When George and the Beatles reconvened in cavernous Studio 1 on Friday, February 10, they spearheaded one of the most transformative sessions in the history of recording artistry. By their current standards, the session was relatively short, clocking in at five hours on the dot. But for George, his day-long prep for the February 10 session, not to mention his well-honed and strategic orchestration, had been essential to the evening's success. Indeed, it depended on it. George had begun making preparations long before the Beatles arrived at Abbey Road at eight o'clock that evening. As it happened, George had reckoned that the only way to get the sound the bandmates desired—the awe-inspiring sound of a symphony orchestra but with only half of its typical personnel in evidence—he would need to develop one of his patented workarounds. This meant that, given the existing rhythm track and sundry overdubs that they'd already carried out, George's standard four-track recording efforts would have to be doubled in order to capture the sound he had in mind. As Ken Townsend later recalled, "George Martin came up to me that morning and said to me, 'Oh Ken, I've got a poser for you. I want to run two four-track tape machines together this evening. I know it's never been done before, can you do it?' So I went away and came up with a method whereby we fed a 50-cycle tone from the track of one machine then raised its voltage to drive the capstan motor of the second, thus running the two in sync. Like all these things, the ideas either work first time or not at all." The proof would be in the pudding during the actual session, of course, but George needed Ken's makeshift, synchronized machines to work if he wanted to pull off the sound in his head and the omnipresent power that "A Day in the Life" merited. George reasoned that with forty musicians booked that evening instead of ninety, he could build his own wall of sound by recording his half orchestra four times on all four tracks of the tape and then mixing them down to one. This would essentially afford the producer with access to the sonic equivalent of 160 musicians![15]

George's gambit not only presented technical challenges for Townsend but also required a bit of chicanery on behalf of himself and his production team. As Emerick later wrote, "Ever conscious of cost, George Martin had warned Richard and me not to let the musicians know we would be recording them multiple times on separate tracks, because doing so would result in

massive extra charges. Instead, we were under strict instructions to make them think that each time around we were wiping the previous take and recording over it." As night fell over the studio, the players began to arrive. In advance of the session, the Beatles had asked for the members of the half orchestra to wear their evening finery—coats and tails, the whole shebang. As usual, George had assembled many of London's most respected musicians, not to mention a number of veterans of Beatles sessions past. Alan Civil, the horn player behind "For No One," was there, as was David Mason of "Penny Lane" fame. Several standout string players were there, too, including Jürgen Hess, John Underwood, and, perhaps most notably, Sidney Sax, who had played on the June 1965 "Yesterday" session that George had considered to be his breakthrough with the Beatles in terms of evolving their sound beyond a mere beat band. And while it may not have been a full orchestra, it was easily the largest group to perform on a Beatles session to date. All told, forty studio musicians participated in the session that evening, with their instrumentation composed of twelve violins, four violas, four cellos, three trumpets, three trombones, two double-basses, two clarinets, two bassoons, two flutes, two horns, a harp, an oboe, a tuba, and a percussionist. The total cost rang up to nearly £370, a considerable sum at the time—and certainly one that left George concerned about bringing in *Sgt. Pepper* within EMI's budget strictures. But it was a far cry, of course, from the nearly £1,500 that booking 160 session players would have necessitated.[16]

With George's preparations complete—and with the half orchestra ready and waiting in their evening dress—the Beatles took the stage in Studio 1, with their own presession prep having taken a rather different form. When the Beatles had promised to wear their formal finery, too, George should have known better: "They wore their version of it," he later wrote, "courageously flamboyant floral costumes" that were "very flower power." For Martin, the strangest of the lot was McCartney, hands down. "For reasons known only to himself," George recalled, Paul "arrived wearing a full-length red cook's apron, which clashed horribly with his purple-and-black sub-Paisley pattern shirt!" For his part, John had donned a pair of upside down spectacles. And the Beatles had brought along plenty of novelty items to share. The idea for handing out party favors found its origins with John, who reportedly said, "If

we put them in silly party hats and rubber noses, maybe then they'll understand what it is we want. That will loosen up those tight-asses!" Lennon dutifully sent roadie Mal Evans to the nearest novelty store, where he purchased an assortment of silly hats, rubber noses, clown wigs, bald head pates, gorilla paws—and lots of clip-on nipples. During the session, George was startled by the transformation of his regal symphonic session men into a ragtag troupe of zany British partygoers. As the producer later recalled, "I left the studio at one point and came back to find one of the musicians, David McCallum, wearing a red clown's nose and Erich Gruenberg, leader of the violins, wearing a gorilla's paw on his bow hand. Everyone was wearing funny hats and carnival novelties. I just fell around laughing!" Sidney Sax remembered that the Beatles had "stuck balloons onto the ends of the two bassoons. They went up and down as the instruments were played and they filled with air!" Like several members of the Abbey Road staff, engineer Peter Vince sat in on the legend-making session and was amazed by what he observed that evening: "Only the Beatles could have assembled a studio full of musicians, many from the Royal Philharmonic or the London Symphony orchestras, all wearing funny hats, red noses, balloons on their bows and putting up with headphones clipped around their Stradivari violins acting as microphones."[17]

