of America. But like all fairy stories, the details change with the telling and the English version is, well, just that little more English than the original.

Shrek the Musical leads us through forests from Shrek's swamp to Lord Farquaad's castle at Duloc, to Fiona's Dragonguarded tower and on to the court and cathedral, by a Scottish ogre and a plethora of fairy story characters. The witty script weaves snippets of fairy stories and pastiches of West End musicals into the storyline with irreverence and a lot of wind!

Largely based on the US touring production, yet with much of the visual language of the Broadway production, the show's design draws from both versions, with some additional elements and embellishments introduced to make the UK production a little more 'West End'.

Associate designer, Tim McQuillen-Wright, explains: "(Designer) Tim Hatley translated William Steig's book illustrations into the Broadway 'language' which often referenced, but did not copy, the film. We have pushed this further by placing more emphasis on its storybook origins.

"We have explored the style of pop-up books to create brightly coloured, larger-than-life scenes which jump out at the audience as the pages are turned. This is the visual hook off which the whole design hangs. The result feels like a single design with multiple layers, like the pages of a book. There is a new discovery with every turn."

No longer subject to the constraints of touring, some new elements have been introduced or expanded upon; these include a hydraulic rope bridge which rises out of the stage carrying Shrek and Donkey with it, a tracking element added to the flown LED wall, and a streamlined 'levitation' of Fiona as she is transformed into an ogress. There is a greater degree of integrated automation control and some refined video work. Most notable of all, however, is the addition of a flying Dragon which circumnavigates the auditorium above the heads of the audience.

The Dragon

The onstage Dragon, enamoured of Donkey, is the 22ft (6.7m) long creation of Michael Curry Design of Oregon. Designed for lightness, the body is constructed of fabric formed around hoops to hold the shape. The wings are of carbon fibre and aluminium and the head a light-weight carbon fibre complete with illuminated eyes and fluttering eyelashes. She weighs 60lb/27kg and is operated by four (very fit) puppeteers who run their socks off to create her fluid movements around the stage.

By contrast the flying Dragon is of quite different construction with the emphasis on overhead safety requirements rather than lightness. A smaller-scale version of the stage Dragon, measuring 14ft/4.2m, weighing 130lb/60kg including onboard electronics, was created by MCD around a sturdy, welded steel frame. This was clad in a lightweight foam to form the body with a carbon fibre head which allowed MCD to retain the facial details that capture her all-important personality. She descends via a circuitous route at up to 4.5m per second to within 30cm of the MD, flapping her wings as she goes, before joyfully incinerating Lord Farquaad on the altar with the help of a boosted Look Solutions Tiny Fogger in her mouth (courtesy of Howard Eaton Lighting Ltd).

Scott Fisher of Fisher Technical Services was brought in to devise the best means of achieving her flight. The Dragon is suspended from six FTSI 515 winches which are positioned on a front-of-house crawl truss installed by Unusual Rigging. A steel post with extra bracings and a variable speed chainhoist were installed in the chandelier void to give the Dragon a third point of travel whilst protecting the fabric of the listed building. The FTSI winches and associated rigging hardware were installed by Gavin Wetherall and his team of riggers from Flywire TRP.

The Dragon is attached to the winches by an intricate system of lines installed by FTSI's Jim Love and Jeremy Day. Six lines of Technora synthetic rope, which has a higher breaking strength than steel, give control over six degrees of freedom, diverting her left and right, up and down and allowing her to roll left and right and pitch and yaw. The rigidity of the rig and its hexopod geometry provide enough stability for the dragon's internal rotation mechanism to rotate accurately, providing a smooth, dynamic flight. Finally, internal Exlar Tritex actuators deploy the wings.

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The Dragon's control system is completely independent of the Stage Technologies system that governs all on-stage automation. Its flight is programmed by Jim Love using FTSI Navigator 3D software on an FTSI Kinetic console. This is operated by the show's head of automation, Richard 'Tricky' Willcox, who says: "Using Navigator we can program her flight path, rotate her in the direction she is travelling, and get feedback on how the system is performing. It's a complex set of moves but the system gives us a lot of flexibility."

