With the threat of war looming in mid-1940, US Army officials began identifying sites suitable for division level training. By 1941, a decision was made to acquire such an area near Augusta, Georgia and the War Department established a \$22 million contract to construct a new installation. At the groundbreaking ceremony on 18 October 1941, the new camp was named for John B. Gordon, a former Georgia Governor and Lieutenant General in the Confederate army.

During WWII the 56,000-acre training site was temporary home to three divisions; the 4th Infantry Division, the 26th Infantry Division, and the 10th Armored Division until they were sent to Europe where they all served with distinction. From October 1943 to January 1945, Camp Gordon served as a Prisoner of War camp. Following WWII Camp Gordon was scheduled to be inactivated however, emphasis on military preparedness during the Cold War brought new life to Camp Gordon. On 20 September 1948, the Military Police School moved to Camp Gordon and on 1 October, a Signal Corps Training Center (SCTC) was activated. Since that time Camp Gordon has served as a crucial communications training installation for the US Army Signal Corps.

In 1950 the demand for signalmen in the Korean War led to a major expansion of the SCTC, making it the largest single source of Army communications specialists. On 21 March 1956, Camp Gordon was redesignated Fort Gordon and a permanent installation. The US involvement in Southeast Asia in the 1960s and 1970s, together with the advances in communications-electronics (C-E) technology, placed heavy training demands on Fort Gordon. At the height of the Vietnam War, the renamed Southeastern Signal School (SESS) was the primary source of personnel for tactical C-E units in Vietnam. In September 1965, the SESS activated the Signal Officer Candidate School (OCS). By the time the last class ended in February 1968, more than 2,000 officers graduated from Signal OCS.

The post-Vietnam years found the Army revising training, doctrine, and organizations to keep pace with rapid technological advances on the modem battlefield. It was a period of reorganization that resulted in consolidation of all signal training at Fort Gordon on 1 July 1974. The SESS was redesignated the US Army Signal School (USASIGS) and on 1 October 1974 was redesignated the US Army Signal Center and Fort Gordon. The 1980s represented a transitional phase for the army that impacted heavily on the Signal Center. The Signal Center's efforts included the development of Mobile Subscriber Equipment (MSE), the Army's communications architecture and assuming proponency for the Army's Information Mission Area, which included the integration of automation, communications, visual information, records management, and publications and printing. In June 1986, the US Army Signal Corp Regiment was established and Fort Gordon designated as the regimental home base.

In 1990-1991, the Signal Center played a vital role in preparing soldiers for deployment during Desert Shield/Desert Storm. In the 1990s, Fort Gordon became home for training most of the satellite operators and maintainers within DOD and continued to train signal troops of allied and foreign countries. Fort Gordon also welcomed the 513th Military Intelligence Brigade in November 1993 and the Georgia Regional Security Operations Center (NSA Georgia) in January 1996. After the terrorist attacks of 9/11, Fort Gordon units were instrumental in providing communications, intelligence, and medical capabilities for the wars in Iraq and Afghanistan. In 2007, both the 35th Signal Brigade and the 7th Signal Command (Theater) moved to Fort Gordon.

In December 2013, the Army announced that Army Cyber Command (ARCYBER) would move to Fort Gordon at a future date, and in March 2014, the base transitioned from the Signal Center of Excellence to the Cyber Center of Excellence (CCoE). This new CCoE would oversee the Signal School and the new Cyber School, which opened its doors in August 2014. Besides providing training for both the Signal and Cyber Corps, Fort Gordon serves as a power projection base for several Army Signal, Cyber, and Intelligence units. Fort Gordon is also home to joint partners from all the Armed Services who provide intelligence, cyber, communications, and cryptologic support for operations spanning the globe. In 2021, Fort Gordon turned 80 years old.