But for the Beatles, the evening wouldn't have been complete without rock's reigning glitterati in attendance. "They were determined to have a party," George recalled, "so they invited along a few of their mates—only about 40 or so, including Mick Jagger, Marianne Faithfull, Pattie Boyd, Brian Jones, Simon Posthuma and Marijke Koger of the design team the Fool, Graham Nash, all of them wearing long, multicolored flowing robes, stripy 'loon' beads, bangles, baubles, badges, and bells." Not to be outdone, George's bride was there, too: "Mingling discreetly in amongst all this unisex hippy flamboyance was Judy," George recalled, "wearing, of all things, a tweed suit—very fashionable!" With everyone in their places inside the studio proper, including Martin and McCartney serving as conductors—and with Emerick and Lush standing by in the control booth—that incredible session was set to begin. But there was one thing left to do. George later wrote that

before the recording got underway, “I told the flower-children to sit around the walls and behave themselves; and, just like good children, they did!”[18]

As George and the Beatles prepared to call the orchestra into action, even Studio 1 itself had emerged as a participant in the production of “A Day in the Life.” A fifty-three-hundred-square-foot room with towering forty-foot ceilings, Studio 1 had opened during a gala November 1931 ceremony hosted by Sir Adrian Boult, the very same maestro who would blow fifteen-year-old George Martin away with the BBC Symphony Orchestra’s rendition of Debussy’s *Prélude à l’après-midi d’un faune* at the Bromley County School in 1941. EMI Studios required nearly two years of construction, and the November 1931 event featured Sir Edward Elgar conducting the London Symphony Orchestra’s performance of his own *Land of Hope and Glory*—including the famous *Pomp and Circumstance* march, before which Sir Edward joked to the musicians that they should “play this tune as though you’ve never heard it before.” In 1965, the thirty-four-year-old studio received a much-deserved facelift, including the installment of a state-of-the-art ambiophonics system. The brainchild of Gilbert Dutton, the head of EMI’s research labs, the ambiophonics system was designed to increase Studio 1’s short reverb time, which typically clocked in around two seconds. The idea behind Dutton’s innovation was to afford the spacious studio with the sound and feel of a concert hall.[19]

The ambiophonic process, as Dutton devised it, was relatively simple. The microphones in the studio sent a slightly delayed signal that would be played back through a series of loudspeakers installed on the walls of the mammoth room. The new signal would be picked up, in turn, by the original set of microphones and recorded. In Dutton’s design, an increase in reverb would be realized by virtue of the length of the delay and the distance between the speakers and the mics. Dutton’s ambiophonic system required ninety-six loudspeakers in order to create the necessary sound diffusion. Historian Howard Massey has described ambiophonics as “the Grand Experiment that never quite worked.” And in truth, the whole apparatus fell somewhat short of Dutton’s original ambition for creating a kind of midcentury forerunner of contemporary surround sound. Given the limitations

of 1960s-era technology, the system maxed out after six signal delays—a process that was made possible by the installation of a "delay drum," which consisted of a rotating metal platter, its outer edge having been treated with ferric oxide, with seven magnetic heads (one for recording, six for playback) randomly interspersed around its perimeter. Each of the playback heads directed its signal to a preamplifier, which returned the signal to sixteen of the loudspeakers installed on the walls of Studio 1. As Massey explained, "The whole system was essentially a large feedback loop, and therein lay the rub: It only functioned best when on the verge of howling, which made it largely uncontrollable." For his part, Townsend concurred, feeling that ambiophonics "was too artificial. The results sounded a little phony." In many ways, Dutton's system was just another one of the several discrete elements that needed to come together on that magical evening to bring George and the Beatles' vision for "A Day in the Life" into reality.[20]