Additional music has been composed by Jeanine Tesori for the flight action and an extra set of sound effects, built using Pro Tools, is played back on D-Mitri's Wildtracks, to add more interest to the sequence of events. Maximum use is made of the surround sound with speakers located around the flight path to follow the Dragon's movements and give it audible life. This helps build the audience apprehension and anticipation even before they can see her - especially for those beneath the circles who have no visual contact until the last moment.

The flight is lit largely by gobo breakups from ETC Source Fours and Philips Vari-Lite VL3500s located below the boxes on each side of the auditorium, whilst smoke emanates from two Look Solutions Vipers with fans positioned in the mid boxes to create atmosphere and help disguise the suspension ropes.

Fiona's Levitation

The levitation sequence follows the moment when Lord Farquaad is incinerated, leaving nothing but a smouldering altar cloth. This is achieved in just four seconds using five Viper smoke machines and six bottles (per show) of liquid CO_2 piped through valves and mixed with the smoke through floor grids to the front and sides of the altar. The altar cloth disappears as it is pulled down through

a storage chute by a high speed winch and Lord Farquaad disappears from the audience's view.

Fiona is subsequently raised 2m into the air and rotated, balanced on a bicycle seat concealed within the altar. Six axes of movement, operated by three pneumatic and three electric motors, are employed to open doors in the altar front, move the seat outwards and upwards, and to rotate whilst being cunningly hidden from the audience by the actress. The altar and effects were supplied by Howard Eaton Lighting Ltd.

Rope Bridge

The 10m long rickety rope bridge which traverses the 'lake of molten lava' has also undergone a transformation, with the Drury Lane production the first to see it rise directly out of the stage.

Two sections of stage floor are hydraulically raised 3m above stage level and form the supporting framework between which the rope bridge is suspended. Shrek and Donkey are lifted up with the platforms before walking across the bridge as it collapses, lowering them back to stage level.

Constructed by Weld-Fab Stage Engineering Ltd of Norfolk and clad by set builders Scott Fleary Productions, the bridge is concealed within a self-contained unit along with the hydraulic rams that open out the parallelogram framework, and the arms from which the rope bridge is suspended, and which ensure that it falls back into the stage without snagging. This unit is installed on existing stage elevators which are sandwiched between the structural remains of past productions in the theatre's historic substage, thus determining the bridge's position on stage. A quiet, variable speed, hydraulic power pack, located upstage, provides power to raise and lower the platforms to their full height of 5m (2m below stage).



Two Look Solutions Viper smoke machines and six PAR cans are buried substage to create the necessary 'molten lava' effect from below.

For safety reasons, the bridge is operated from a portable control panel provided by Weld-Fab to ensure stage management have a clear line of sight with the actors throughout the sequence.

Rigging & Flying

At three tons, the speaker system was one of the heaviest theatre systems Unusual Rigging have ever installed on a front-of-house crawl truss. The truss also carries a 10kg model donkey, made by Complete Fabrication Models and Effects Ltd, for the 'donkey drop' (used to introduce the character of Donkey) the mechanics of which were supplied by HELL. The truss was installed using eight 1-ton hoists, with four spreader beams placed in the front-of-house void for extra weightbearing.

The fly floor is especially busy and heavily loaded with 40 flown cloths and four lighting trusses, most of which carry moving lights. Unusual Rigging had the job of flying 18 tons of set off the Lane's limited house counterweight system.

The house flybars were replaced with five tons of Unusual ladder beams and secondary steelwork added in the roof for increased weight-bearing. Each house counterweight cradle could only handle a maximum of 125kg, so these were replaced by Unusual's own, each of which can handle up to 1.5 tons. For three of the flown pieces, which weigh over 1400kg each, several of the cradles were connected together to triple or quadruple their normal capacity.

Simon Stone, project manager for Unusual Rigging, explains: "We took advantage of the fact that the theatre has 125 counterweight sets, split between both sides of the stage: so every flown piece has two steel wire ropes from a stage left cradle and two steel wire ropes from a stage right cradle, to give us enough cradle capacity. This way, each piece of set is actually countered on both sides of the stage."

There are seven counterweight assisted pieces in all which are moved by Stage Technologies' Big Tow Classic winches. The LED wall, the heaviest piece of all at just under 2 tons, is moved by a flown SEM 115 motor and guided by legs installed in the wings by Unusual Rigging.

