





Sitcom Limbo

Jess Hall, ASC, BSC and director Matt Shakman draw lighting inspiration from TV history for Marvel's *WandaVision*.

By Mark Dillon

The plot of *WandaVision* unfolds in a highly unconventional environment. Its two main characters, a superhero couple, live a seemingly carefree life within a world of television situation-comedy tropes whose visual aesthetics change in line with the genre's evolution through the decades — recalling, as the episodes progress, the looks of *I Love Lucy* and (even more so) *The Dick Van Dyke Show*, as well as *Bewitched*, *The Brady Bunch*, *Family Ties* and more.

Though the first three episodes of Marvel Studios' inaugural series on Disney Plus — which this article will focus upon — show no intention of quickly answering the questions posed by its premise, fans of the franchise might deduce that *WandaVision* is employing the American sitcom as a device to tell a story about grief. The show opens to find titular characters Wanda Maximoff (played by Elizabeth Olsen, and known as Scarlet Witch in the comics) and her synthezoid significant other, Vision (Paul Bettany), living as newlyweds within the jaunty black-and-white world of Westview, N.J. — yet those familiar with the Marvel Cinematic Universe (MCU) know that supervillain Thanos killed Vision in *Avengers: Infinity War* (AC June '18), leaving Wanda devastated. Within its first moments, *WandaVision* sets itself up to be rife with intrigue.

Wanda Maximoff (Elizabeth Olsen) and Vision (Paul Bettany, here sans prosthetics) find themselves in a vintage-sitcom world.



Vintage Perspectives

Serving as a de facto micro-history of television production, the show's unorthodox narrative and stylistic perspective challenged the filmmakers to create distinct visuals and lighting approaches, authentic to each era, for nearly each installment.

Director Matt Shakman — whose work includes the FX series *It's Always Sunny in Philadelphia* — wanted to collaborate with Jess Hall, ASC, BSC, for the range the cinematographer demonstrated with credits such as the action comedy *Hot Fuzz* and the sci-fi movies *Transcendence* and *Ghost in the Shell*. “Early on we talked about re-creating the sitcoms as authentically as possible,” Shakman says. Rather than

“parody” or “spoof,” he adds, the styles would be presented simply as the main characters’ reality.

The visual strategy, Hall says, focused on exploring “a parallel reality emanating from the nostalgic *memory* of classic sitcoms, rather than simply a replication of them. The process included an intense analysis of the originals and their context within their eras, blended with our own aesthetic sensibility and instincts as to what was appropriate to our narrative.”

For primary references, the filmmakers studied their chosen sitcoms’ source materials — along with the feature *Pleasantville* (AC Nov. ’98), which explores the artifice of television. (Hall says he also kept in mind *The Truman*

Show [AC June ’98] for similar reasons.) They also examined the 2015 Marvel comic series *The Vision*, written by Tom King and illustrated by Gabriel Hernández Walta, in which the character, who longs to be human, moves to a small town to experience family life. “That [comic] was important to me in understanding [Wanda and Vision’s] landing in American suburbia,” Hall says. “But I was also interested in the use of color and how much of a stylistic tool it is in the comics, particularly *House of M* and *Scarlet Witch Vol. 3: The Final Hex*. I wanted to use the opportunity inherent in the expanded color gamut of the HDR [environment] to integrate some of that richness and complexity into our MCU work.”

“The quality of the 8K Super-Softlite is somewhat unique — with characteristics somewhere between a hard and a soft source — and provided the right balance.”



In his quest for veracity, Shakman challenged cast and crew to shoot Episode 1 in front of a live studio audience, as *I Love Lucy* and *The Dick Van Dyke Show* did, and encouraged the crew and audience to dress in period-appropriate attire. (The episode is, in fact, titled “Filmed Before a Live Studio Audience.”) “I’m a theater person,” the director says. “I love the adrenaline and preshow jitters, and I know that extended to my whole crew. You just don’t have a lot of time to work out your camera blocking and all your lighting cues, and the crew was just getting used to

the show. It was the first thing we did.”

Shakman gave Hall books detailing production on *Dick Van Dyke* before mapping out the live three-camera shoot, which was recorded in November 2019 at Pinewood Atlanta Studios (now known as Trilith Studios). The crew’s camera package included two Arri Alexa LFs and one Alexa Mini LF, capturing in 4.5K to accommodate Disney Plus’ presentation of *WandaVision* in 4K, and in ArriRaw to meet the streaming service’s HDR requirement.

