

Buck Alman

February 13 at 12:37 PM

.

Because... I am a “techy” kinda guy who has been doing concert and event production for 30+ years and I want to know how everything works and what is involved... Here is some of the tech info and some of the renderings I’ve compiled from various sources for the production of last night’s Super Bowl Halftime show 😊

There’s no bigger and more spectacular event than the Super Bowl halftime show. This year was no different. The Super Bowl LVII halftime show had the widest – and maybe the most brightly colored – stage of any halftime show, measuring nearly 235 linear feet. (In football terms, imagine a 78-yard rush starting from the 11-yard line.)

The performance required the participation of some 800 people, from camera operators to stage crews to Rihanna and her 80 dancers and seven band members. It also required a great deal of building. In order to minimize the weight on the field, the stage Rihanna performed on had to be constructed out of no more than 15 rolling structures (called “carts”).

Flying high on an automated platform built by TAIT, and help from Willo Perron and Tribe, Inc’s Bruce Rodgers. The “elevated” (pun intended) show featured a series of platforms to rise above a bright red stage, built by All Access Staging & Production, which ran the length of State Farm Stadium in Glendale, Arizona.

Because of the shape of the tunnels leading down to field level at State Farm, All Access—the company responsible for fabricating the stage—had to build platforms with stairs that could be tilted up for transport. The carts range in shape from 10 by 24 feet to 8 by 31 feet, and each one weighs anywhere from 2,000 to 4,000 pounds and is outfitted with “turf tires” (not a technical term) designed to roll gently and evenly over the grass.

The platforms themselves, roughly 10 by 17.5 feet, had to be stored up by those trusses during the first half of the game and then guided down to field level on synthetic cables in those precious seven-plus minutes the stage was being set up using a series of automated motors. The bottom of each one was affixed with 512 lights choreographed to move along with Rihanna’s performance. The platforms also had to be returned to the trusses and stay there until the game was over. And unlike the equipment used for previous halftime shows, they couldn’t be wheeled in and out of the stadium easily, meaning some of the final rehearsals before the Big Game had to be done in the stadium, not at an off-site location like in previous years.

“This will be, in my opinion, the most technically advanced Super Bowl halftime show that’s ever been done because of the amount of tech used to move the platforms,” says Aaron Siebert, the project lead from Tait Towers, which made the platforms.

Every year the All Access team is presented with unique variables and puzzles to piece together. “Halftime shows are never straightforward,” said All Access president Erik Eastland. “There’s nothing simple about getting a 234-foot stage on and off a football field in six minutes.”

Staging specs:

23 carts with 236 wheels

64 custom hinging stairs

57 gallons of neon paint

~4,000 feet of LED tape

400+ local crew

16 semi trucks

Carts

This year, to protect State Farm Stadium's natural grass, the NFL limited the number of carts on the field to 25. The set ended up with 23 carts in total, with 15 for the main stage and runway system and eight for lighting. The 31-foot main center stage consisted of five custom carts, and each side of the runway consisted of four custom runway carts and one end cap cart.

All Access also built custom framing for the lighting carts to accommodate the large size and quantity of lighting fixtures. As with every halftime show, the Versa field stage system was used, which features pneumatic tires specially made for rolling smoothly on – and protecting – both natural and artificial turf.

Flipping Stairs

To reduce the number of overall carts, the All Access team designed custom runway carts with stairs that hinge up, which kept everything self-contained and maximized the square footage of each cart. Additionally, it gave the stage a seamless, zero-clearance finished look that appeared to sit directly on the turf, achieving the blocky, solid, monolithic aesthetic. (Every piece of scenery that touched the natural grass was reinforced with Enkamat turf protection material.)

Scenic Painting

As wide as this year's stage was, it was just as bright. Pinpointing the perfect shade of red to paint the stage wasn't simple. The design team provided a color reference, and after narrowing it down to 10-15 options, the designers chose premium luminescent Wildfire paint in Bright Red. All Access' scenic painters applied 57 gallons to create that vivid fluorescent stage (and may have bought out the manufacturer's entire stock).

LED

The entire stage and runway system was outlined in RGBW LED tape and four rows of LED band at the base. Almost 4,000 feet of LED were used, requiring more than 12,000 feet of wiring. (That's more than two miles of wire!)

Effects Integration

This year also featured the most fog machines integrated into any halftime show stage. All Access integrated 44 high-intensity Atlas fog generators, provided by Pyrotecnico, in custom housing boxes into the main stage and runway system, which included reservoirs to prevent fluid leaking onto the field and absorbent pads for extra protection. High-intensity foggers were required because typical CO2 fog machines aren't effective in dry desert climates. Unfortunately the fog effects did not make it to final version of the show.

Precision

Because the overall footprint of the stage was so wide, perfect placement on the field was critical. Dancers flying onto the stage platforms from above relied on the stage being in the exact spot to hit their marks. There was no margin for error.

Field Access Ramp

The State Farm Stadium has a natural grass field, which sits on a tray that rolls outside of the stadium to get sunlight. The tray elevates the field by four feet, making it inaccessible for the carts from the access tunnels. The stadium's house ramp was not wide enough for the carts, so All Access created a custom field access ramp, which was 14 feet wide and 62 feet long, to allow the set pieces to roll onto the field.

Produced by ROCNATION, Diversified Production Services and Jesse Collins Entertainment

Bruce Rodgers shared four design sketches with Live Design, and the full credit list for the production.