Tracking LED Wall

Flown upstage, the 13sq.m 10mm pixel pitch LED screen, provided by Creative Technology, is used to represent the slow passage of the sun and the moon. The LEDs were programmed on a grandMA2 and run off a grandMA1, triggering two Green Hippo Hippotizer V3 media servers (one of which acts as backup).

The new tracking function is automated by Stage Tech's eChameleon software Sculptor feature enabling the wall to travel at a speed of 2mm per second. "It is a very slow move for an axis and very unusual," says Willcox. "With Sculptor I can set up the visual graphics on the desk, plot the start and end positions for the 10-minute move and the software works out the rest to give the optimum movement across lift and track."

Willcox is also responsible for the automation on stage using a Stage Technologies control system. This consists of four AU:tour 6 and one AU:tour 1 with an Acrobat.G6 console running the eChameleon software. Each AU:tour 6 cabinet runs 6 axis at variable speed allowing the operator to run timed moves of anything from 5 seconds to 10 minutes. It controls a total of 25 axes of movement, including six floor tracks, 11 sliders and portals, the lift and tracking of the LED screen, a counterweight lift and tracking of flying redwood trees, plus five further flying pieces.



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Crew & Creatives

Directors

Jason Moore and Rob Ashford

Designers

Tim Hatley, Tim McQuillen-Wright (associate)

Stage Technologies

Director: Ted Moore Mechanical engineer: Charlie Ellis Project manager: Simon Roberts Project engineer: Chris Havard Electrical engineer: David Hayler

> Fisher Technical Services Scott Fisher & Jim Love

Automation

Head: Richard 'Tricky' Willcox Deputy head: Adam Calver Automation assistant: Chris Goode

Unusual Rigging

Senior Rigger: Simon Stone Design Engineer: Jeremy Featherstone Riggers: Chris Evans, Craig Warlow, Mark Davis

Sound

Sound designer: Peter Hylenski Sound associate: Chris Full Head of sound: Mark Karrie Sound No.2: Robin Conway Sound No.3: Claire Hibberd Sound supplier: Autograph

Lighting & Video

Lighting designer: Hugh Vanstone UK associate lighting designer: Matt Daw US associate lighting designer: Philip Rosenberg Senior production electrician: Fraser Hall Production electricians: Richard Mence, Simon Targett Moving lights programmers: Jonathan Rowse, Dave Sadler UK media associate & programmer: Duncan McLean US media associate: Laura Frank Lighting supplier: White Light Video supplier: Creative Technology

Set Building

Howard Eaton Lighting Ltd, Terry Murphy Scenery, Scott Fleary Ltd, Souvenir Scenery, TR2 Theatre Royal Plymouth Production Centre, Weldfab Stage Engineering Ltd

Cloth Painting

Gordon Aldred, Alasdair Brotchie, Andy Greenfield, Eugene Neilson, Richard Nutbourne, Julie Perren



The floor tracks and slider trusses are built by Weld-Fab and run on timing belt drives with Stage Tech servo motors moving the sliders on rubber-toothed belts. The scenic sliders are connected overhead to 10 further Stage Technologies servo motors.

Stage Technologies project manager, Simon Roberts, says: "The system gives the flexibility to run counterweights, sliders, whatever you want. By automating them we can achieve consistency and a high degree of safety, which is important for such a technical show.

"We worked closely throughout with Unusual Rigging and Stage Services, who fitted the winches. It's a close collaboration between all the departments from the designer down."

Willcox agrees with Roberts. "One of the biggest challenges was integrating so many different contractors. There are two automation control companies and many set builders involved, including Howard Eaton Lighting Ltd, Terry Murphy Scenery, Scott Fleary Ltd, Souvenir Scenery, TR2 (Theatre Royal Plymouth Production Centre) and Weld-Fab Stage Engineering Ltd. The relationship between departments has been key to the success of the production."

As head of automation, programmer and show operator, it is Willcox's job to bridge the gap between the FTSI and Stage Technologies control systems. "It was fairly straightforward to program the show on the Acrobat with the eChameleon visualisation software," he says. "I was able to pre-program a lot from the detailed storyboard and measurements provided by Tim McQuillen-Wright. Patrick [Stanier, DSM] could email me any changes from rehearsal, after which it was a case of fine-tuning what was already in place.