Evolving Ratios

WandaVision begins with the period-appropriate 1.33:1 aspect ratio, and ultimately progresses to the current TV-standard 1.78:1. When the

show’s sitcom-style environment is intercut with scenes in the “real world,” it is presented in 2.39:1 — a framing viewers may recognize from the MCU movies.

Top: Jess Hall, ASC, BSC (right) and director Matt Shakman.
Bottom: The “real world” intrudes into the artifice.

Lighting the Eras

Seeking authenticity in lighting the production, the cinematographer sought out gaffer John Vecchio, who has experience both in film and in vintage fixtures — particularly on Tim Burton’s black-and-white feature *Ed Wood*.

From referencing production stills of *Dick Van Dyke* (see page 72 for a vintage shot from the AC Archive), they discerned some of the original lighting sources. The question then became, “How could I respect what they did and build [an early-1960s] film look on set, while using sophisticated 4K HDR mastering quality?” Hall says. “The two are so far apart that it would never be a case of replicating the original lighting and getting the same result.

“Because of the robustness of emulsion film stock, it can absorb harder light without feeling brittle or harsh like a digital sensor,” the cinematographer continues. “My research of *Dick Van Dyke* showed they used mostly harder Fresnel sources with the occasional 5K skypan softened with Tough Spun. However, in order to accommodate the multi-camera approach, they used light coming from multiple angles, so the lighting inevitably became quite flat. Achieving this look on a digital sensor required a modified approach.”

Vecchio perused his old Mole-Richardson catalog (which he’s had for “at least 20 years,” he says), and suggested the 8K Super-Softlite, which was tested along with several other period fixtures. “The quality of the 8K Softlite is somewhat unique,” Hall says, “exhibiting characteristics somewhere between a hard and a soft source, and provided the right balance.”

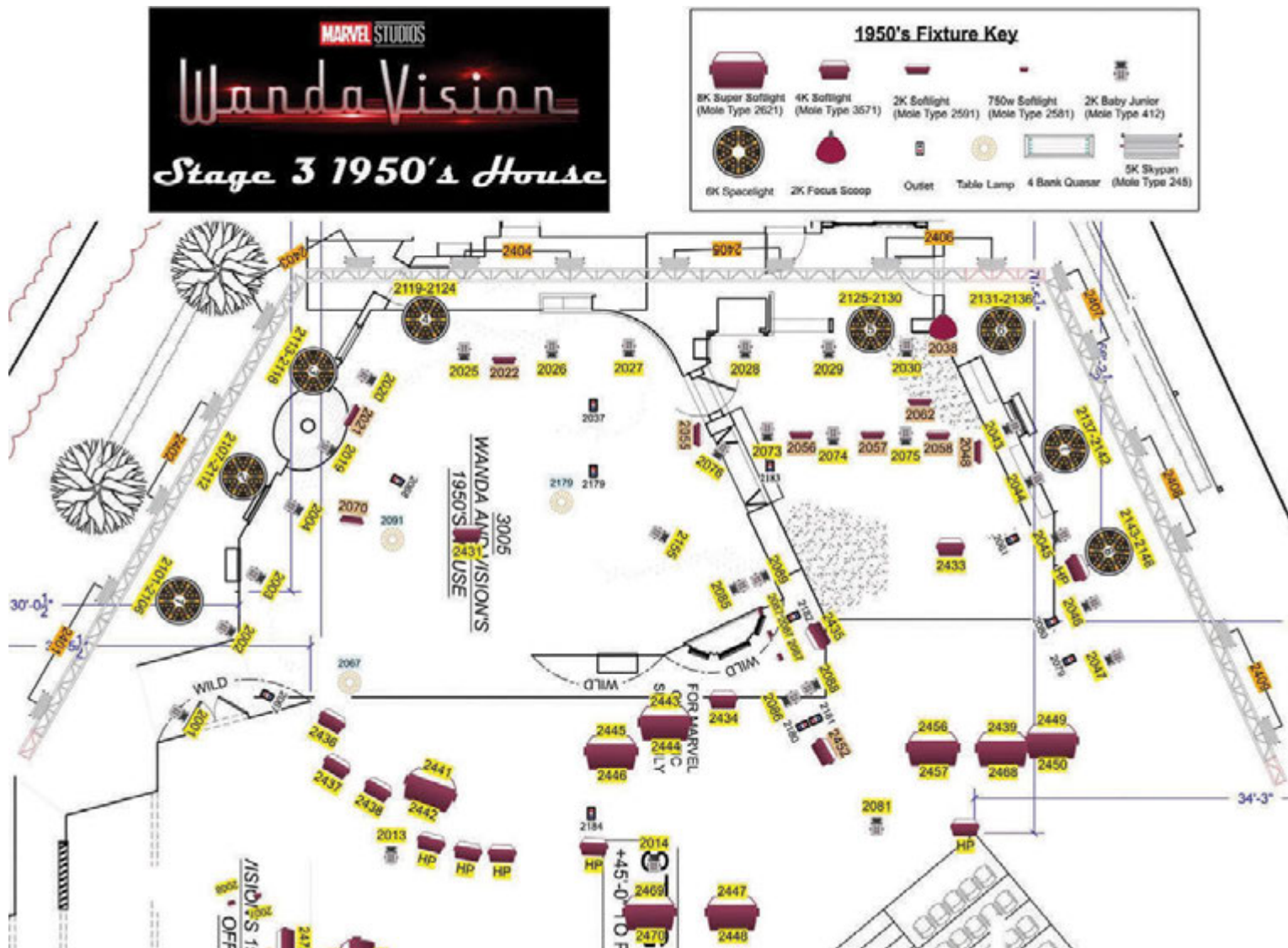
Key grip Jim Kwiatkowski built an extensive overhead rig with greenbeds that would allow easy access to the fixtures even during the live show. From this, the crew suspended 10 of the 8Ks along with 15 of its 4K equivalent and a dozen 2Ks. Jared Talbot at MBS Equipment doggedly tracked down the units all over the East Coast.

