The biggest push for the Signal Service was from farmers and coastal shippers. Between crop loss and death due to unpredictable storms at sea, those two professional collectives had the most extensive collection of weather data, but it mattered little as there was no way to disseminate the information. By the mid-19th century telegraph wire was being lain throughout the eastern portion of the United States, however, the work was interrupted by the Civil War. It took nearly a decade after the war for the work to be continued after the war concluded, and expansion of the telegraph to move westward.

By 1873 the Signal Service was still in its infancy, but had branched out from locations functioning strictly on military bases; the collective had also expanded its weather recordings nationally, opposed to solely along the coast lines and Great Lakes region of the United States. The days of Americans mailing Thomas Jefferson requests for information pertaining to weather observations were officially behind them.

In July of 1873 U.S. Army Signal Service Sergeant George Boehmer and Private James H. Smith received orders to ascend Pikes Peak in an attempt to ascertain whether the summit was a suitable location for a weather observatory; the location would be the nation’s second mountain top locale yet the highest. Shortly after their ascent, another trip was planned; again with Boehmer and Smith, as well as three others: Private Edward Boutelle of the Signal Service, Officer Fitch of the U.S. Coastal Service, and C. Ford Stevens of the Denver and Rio Grande Railway. Only the latter three made it to the summit on the second trip, however. Not only did the three agree the locale was ideal for all things research related to atmospheric phenomenon, weather, and forecasting, Pikes Peak was chosen because it was (at that time) removed from any major populated area, any eastward moving storm could be spotted from its tall peak, and it substantially surpassed the height of the then tallest weather station in the U.S. – New Hampshire’s Mt. Washington standing at 6,288’.

Before winter of that same year Edward Newman, a Denver area contractor, was retained for a mere $2,500 to build the first signal station, nearly the equivalent of $49,019.61 today. In a short four weeks a team of thirteen men loaded supplies on horseback and donkey to trek the arduous route back up the mountainside. They constructed a two room building, a rustic cabin fashioned roughly eighteen by thirty feet long and ten feet high, with stone walls 18 inches thick. One room served as an office and bedroom for the officer in charge, typically a sergeant, while the other room was a catch-all kitchen/storeroom/sleeping quarters for the assistants. Officially opened in October of 1873, the location was manned year round; the first telegraphic report was sent out on November 6th of that same year. When we consider the average temperature at the summit is thirty to forty degrees colder than at the base of the mountain, a picture such as this truly does speak a thousand words.
The signal station was crudely and quickly built, inadequate for the inaugural winter weather conditions in which it and its residents would face. The windows and doors were ill-fighting, allowing snow to accumulate through crevasses and cracks; boulders were often needed during bouts of high wind to keep the roof from flying off. Notice the boulders atop the roof in the below photo.

Word of the signal house spread like wild fire, eventually drawing tourists who unceremoniously viewed the work station as a rest stop after conquering the first rustic route, the present trail through Bear Creek Cañon, up
the mountain. Who manned the weather station was published in the local phone directory, a bit of stardom bestowed on those who served the mountain top post.

Photograph of C.F. Schneider and T.W. Sherwood whose names are also listed in the CO Spr Directory 1888 – The Colorado Springs Pioneers Museum

Weather was not the only struggle in which the signal men dealt. High altitude meant challenges in cooking and food preparation that the men who stemmed from sea-level altitudes were not accustomed to dealing with. The highest point of altitude in Washington, D.C., where many of the new signal station residents originally resided, is 410’. The altitude of Colorado Springs is roughly 6,035’, posing its own challenges for cooking, not to mention anatomical and physiological acclimations. Water at sea level boils at 212 degrees, however, at 14,110’ it boils at 178 degrees. Something as simple as boiling potatoes took the signal station residents now four hours, cooking beans took over ten hours. They had to drink their coffee quickly before it cooled mere minutes after brewing. Simple, economically savvy, meals which the men stationed on top of Pikes Peak rationed and were prepared for taking an hour or two to cook were in actuality taking upwards of half a day, if they were finishing at all; on occasion the men went to bed hungry.

Nine years later, in 1882, the original signal station was replaced with a larger station, one which could accommodate more people, supplies, and equipment. Not only was the signal station being utilized for weather services, but for a growing number of visitors who were traversing the winding path from base to summit up Pikes Peak for recreational purposes.
Despite reconstruction, the Army closed the signal station in 1888. It was determined that the constant downed telegraph wire, with its prolonged interruption of service, was not worth the cost of maintaining the location. And, after years of daily weather reports they concluded there was little correlation between the Pikes Peak summit weather and her sister weather in the plains to the east. While this meant the end of the signal station for weather purposes, the location remained alive and well for tourism purposes. In 1890, and for roughly seven years, weather reports were stemming out of stations in Denver and Breckenridge, sitting at roughly 9,500’ above sea level.

New revitalization efforts are in the works for yet another summit house as of Spring 2015.