"Each week something was added - for example, the performer lift in Lord Farquaard's Castle. This was built by Terry Murphy Scenery and started life as a manual move. We then decided to automate it and it's now controlled by the AU:tour 1 driving a Big Tow Classic. It proves the Stage Tech' system is flexible enough to be able to cope with these fast changes."

Willcox also operates the FTSI Navigator desk to fly the Dragon. "It's the first West End show for the Navigator and a steep learning curve for me, as it is a different operating system from the Acrobat. Jim has been a great help and I am impressed with how it has all gone together. The eChameleon's and Navigator's virtual graphics means I can monitor every single scene change which is vital when it is so busy. Between the two systems we can do some pretty impressive stuff."

Finally, Willcox also operates a laptop running a Kinesys Vector system to control two lighting trusses on variable speed chain hoists, all of which was provided by Unusual Rigging.

Lighting

The lighting brief was largely based on that of the US tour and recreated for Drury Lane by Hugh Vanstone with the assistance of UK associate lighting designer Matt Daw. The primary requisite is to bring a heightened quality to the bright, bold costumes and sets.

Vanstone's rig is based around a core of Philips Vari-Lite equipment: VL3000 Spots, VL3000 Washes, VL3500 framing spots and VL500 80V tungsten washlights, as well as Martin Professional TW1 tungsten washlights.

These fixtures are rigged across four overhead lighting bars: VL500 80V tungsten fixtures positioned on the two downstage bars create mid-air effects, while VL3000 spots and washes rigged on the Kinesys-driven upstage bars cater for the changing deads throughout the show.

Cross-light is provided by VL3000 spots, VL3000 washes and TW1 fixtures on five



Top, L-R: The Rigging & Automation team: Simon Stone (Unusual Rigging), Adam Calvert, Simon Roberts (project manager, Stage Tech), Richard 'Tricky' Willcox and Chris Goode.

Middle, left: Associate set designer Tim McQuillen-Wright; Middle, right, L-R: The sound team - Peter Hylenski (sound designer), Mark Karrie (head of sound) and Chris Full (sound associate).

Above, left: Jim Love of FTSI. Above, right, L-R: Fraser Hall (senior production electrician), Duncan McLean (media associate & programmer), Matt Daw (associate LD), Jonathan Rowse (lighting programmer).

pairs of dead-hung lighting ladders. iPix BB4 and PixelRange PixelLine 1044 LED fixtures are located behind the groundrows, augmented by L&E battens for scenic and cyclorama lighting.

Front-of-house, four VL3500s, with VL500 80V tungsten units on the proscenium, do most of the work, with additional washes provided by ETC Source Fours, used sparingly for 'extra kick'. Three Robert Juliat Lancelot 4kW HTI followspots were chosen for their punch over the long throw distances of one of London's largest theatres.

On stage, low smoke is fed from four Le Maitre LSG liquid CO_2 machines through eight HELL pop-ups. Two MDG Atmosphere Haze machines and two Look Solutions Unique Hazers, located in the wings, provide fast, ambient smoke, while a Tiny Fogger concealed within the campfire and a roving Viper on a dolly complete the atmospheric line-up.

The installation team consists of senior production electrician Fraser Hall and his team of Richard Mence and Simon Targett. The show was programmed by Jonathan Rowse and Dave Sadler and is controlled from an MA Lighting grandMA console. All lighting and smoke equipment is provided by West End stalwarts, White Light Ltd.

Video

Video has become a prominent force within theatre and Vanstone has worked hard to redefine its use in theatre lighting since his previous collaboration with Hatley on *Spamalot* in 2005. Here, video is used to enhance, not dominate, the lighting. Effects range from the obvious such as moving clouds, fireworks and green sparkles during Fiona's levitation, to subtle embellishment of the gold trim on the book



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(702) 251-0700 www.fishertechnical.com bindings in the giant bookcase, heightened colour in individual leaves and blades of grass, or subtle emphasis of the brickwork of the Duloc Castle sliders. The audience might not consciously be aware of this but the effect gives an enriched, hyper-real, cartoonlike quality.