The 8K, Hall says, “is a large soft light with an egg crate on the front. We used layers of them because, since we were shooting live, we had to accommodate the actors moving across a set measuring approximately 40-by-22 feet.



Tech Specs:

1.33:1, 1.78:1 and 2.39:1
 Cameras: Arri Alexa LF, Mini LF; Blackmagic Design Pocket Cinema Camera 6K (handheld for the sitcom opening of Episode 5 and for surveillance footage on monitors); DJI Inspire 2 (drone work).
 Lenses: Panavision PVintage primes, Ultra Panatar Prism 1.25x Anamorphic, Panaspeed; Cooke/Panavision Super Panazoom 28-140mm T4.5; Fujinon Premista 28-100mm T2.9, Premista 80-250 T2.9

Lighting diagram for *The Dick Van Dyke Show*-inspired set.

Lighting for Retro Hues

To help achieve the vibrant colors desired for the *Brady Bunch*-style Episode 3, Hall keyed using the Mole-Richardson 10K Big Eye with Quarter, Light or Full Tough Spun, and Cosmetic Peach and Cosmetic Burgundy gels for the correct hue, saturation and high-key quality of light on the skin tones, with contrasting, cool shadows.

While the cinematographer wanted to avoid modern LEDs when creating the retro looks for the show, in this case the crew built 12'x12', 8'x8' and 4'x8' light boxes outfitted with Arri SkyPanels adjusted to 5,500–6,000 Kelvin — for fill and to evoke the cool reflective sheen of a film print. More fill was provided by 2K and 4K Mole Softlite units with Cosmetic Rouge.

[The lights were also] good directly on skin. The egg crates enabled me to create separation, so they could walk out of one source and into another and remain evenly lit, even from one room to another.”

Above the back of the set, the crew lined up a series of Mole Junior 2K Fresnels for edge lighting that Hall could easily turn on and off. The filmmakers used period-correct Rosco Cinegel Tough Frost and Spun diffusion. “The purpose of the edge light,” Vecchio says, “is to bring some contrast and accent to the soft front key light.” Adds Hall, “A subtle edge light was an essential component of the look, as it created separation in the classical tradition typical of black-and-white photography of the period, but also because it provided reflective sheen on the actors’ hair — and a subtle halation on Elizabeth Olsen, at times.”

