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Rockwell Collins

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Introduction

Rockwell Collins stands as a cornerstone in the annals of American innovation, business, and technology—a company whose reach has quite literally spanned the globe, even venturing into the silence of outer space. Beginning as the Collins Radio Company in a small shop in Cedar Rapids, Iowa during the hardships of the Great Depression, Rockwell Collins emerged through decades of fast-changing technology and turbulent economics to become a central figure in aerospace and defense. This book explores the remarkable journey of Rockwell Collins: its humble beginnings, its pivotal role in historic events and technological revolutions, and its transformation into a global force in aviation and communications.

From the start, Rockwell Collins was built on a foundation of engineering brilliance and a relentless drive for innovation. Founder Arthur A. Collins, driven by his fascination with radio technology, staked his future on creating equipment that would set new standards for dependability and clarity. Early achievements, such as enabling Rear Admiral Byrd's South Pole expedition to communicate with a waiting world, captured national imagination and earned the company a reputation for quality and precision that would define its brand for decades.

Over the ensuing years, the company weathered seismic shifts in technology, warfare, and commerce. Its contributions during World War II and the subsequent Cold War helped shape the defense capabilities of the United States and its allies. When the space race beckoned, Collins technology made humanity's first journeys beyond Earth not only possible but safer and more successful. The company's radio and telemetry transmissions stitched together the scattered stations of Mercury, Gemini, Apollo, and Skylab, ensuring that communication was always possible between crew and command.

The story of Rockwell Collins is also one of resilience and adaptation. The transition from a privately-held engineering shop to being absorbed within the vast structure of Rockwell International and later evolving into an independent public company marks periods of reinvention. Each phase brought its own set of challenges and opportunities, from restructuring business units to expanding into new global markets and broadening a portfolio through strategic mergers and acquisitions.

The modern chapter for Rockwell Collins began in the twenty-first century, when it cemented its status as a powerhouse in both military and commercial aviation electronics. The company embraced rapid technological evolution, pushed boundaries in cockpit and cabin systems, and built a culture that valued integrity, teamwork, and customer focus. This all culminated in its acquisition by United Technologies

Corporation and, ultimately, its role within Collins Aerospace as a part of RTX Corporation, reflecting an enduring legacy in the face of relentless change.

This book seeks not only to chronicle the history of Rockwell Collins but also to consider its present-day situation and speculate about its future trajectory. Through a close examination of leadership decisions, technological breakthroughs, and the values that underpinned the company's rise and reinvention, readers will discover how an American company built from vision and innovation helped shape modern aviation, defense systems, and beyond.

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CHAPTER ONE: The Birth of Collins Radio Company

In the heartland of America, where innovation often sprouted from ingenuity rather than established industrial centers, a new chapter in radio communications began. The year was 1933, and the Great Depression gripped the nation, making any entrepreneurial venture a risky proposition. Yet, in Cedar Rapids, Iowa, a young radio enthusiast with an unshakeable belief in his craft dared to do just that. His name was Arthur A. Collins, and he was about to lay the foundation for what would become Rockwell Collins.

Arthur A. Collins, born in Kingfisher, Oklahoma, in 1909, moved with his family to Cedar Rapids, Iowa, at the age of seven. His early life was marked by a keen curiosity for the nascent world of radio communication, a fascination encouraged by his parents. By the tender age of 14, he had already become a licensed amateur radio operator, designing and constructing his own equipment in the attic of his family home. This hands-on experience, coupled with an insatiable desire to understand the intricacies of radio waves, quickly set him apart. He forged friendships with fellow amateur radio "hams," including the notable radio pioneer John Reinartz, sharing a particular interest in radio wave propagation.

Even as a teenager, Collins was making waves, quite literally. In 1925, he established a critical radio link with the MacMillan-National Geographic Arctic expedition, a feat that garnered national attention. While the U.S. Navy, relying on longer wavelengths, struggled to maintain communication, Collins and Reinartz had discovered that shorter, higher frequency wavelengths experienced an atmospheric "skip" during the daytime over long distances. This breakthrough allowed them to maintain vital and reliable communication, and the American public was fascinated to learn that much of the news from the expedition was being transmitted by a 15-year-old in Iowa. This early success not only solidified his reputation but also hinted at the groundbreaking work that would define his career.

By 1931, with the Great Depression in full swing, Collins, then in his early twenties, decided to turn his passion into a livelihood. He began designing and building transmitters for amateur radio stations from the basement of his Cedar Rapids home. This was a pivotal moment, as it marked the first time that fully assembled and working radio transmitting apparatus, of any power output, was available for purchase. His initial setup was humble, with only one employee, Clair Miller, fresh out of Iowa State College. However, word of his high-quality, reliable equipment quickly spread, attracting orders and leading to the company's gradual expansion.

In 1933, with a team of eight employees and \$29,000 in capital, Arthur A. Collins

officially incorporated his business as the Collins Radio Company. This move necessitated a step up from the basement factory, and the company moved into leased commercial space at 2920 First Avenue in Cedar Rapids. The focus remained on designing and producing shortwave radio equipment, primarily for the amateur radio market. Collins' unwavering commitment to innovative design, meticulous attention to detail, and exceptionally high quality quickly became the company's trademark. This dedication to excellence ensured steady growth even during the challenging economic climate of the 1930s.

The early years of Collins Radio Company were characterized by an emphasis on rapid development and the continuous introduction of new models, each incorporating increasing levels of technology. This period was crucial in establishing Collins Radio as a supplier of equipment that could be depended upon in every sense. The company's reputation for superior performance and unwavering quality, even in comparison to much larger established firms, quickly began to solidify its position in the burgeoning radio industry.

Collins Radio's initial offerings were advanced, high-quality amateur radio transmitters, but their appeal quickly extended beyond the hobbyist community. Police departments across the country began to acquire Collins radios, recognizing their robustness and clarity in vital communications. This early diversification into commercial applications showcased the versatility and inherent quality of Collins' designs. The company's commitment to precision and reliability resonated with users who demanded nothing less, setting a high bar for future endeavors.

The ambition of Collins and his nascent company was not limited to land-based communications. In a truly revolutionary move for aviation, Collins Radio developed the first airborne radio transmitter during the 1930s. This advancement was a significant step forward, offering improved communication capabilities for aircraft, a sector that would later become a primary focus for the company. These early airborne radios were a testament to Collins' foresight and his understanding of the critical need for robust and dependable communication in the rapidly evolving world of aviation.

While the amateur radio market and early commercial ventures provided a crucial foundation, Collins' reputation soon reached the ears of those embarking on more ambitious endeavors. The quality and reliability of Collins equipment were about to be tested in one of the most extreme environments on Earth, an opportunity that would propel the young company into the national spotlight and solidify its standing as a serious player in the world of advanced radio technology. The stage was set for an expedition to the frozen ends of the earth.

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