Karl Sendler

By Jim White

Karl Sendler (1914-2001) was born in Vienna, Austria. When his homeland became part of Hitler's Germany, Karl was drafted into the German Army. He was assigned to work on the V2 missile at Peenemünde with Herr Doktor Professor Wernher von Braun (1912–1977).

Karl's favorite story about his experience at Peenemünde involved a V2 that misbehaved and headed in the wrong direction. Karl could see that the missile would pass directly over his Instrumentation Facility – unless the Safety Officer aborted the flight, which might cause the missile to fall on Karl's Facility. In order for the Safety Officer to abort the flight he would have to send a command using a radio link that was part of Karl's equipment. So, naturally, Karl unplugged that radio link. Then, after the V2 got beyond Karl's Station, he re-plugged that radio link to enable the Safety Officer to destroy the missile in a place where it could NOT harm good-old Karl.

When it became obvious that Hitler would be defeated, von Braun decided that he wanted to be captured by the Americans instead of the Russians, but Peenemünde was in the path of the advancing Russians. He loaded up his unfinished V2's and headed west. In their rush they dumped out their spare parts on the floor and shoveled them into trucks. In spite of the shortage of fuel for his trucks, he made it to the American troops.

Then, as part of an American operation labeled "Paperclip" our General Toftoy (1902 –1967) went to Europe and arranged for von Braun and about 100 of his people to come to the USA as "guests of the Army." Karl Sendler was one of those.

Karl's first wife was the daughter of his father's partner. Those partners had owned a chain of "white bakeries" meaning that they baked cakes and other deserts rather than brown bread. When the war ended and democracy returned to Austria, the wife became a politician and was elected to the city council. When Karl came to the US, his wife considered her job more important than his; she refused to come with him. In Austria, a Catholic country, divorce is unusual. She insisted that, if they divorced, Karl would have to give her everything he had (100%), including his half of all those bakeries that he inherited from his father. For reasons that will be discussed below, he eventually agreed to that.

Karl was one of those who came to the USA with von Braun in 1945. They were first stationed at Fort Bliss, Texas, which is across the state line from White Sands Proving Ground, New Mexico. Then in 1950 they moved to Redstone Arsenal at Huntsville, Alabama.

Karl's best friend was married to a fine German lady named Ingeborg, better known as Inge. Unfortunately Inge could not get pregnant, although Karl's friend

was anxious to have children. The friend was thinking of divorcing Inge so he could marry a woman who could be a mother, but he could NOT do that to Inge unless Karl would agree to divorce his far-away wife and marry the beautiful Inge. Those of us who knew Inge were able to understand why Karl agreed to that.

In 1952, Karl's boss, Wernher von Braun, published a series of articles in Colliers Magazine. Most of his readers thought he was writing science fiction; I thought he was talking about what he was actually going to do. I was already a government employee, so I went to Huntsville, Alabama, and applied for a transfer to von Braun's organization.

He agreed and assigned me to work for Karl Sendler on Squirrel Hill at Redstone Arsenal near Huntsville, Alabama. Karl had a team of engineers that were designing and fabricating Instrumentation systems for two missiles. For a while we were working on a ramjet that was intended to be a second stage for the V2 missile. The ramjet project was canceled and we began to apply all our efforts to a liquid fuel rocket missile, similar to the V2 but larger. The original name for that missile was the Major, but its name was soon changed to the Redstone.

When the Redstone was almost ready for its first test flight, Dr Kurt H Debus formed a new organization that was originally called the "Firing Branch" and eventually became Kennedy Space Center (KSC). Karl, who was a long-standing friend of Dr Debus, transferred to the new "Firing Branch." I didn't like the guy that took over Karl's old job, so I followed Karl into Dr Debus' "Branch."

Karl put me in charge of RF & Tracking Systems. My equipment included a radar beacon but Karl knew from experience that those old slow World War II radars would have trouble tracking a radar beacon in a fast rocket missile. While Karl was at Fort Bliss and White Sands, be built a tracking system like one he had built in Germany. But we were going to launch the Redstone from Florida, NOT from White Sands. Karl sent me to White Sands to make a copy of the DOVAP (Doppler Velocity And Position) system. DOVAP (and later systems that I developed) proved valuable later, not only for our missiles but also for Air Force missiles that I volunteered to track "on a non-interference basis" after the Air Force started using rocket missiles, which were too fast for their old radars.

