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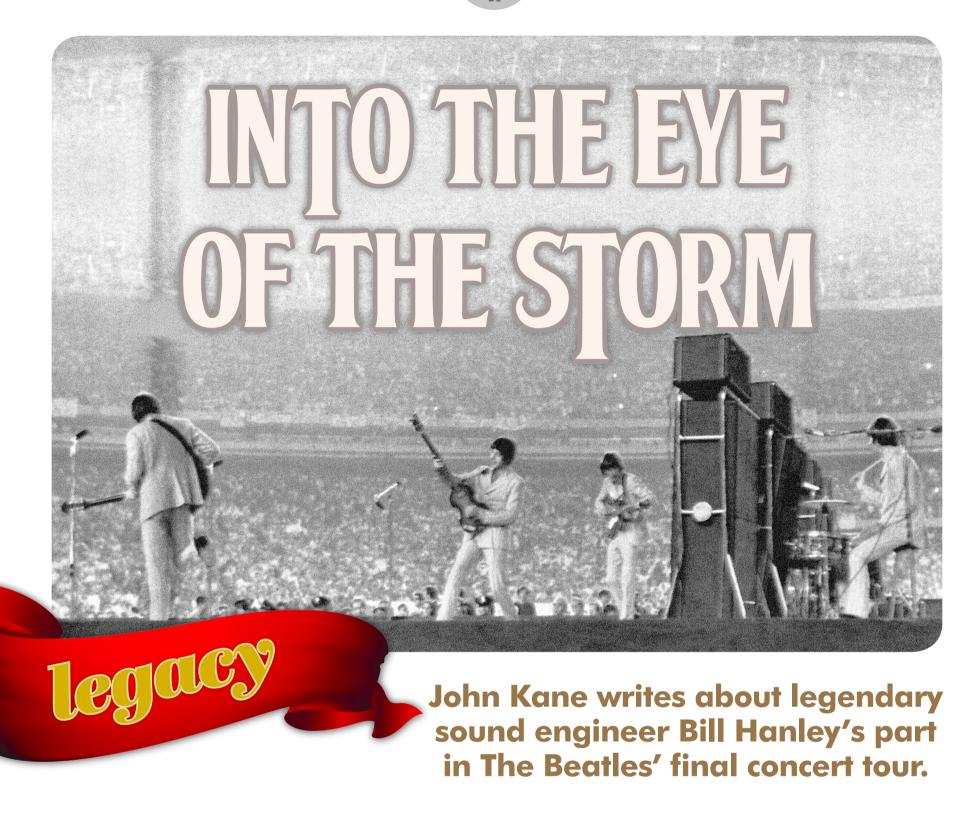
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Ron Howard's celebrated 2016 documentary 'The Beatles: Eight Days A Week – The Touring Years' gave audiences a healthy snapshot of the band's unprecedented and unequalled four-year progression from the Cavern Club in Liverpool to San Francisco's Candlestick Park where, in August 1966, they gave their final live public performance.

The film reminds us of just how rabid Beatle audiences were and how the deafening screech they made – comparative with the volume of a jet engine – meant that Lennon, McCartney, Harrison and Starr would suffer greatly when trying to hear each other perform.

Watching the film, it quickly becomes evident that
Beatlemania peaked at a time when the technology around

them was not yet at full apogee. Although the film grants viewers an all access pass into their intimate world, it leaves much behind regarding the band's issues with – and lack of – sound reinforcement.

When pioneering sound engineer Bill Hanley (below),

known to many as the father of festival sound, met The Beatles in 1966, the quality of live concert sound from one venue to another was purely a game of chance. To reach their audience, most bands









relied solely on their backline amplification and a house public address system that invariably was designed for no more than announcements; unfortunately for The Beatles it was no different.

By 1966, however, public demand meant that the Fab Four had long graduated from theatres and were inventing what we now refer to as stadium rock. As a consequence, their need for more power had hit crisis level. In many ways, The Beatles set the standard of what good concert sound should be like by demonstrating how bad it really was. This was, after all, a time when the concept of sound reinforcement was still fairly new one.

For the '66 tour, the Fabs acquired a set of specially designed Vox Super Beatle 100 watt on-stage amplifiers

with matching (and tilting) cabinets that were fitted with four 12" Vox Bulldog loudspeakers, plus crossovers, and two HF horns. Though a step forward for instrument reinforcement, even the efforts of Vox designer Dick Denney failed to break through the cacophony.

UNANNOUNCED

When Boston-based garage rock band The Remains landed the gig of a lifetime, backing The Beatles on their 1966 North American tour, their old sound engineer Bill Hanley arrived unannounced at Chicago's International Amphitheater and convinced the band to use his equipment once more for at least a few of the dates, with no promise of any payment.