With Martin and McCartney poised in front of the half orchestra, Emerick finally set the whole business into motion. Before taking his place in front of the musicians, Martin had given the players a series of vague instructions. "Having given them the score," he later wrote, "I had to tell them how to play it. The instructions given, though, shook them rigid. Here was a top-flight orchestra, who had been taught all their lives by maestros that they must play as one coherent unit. I told them that the essential thing in this case was *not* to play like the fellow next to them! 'If you do listen to the guy next to you,' I told them, 'and you find you're playing the same note, you're playing the wrong note. I want you to go your own way, and just ignore everything else; just make your own sound.' They laughed; half of them thought we were completely insane, and the others thought that was a great hoot." From his place in the booth, Emerick could sense Martin's mounting frustration. "Do what?? What the bloody hell?" Emerick heard through the studio mics as Martin attempted to ease Erich Gruenberg's dismay with the sound of balloons, helpfully supplied by the bandmates, which kept popping in the background. "Just trust me. Please," Martin pleaded with the violinist. "Just trust me." Meanwhile, Alan Civil observed the strange festivities from his place in the brass section, later remarking that "it was such a chaotic session. Such a big orchestra, playing with very little music. And the Beatle chaps

were wandering around with rather expensive cameras, like new toys, photographing everything."[21]

As Martin and McCartney took up their batons, the half orchestra finally kicked into gear, performing the producer's strange cacophony of a score, with his even more bizarre, presession instructions to the players blaring in full effect. Of course, the musicians falsely believed that they were rehearsing the passages. But Emerick and Lush were already recording the sounds reverberating in Studio 1. As Emerick later recalled, "At the session, we ran the Beatles' rhythm track on one machine, put an orchestral track on the second machine, ran it back, did it again, and again, and again." As Emerick admitted years later, "We were doing something naughty. Over the remaining two and a half hours of the session, we actually recorded them playing that passage eight separate times, on two clean sections of four-track tape." In so doing, Emerick and Lush had captured the equivalent of four orchestral recordings—exactly as Martin had planned it. But the unsung hero in the process was Emerick, whose quick thinking at the mixing desk ensured that the half orchestra's crescendo had been recorded to Martin and the bandmates' specifications. "It was only by careful fader manipulation that I was able to get the crescendo of the orchestra at the right time," he later wrote. "I was gradually bringing it up, my technique being slightly psychological in that I'd bring it up to a point and then slightly fade it back in level without the listener being able to discern this was happening, and then I'd have about 4 dBs in hand at the end. It wouldn't have worked if I'd just shoved the level up to start with."[22]

And then, before the clock struck eleven on that fateful night, George put down his baton and said, "Thank you, gentlemen, that's a wrap." As Emerick looked on from the booth, "everyone in the entire studio—orchestra members, Beatles, and Beatles friends alike—broke into spontaneous applause. It was a hell of a moment." Looking on from his position beside Emerick, Lush couldn't hide his ebullience, saying, "Wow, I can't wait for people to hear this!" For his part, George was elated. "When we'd finished doing the orchestral bit," he later remarked, "one part of me said, 'We're being a bit self-indulgent here.' The other part of me said, 'It's bloody marvelous!'" To

everyone's great relief, Townsend's gambit had paid off, and the synchronized tape machines had done their work. The sounds of the orchestra—four of them, to be precise—now played alongside the words and music of the Beatles in exquisite harmony. And for one night at least, ambiophonics hadn't been all that phony at all. Dutton's brainchild had ensured that the orchestral reverb enjoyed an arresting, artificial echo that served to heighten the song's dramatic intent. For George and the Beatles, the stars had truly aligned on the night of February 10. On that rarest of occasions in Studio 1, the system had worked like a charm—and exactly as Dutton had imagined it would. By 1971, studio personnel, frustrated by ambiophonics' hit-or-miss nature, gave up on Dutton's design and removed the system from Abbey Road altogether.[23]

After the studio musicians packed up and left for the night, Paul ushered the Beatles and their friends around the microphones for one last recording that evening. At this juncture, George's score called for the half orchestra to conclude with an E major chord, which they had duly recorded that evening. George knew that the Beatles wanted to create an arresting conclusion for "A Day in the Life," and for the moment at least, the orchestral flourish brought the recording to a close. As George later recalled, "It was Paul's idea to do something really tumultuous on the song, something that would whack the person listening right between the ears and leave them gasping with shock. He didn't know quite what it was he wanted, but he did want to try for something extremely startling." Lennon and McCartney had already decided that the orchestral coda was a place-saver. As Geoff remembered, "Paul asked the other Beatles and their guests to stick around and try out an idea he had just gotten for an ending, something he wanted to overdub on after the final orchestral climax. Everyone was weary—the studio was starting to smell suspiciously of pot, and there was lots of wine floating around—but they were keen to have a go. Paul's concept was to have everyone hum the same note in unison; it was the kind of *avant-garde* thinking he was doing a lot of in those days. It was absurd, really—the biggest gathering of pop stars in the world, gathered around a microphone, humming, with Paul conducting the choir. It was a fun way to cap off a fine party."[24]