The stressful job of handling the live lighting cues fell to lighting

Hall found the look of Episode 3, which was inspired by the vibrancy of *The Brady Bunch*, to be one of the most difficult to achieve.



programmer Chris Chalk.

At Vecchio's recommendation, Hall used a scoop light — a theatrical fixture with a lamp in the middle of a reflective metallic casing. "It was from *Ed Wood*," Vecchio says. "We used it in its old form with a big 1K or 500-watt globe and Tough Spun in front. It's a marvelous portrait tool providing a beautiful eye light that illuminates the iris. It became our featured eye light, especially in the earlier episodes where we wanted to have the look of Hollywood glamour photographers, with backlight and sculpted light."

In each of the retro sitcom episodes, the frivolity is interrupted by a disturbing moment that alters the tone and reminds audiences that all is not right in this world. "We take those sitcoms into *The Twilight Zone*," Shakman says. "We go from a three-wall set to four walls. Suddenly

we're turning around and looking toward Vision at the head of the table, and rather than seeing the audience behind him as we should, we see another wall we haven't seen before. We're moving from the objectivity of a multi-cam sitcom to the subjective, where suddenly we're in [the characters'] personal space. We planned how to accomplish that transition with the lighting."

For this sequence, the crew mostly turned off the overhead fixtures in favor of more dynamic lighting. "Now we're dealing with more traditional lighting on the floor: key, fill and potentially backlight," Hall says. "I used a more pronounced chiaroscuro featuring a modeled key light. I was putting my shadows 2.5 to 3.5 stops under, letting the walls fall off and creating a decent contrast curve compared to the flatter curve with more expanded midtones [seen thus far]. Most of the lighting was

Shakman, Olsen and Bettany at work.

provided from fixtures that were not rigged, and more light control was introduced to create contrast and areas of shadow.”

Episode 2 (“Don’t Touch That Dial”) follows Wanda and Vision as they prepare a magic act for a town talent show in a bid to fit in with the community. It was also shot for black-and-white, but with a one-camera approach and four-wall sets in the style of *Bewitched* (which transitioned

to color in its third season). Shakman describes the lighting difference between *Dick Van Dyke* and *Bewitched* as “dramatic,” especially since *Bewitched* star Elizabeth Montgomery was married to series producer and director William Asher, “and he made sure she looked awesome in every shot. Asher did not spare any time on her close-ups — they’re gorgeously lit, like Garbo’s. So we made sure we were doing that, too, using a lot



Blue Tones

The crew took its lead from *The Dick Van Dyke Show* in emphasizing blue tones in the set design for this black-and-white section of the series. Says Hall, “The decision to paint the set in hues of cool blue-green, in contrast to the warm skin tones, enabled me to simulate a characteristic evident in some

black-and-white film stock — its increased sensitivity to red over blue. This color separation allowed me to apply custom matrices to the RGB image at the digital-intermediate stage, and therefore to enhance the luminance or shift the tonal value of the skin tones in relation to their backgrounds. By using this process, I achieved greater flexibility in

rendering a balanced grayscale with a full range of midtones — one that I could subtly manipulate.”

WandaVision’s final color grade was performed with colorist Matt Watson at Marvel’s new facility, located on the Walt Disney Studios lot in Burbank, Calif.

of front light versus the more theatrical lighting style of *The Dick Van Dyke Show*.”

Hall studied 35mm prints of *Bewitched*, which pushed him toward a warm D58 white point for the black-and-white work. Shooting with custom-made lenses, including specific portrait lenses adapted from PVintage primes by ASC associate Dan Sasaki of Panavision, Hall used the Mole-Richardson 10K Big Eye Fresnel for stronger, more directional lighting. “It’s a big light that felt authentic as the key for [Olsen], in keeping with what they were doing on *Bewitched*,” he says. “It gets so hot that John replaced the 10K bulb with a 2K, which was fine since we’re working at 800 ASA, not the lower ASA stocks typical of early black-and-white film stock. That kept the actors and sets a bit cooler. I used Quarter or Light Tough Spun in the circular scrim frame right next to the Fresnel because it gave the light a wonderful quality, and the direct hard light was too extreme.”

The cinematographer found the look of Episode 3 — aptly titled “Now in Color” and inspired by the vibrancy of *The Brady Bunch* — one of the most difficult to achieve. He analyzed the RGB values in *Brady Bunch*

reference stills that he selected, and which were approved by production designer Mark Worthington. This data was subsequently shared across departments for a coherent color palette. “The color was complex, and I couldn’t achieve it simply with a combination of lighting and LUT,” Hall says, adding that he also used lighting gels. (See sidebar, page 30.)