Full Crew List:

Design Concept by Willo Perron and Rihanna

Creative Direction and Production Design: Bruce Rodgers

Art Direction: Shelley Rodgers, Lindsey Breslauer, Maria Garcia and Lily Rodgers

Art Department: Regan Eastland

Super Bowl LVII Halftime Show Staging Sketches & Credits:

Audio vendor: ATK

2 - DiGiCo Quantum 338 audio consoles at front of house, mixed by Alex Guessard and Dave Natale

1 - SD5 console for monitors, mixed by Tom Pesa and System Engineer Chris Daniels

System Tech: Jonathan D Martin

6 - eight-box clusters of L-Acoustics KS28 subs flown around the bowl

8 - Powersoft M-Force 30-in. subs positioned two per quadrant

10-box main hangs of L-Acoustics K2 speakers

13-box K2 sideline clusters

Lighting vendor: PRG and PIXMOB

146 Vari-lite VL3600 Profile

72 Robe Robin 1200

35 Vari-lite VL2600

325 GLP X4

76 TMB Solaris Flare

3 MA Lighting grandMA3 Full Size

1 MA Lighting grandMA3 Lite

6 Strong Gladiator IV

6 Britebox Flame LT3000

6 PRG Best Boy Ground Control Long Throw

4 MDG The One

8 Reel EFX Diffusion DF-50

8 Reel EFX Fans

2 zactrack PRO servers (taking and translating positioning data for all of the moving platforms so that the lighting fixtures could correctly be programmed to hit them while they were in motion).

PIXMOB Equipment:

4,200 Pixmob Nova

12 Pixmob IR Transmitters

7 Pixmob Kore Receiver

Lighting Team:

Designer: Al Gurdon

Lighting Directors: Harry Forster, Ben Green

Lighting Director/Programmers: Eric Marchwinski, Mark Humphrey

Stadium Lighting Integration: Michael Dodge

Media Server Programmer: Jason Rudolph

Media Server Tech: Tim Nauss

Gaffer: Alen Sisul

Best Boys: Dennis Sisul, Chris Latsch, John Cox, Damon Isaacks, Ron Murphy

Best Boys / Followspots: Adam Hagin, Daisy Toledo, Mike Smallman, Ron Murphy

PRG Chief Tech: Robb Minnotte

PRG Lead Techs: Matt Genezcko, Janos Bode, Meg Flanagan

Zactrack Tech, Aria Grosvenor

Pre-Vis Tech: Nick Couaette

22 Degrees Project Manager: Marie Turner

PRG Account Managers: Tony Ward, Patrick Osuna

Cable Path Specialist: Larry Ganson

Fiber/Stadium Cable Management: Nathan Wilson, Larry Ganson

Local 336 Heads: Steve Hyatt, Kelly Beaton

Field Team: Ernesto Alvarez, Selene Curtis, Terry Ekes, Bernardo Felix, Jeremy Friedman, Matthew Hall, Christopher Kidd, Corey Mathews, David Miller, Stephen Sizemore, Caleb Smith, Rupert Ramsay, James Rosario, Mike Mungavin, Jeremy Sarkissian

Spot Operators: David Acevedo, Adam Bernau, Michael Brown, Brandon Daniel, James Faulkner, Tracy Johnson, Aki Jones, Abdul Kassim, Jim Miller, Carmin Ortiz, Vincent Russo, Robert Sciorillo, Tara Shingola, Precious Schuler, Chris Sims, Bruce Wiberg

Pixmob Executive Producer: Sophie Blondeau

Pixmob Nova Programmer: Samantha Torres

Pixmob Technician: Felix Torres

Pixmob Special Projects Manager: Liz Hart

Pixmob Special Projects Coordinator: Nikki Sude

All Access LED Tape Specialist: Talus Jarvis

Pre-Vis by Earlybird Visual

Scenery by All Access & TAIT

Power by Aggrekko

Gaffer: Alen Sisul

Choreographer: Parris Goebel

Assistant Choreographers: Natalie Bebko and Gab Robert

Field Creative Producer: KP Terry

Staging Supervisors: Cap Spence, Tony Hauser, Douglas Cook

Field Team Managers: Bryan Ransom and Holly Silber

FTM Coordinator: Roma Ramchandani

Music Directors: Adam Blackstone and Omar Edwards

Stage Manager: Gary Natoli

Rihanna Tour Manager: Jason Milner

Rihanna Production Manager: Joseph Lloyd

Rihanna Lighting Consultant: Jesse Blevins

Producer/Director: Hamish Hamilton

Executive Producer/Director: Shawn Carter

Executive Producer/Co-Director: Desiree Perez

Associate Director: Cameron Whitelaw

Executive Producers: Jesse Collins, Jay Brown, Roger Goodell

Co-Executive Producer: Dionne Harmon

Event Producer: Dave Meyers

ROCNATION: Jana Fleishman

Supervising Producer: Aaron Cooke

Talent Producer: Raphael Burne

Operations Director: Carly Vaknin

Coordinating Producer: Laura Paganucci

Site Director: Darian Reynolds

Production Manager: Erin Harding

ASL Producer: Brian Cavallaro

Production Managers and Coordinators Offsite: Michael Ferrante and Marvin Hickman

Production Supervisors: Sophia Bonhomme and Jenn Stanley Kashole

Production Coordinator: Elizabeth Jones

Finance Director: Chris Covin

Pregame Producers: Cheryl Alper and Brittany Brazil

Line Producers: Phil Sino-Cruz and Chelsea Gonnering

Field Staging Design and Engineering: ALL ACCESS, Erik Eastland, Tommy Rose

Head Rigger: Carsten Weiss

Flying Platform and Navigator Camera design and engineering: TAIT TOWERS, Aaron Siebert, Erick Fields, Paul Sapsis, Kiel Heerding

NFL: Peter O'Reilly, Seth Dudowsky, Jon Bark

er, Eric Finklestein, Tim Tubito, Phil Bogel, Ed Mangel, George Toma

Populous: Jennifer Hill and Todd Barnes

IATSE Local 1, 33 & 336