Fortunately for Hanley, when Beatles manager Brian Epstein heard the quality of The Remains'

Altec Lansing sound system he hired the engineer on the spot, inviting him to accompany the band on most of the East Coast dates on a tour that covered 14 cities and consisted of 19 shows at sports stadia and racetracks.

When The Remains opened for The Beatles to 25,000 screaming fans in Chicago, writer Judith Sims was sitting behind the stage and gave a telling account of the live experience, claiming that the "roar was deafening", her "ears were ringing" and "it's a wonder The Beatles can see or hear at all after going through that so often."

Sadly, this was a problem Hanley faced on most of the tour and even though he took his equipment halfway across America for the world's biggest band, he could never imagine the consequences of so many screaming girls.

THE BEATLES SET THE STANDARD OF WHAT GOOD CONCERT SOUND SHOULD BE LIKE BY DEMONSTRATING HOW BAD IT REALLY WAS.

Right: Altec Lansing's 210 LF horn and 203B cell. Below right: The Vox Super Beatle.

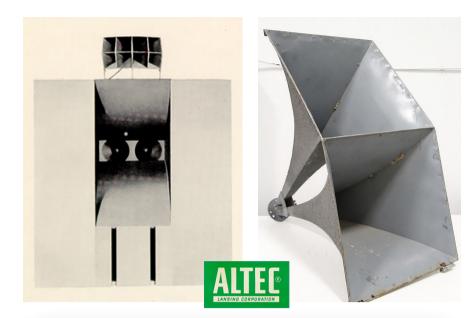
According to The Remains' bassist Vern Miller, "Using Hanley's equipment felt like the big time. I had never seen a PA like that. Bill was really smart and really knew his stuff inside and out. He saw a need and he was right there at the right time developing this stuff."

Not every show had constant screaming. Southern fans, for example, seemed more polite and it was possible to actually hear oneself with intermittent lulls in the screaming as The Beatles tore into their regular set, which averaged around 35 minutes long. Due to the venue's sheer size, however, the performance at New York's Shea Stadium on August 23rd proved to be another story.

According to Remains leader Barry Tashian, Shea Stadium had more in attendance compared to other shows on the tour; the 44,600 crowd, he says, was "restless and noisy." Here, Hanley's total system power consisted of only 600 watts, with no stage monitors. The configuration was comprised of a dozen "monster" Altec 210 low frequency horns (as used in the famous 'Voice of the Theatre' cinema systems), Altec 203B multi cells with 288 drivers, and a 600W RMS amplifier built by RCA and weighing around 300lbs, which the sound engineer claims was surplus equipment from a battleship.

Uniquely, Hanley kept his speakers at most of these stadium performances low to the ground. He and a few of his crew fanned them out around the bases of the baseball field to help contain reverberation and reduce bounce. Clearly, the public address systems at some of these ballparks were atrocious, making it virtually impossible for The Beatles to be heard.

Hanley's innovations at Shea Stadium are a prime example of the challenges any sound engineer of the day would have encountered.





INSANITY

Now 79 years old and living in Massachusetts, Bill Hanley, the man who would go on to look after the sound at Woodstock in 1969, reflects on this event of a lifetime as "sheer insanity... you didn't even know there was a concert going on." He adds: "You couldn't do your job very well because you couldn't even hear yourself think."

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The Fabs vs. the Shea Stadium audience with (above right) Hanley's Altec gear. Inset: Hanley, a month before the tour began.

Although Hanley could not overcome the intensity of this rocket ship of roaring decibel levels, many claim that his impact on this Beatles tour changed the concept of live sound moving forward.

Future developments in audio, however, would arrive too late to save the Fabs' touring career. "The problem was that touring under such circumstances had turned us into mediocre players," recalled Ringo Starr, during the promotion of Ron Howard's documentary. "My job was reduced to just keeping time; if I tried doing a fill, it was like drumming in a vacuum. I'd be watching John's foot or and Paul's arse to get a clue as to where we were in a song.

It had become a joke. We had to come off the road to preserve our ability to play together, if nothing else."

Three months after the American tour came to an end in San Francisco, The Beatles regrouped at Abbey Road Studios in London to start work on a new song, 'Strawberry Fields Forever' and take their first steps towards creating the iconic Sgt. Pepper's Lonely Hearts Club Band. A new chapter in pop music's greatest story was beginning.

Additional text by Mark Cunningham Photography: Sid Bernstein Archives, the Hanley Collection, David Griffin and courtesy of JBL Professional

John Kane is a post-grad doctoral student, musicologist and educator whose 2014 dissertation, 'The Last Seat in the House: The Story of Hanley Sound' is now being turned into a book and documentary film with footage he captured while immersed in his studies. Find out more at www.thelastseatinthehouse.com



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