The episode also marks the first transition to the recognizable MCU, when a Westview neighbor — played by Teyonah Parris, and who becomes quite important later on — is physically ejected from the sitcom world through a forcefield and lands in the “real” world outside a pop-up base set up by an intelligence agency investigating the situation. In addition to a mid-shot expansion of the aspect ratio to 2.39:1 and a switch to modified Panavision Ultra Panatar 1.25x anamorphic lenses — which offered Marvel fans a look they’re familiar with from the MCU movies — there is further contrast to the sitcom look in the cold night exterior and a more modern lighting approach. Says Hall, “We shifted from high-key studio lighting to cinematic location work, embracing amongst other things the *vérité* style emerging in the 1970s, demonstrated by Gordon Willis [ASC], Owen Roizman [ASC], and other greats of that era, who

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Hall at work on the *Brady Bunch*-inspired set.

would frequently use practicals as key lighting. Matt was looking for a patina of gritty realism to permeate these sequences, whilst maintaining precise color control and achieving the T2.8½-T4 shooting stop that was optimal for the Ultra Panatar lenses.”

They surrounded the pop-up base with 19 elevated Digital Sputnik DS6 units dressed to look like emergency-assistance lights, which created pools of hot light. Bebee Night Light trucks were positioned at the west and south ends of the base with the HMIs gelled with Rosco CalColor

30 Cyan to make them look like mercury-vapor fixtures one might find at a military setup in a disaster zone. Low-key practical sources inside the base included large visual-display monitors, as well as hanging LED Astera Titan Tubes, smaller Helios Tubes and LiteGear hybrid ribbon. All of these fixtures were housed in practical light fixtures that could be photographed in-camera, and that Hall developed with Worthington.

“It was a long conversation among Jess, Mark Worthington, John Vecchio and me to make sure whatever we had in [terms of] design would



Inside the Look

The Dick Van Dyke Show was shot on Eastman Plus-X 5231 stock, which, Hall says, “influenced some of the characteristics I was aiming for, including a lower contrast curve, softer grayscale, and an expanded range of midtones.” This look was ultimately achieved through a combination of lighting, color science and LUTs, Mark Worthington’s production design, and Mayes C. Rubeo’s costume

design. Says Worthington, “Jess spent days with me in the art department reviewing every detail of the color palette, textures and layout of the sets to make sure our intentions were realized in the final product.”

Tests began well in advance, with Hall devising LUTs for *WandaVision*’s various television eras alongside ASC associate Josh Pines of Technicolor. Prep was 12 weeks, with color-science work, camera and lens testing commencing immediately. They

kept in mind that the full highlight range of 4K HDR would not be period-correct for the retro segments. “We put the 4K HDR signal within a kind of envelope,” Hall says, “capping out the highlights around 100 nits and doing that with a soft roll-off curve so we never got into the kind of white highlights that wouldn’t have existed on film. Highlights for the modern MCU material were placed between 400 to 800 nits.”

The filmmakers focused on exploring “a parallel reality emanating from the nostalgic memory of classic sitcoms, rather than simply a replication of them.”



work for the cinematography,” Shakman says. “Jess would often ask for things he needed to help build an environment, because he wanted it to feel real, especially inside the control room where we thought hard about what the monitors would be — and giving just enough tech and illumination, but still feeling believable and [that it was] assembled quickly.”

For this MCU-world work, Hall embraced LEDs’ color-changing functionality, which enabled him to realize his customized palette, aspects of which were inspired by saturated comic-book hues. Balancing these cutting-edge techniques with the vintage styles he created, Hall welcomed the challenge of introducing new looks to the MCU while still giving fans some of what they’ve come to expect.

“It’s all about the integration of the streaming and cinematic work, and those lines start to blur,” he says. “We’re taking things into a new era, so I had to respect what’s been done before. We have been traveling with these characters across multiple films, and if we want to benefit from the dramatic tension emerging from that, we needed to honor the lineage. On the other hand, I had to do so much to build looks for the early episodes. I really wanted to do my own twist on ‘Marvel cinematic.’” ◉

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