Video content was created by UK media associate and programmer, Duncan McLean, using original footage from the US tour showfile (from US media associate and programmer, Laura Frank) as a basic blueprint. Using a Canon 400D digital camera fixed in position beside the Barco 20K FLM R20 projector situated on the front of the Upper Circle, McLean took photos of the set from which he cut out the parts requiring emphasis. These were then placed on a grid and over-painted before being 'transformed' or keystoned with Photoshop. The corrected images were then projected to form the highlights that enhance aspects of the set.

The video system is based around Green Hippo Hippotizer V3s which McLean was able to program using a grandMA2. The main grandMA triggers the Hippotizer to run the cues while Green Hippo Zookeeper software monitors all its layers (eight for the projection and four for the LED wall) which are then networked together. "Video is very effective in enhancing the set and is a great help for the lighting as the set dressing is already dealt with," says Daw. "Projection can't compete with lighting in the brighter scenes but it is a very effective way of treating the set with this kind of show."

The projector and video system is supplied by Creative Technology and mounted in a custom-built box made by Andy Latham Scenery.

Sound

All sound equipment for Shrek has been provided by that other West End stalwart, Autograph. The system features a mix of loudspeaker brands, including d&b audiotechnik, Meyer, Martin Audio, L-Acoustics and EM Acoustics; amplification is from d&b and Lab.gruppen. Microphones too are a plentiful mix of brands (see equipment list) though the radio systems are all Sennheiser. A Soundcraft-Studer Vista 5SR mixing console sits at front-of-house.

Sound designer Peter Hylenski based his sound design on a mix of the original Broadway show and US tour, which sound associate Chris Full translated into the environment of Drury Lane. "This set is much more of a traditional English flown set, alternating front of tabs and onstage scenes," says Full. "Drury Lane's old-style acoustics work well without a sound system but this makes it difficult to integrate with amplified content so we had to devise a system that would ideally complement the acoustics."

"The intention is to take the idea of the original and translate it into the new equipment. We have retained some key tools from the previous shows, such as the Studer Vista 5 console, which we have used as a starting point to build the system for this show. It is refreshingly easy to use after using other digital desks in theatre. It is quick to program, rather like an old analogue console, which means we can spend more time making the show sound good instead of programming!"

The show has a large musical dynamic ranging from rock to traditional musical style so the system had to cope with both ends of that spectrum. The surround sound, absent from the touring production, has been reinstated, whilst the onstage effects speakers were re-worked to fit the new set. These add realism for the on-stage Dragon, but otherwise most equipment is in the auditorium.

The tour structure has been retained for the orchestra, now located in the pit instead of split into separate rooms as for the Broadway production. "It was a bit of a squeeze since we had to make enough

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room for Donkey to make his entrance through the pit without disturbing the musicians!" says Full.

The show's larger-than-life characteristics had to be reflected in the way the show sounds, jumping off the 'page' rather than drawing the audience in in the conventional manner. Sound effects - such as burps, roars, pops and farts - are used frequently for comedy value, leaving Hylenski and Full to achieve a tricky mix of realistic scenesetting and unrealistic comic effects. "It's a fine balance to make the audience believe they are in a different environment and acceptably connected to the characters to have an emotional response, whilst simultaneously introducing the fun elements to make the characters larger than life."

The hub of the sound effects system is the D-Mitri Digital Audio Platform and DSP Matrix engine, which Full and Hylenski use to mix elements of the show together and balance the rock and traditional elements. "It's very new and much more powerful than the Matrix 3 system of earlier shows," says Full.

On stage the greatest challenge is the amount of prosthetics in use. Almost every character wears some and the effect on the sound of the microphones is immense. The sound team had to work closely with the actors and the prosthetics department to find



solutions that were both comfortable and functional. "We had to take into account how each actor breathes, the shape of the face, the mould of the head," says Full. "Each actor was different and all had to have their own individual set. Moving the microphone even as little as quarter of an inch had a big effect so it was very much a case of trial and error, and with only one chance per day to make any adjustments. It was a painstaking process and a real labour of love!"

"We were able to draw on the past experience of the American team and hone the present production with a learned approach. This has enabled us to go forward quickly with new ideas and be more bold. The result is a fresh production with a lot of depth."

Shrek the Musical hits the nail on the head for both adults and children. There may be some criticism about the amount of musicals in the West End again, but when times are hard, people want to be entertained. For twoand-a-half hours a night it is certainly a Big Bright Beautiful World at Drury Lane and just the tonic you might not know you needed.

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