For a while we of the "Firing Branch" (about 60 of us) commuted back in forth between Florida and Alabama; we launched a Redstone in Florida, then went back to Alabama and built another one. When I found that I was spending more time in Florida than in Alabama, I became the first member of the team to move to Florida.

The Redstone was NOT a long-range missile. Instead it was designer to carry the heavy nuclear bomb like those dropped on Hiroshima and Nagasaki. Meanwhile the nuclear folks were redesigning the bomb to make it smaller and lighter weight. Later missiles were designed to carry a smaller warhead over a longer range. Our next missile was the Jupiter. Not only did the Jupiter have a much longer range than did the Redstone, but it went much higher, and the nosecone came back into the

atmosphere much faster and the air friction made it much hotter. The pessimists insisted that the nosecone would burn up like a meteorite.

Several designs were made for a miniaturized version for the Jupiter nosecone. Therefore some small fast missiles were needed to lift the experimental nosecones out of the atmosphere and then blast them back through the atmosphere. The result was the Jupiter-C missile, a multistage missile with a modified Redstone as the first stage and a bunch of little solid rockets for upper stages. Several of these Jupiter-C's were built because it was assumed that we would have to test several of those experimental nosecone to find one that could reenter the atmosphere without burning up. But surprise! The first nosecone worked; we had some leftover Jupiter-C's.

That was during the "International Geophysical Year" (1957-1958) and the USA was expected to put the first artificial satellite in orbit, using the Vanguard, a nonmilitary missile.

It was generally known that those left-over Jupiter-C's, with a slight modification, could put a satellite up yonder. The Powers-That-Be were of the opinion that the satellite must NOT be military. We were ordered not to use the Jupiter-C for the satellite project.

Well the Vanguard would not be ready to go until after the Russians put their Sputnik in orbit on October 4, 1957. Then we were finally given permission to use a Jupiter-C's to put a satellite in orbit. The American satellite, named Explorer-I, was launched into orbit on January 31, 1958.

The Russians had gotten there first, but we could have easily put a satellite in orbit before the Russians if we had been allowed to do so.

In the mid '60s the Launch operation Center (LOC), later renamed Kennedy Space Center (KSC) moved from Cape Canaveral to the nearby Merritt Island. There was controversy about where Karl Sendler's Instrumentation organization would be located on Merritt Island: Should it be part of the KSC Headquarters Building? Should it be part of the VAB? Or should it be a separate building with its own flagpole.

We never did get our own flag pole.

Karl appointed me to design and oversee the construction of the Central Instrumentation Facility (CIF). It had equipment for telemetry and tracking and computing and timing and instrument calibration.

When the CIF was ready for occupancy, Karl allowed me to appoint my youngest engineer, JoAnn Morgan, to supervise the move. JoAnn said that the movers were paying no attention to her insistence that they be careful in the handling of delicate equipment. She went up to my office and got two of my cigars. Then she went back down where movers were working and lit one of my big cigars. After that she had no

trouble with the movers. JoAnn went on to break the glass ceiling for NASA woman. Years later when I retired, JoAnn's parting gift to me was to repay those two cigars. By that time I had stopped smoking. I saved her two cigars that were sealed up in aluminum tubes. Then when JoAnn retired many years later, my gift to her was the same two cigars. I never knew whether JoAnn ever smoked those well-aged cigars.

I would have been glad to continue working for Karl Sendler for the rest of my career, but Dr Debus decided that I was needed elsewhere. He transferred me to Design Engineering, over in the KSC Headquarters Building. At first I had an office with windows overlooking the CIF, which I still admired. Then somebody built another wing on the Headquarters Building. The new wing obstructed my view of the CIF. I moved to an office at the front of the building, overlooking the alligator pond.

When Karl and the other Germans had been in this country long enough to become citizens, their applications for citizenship were denied because they had never legally entered the USA. Their status was "Guests of the Army," a polite term for prisoners of war. Their application showed that they had entered the USA five years earlier at El Paso, Texas. They were told that their time in America would not count toward citizenship until they officially entered the country at El Paso. They went to El Paso and got an official re-entry permit. They boarded the streetcar, crossed the Rio Grande into Mexico on one of the two bridges, continued around the circular streetcar track and crossed the other bridge, entering the US legally. Each one became a naturalized citizen five years after his streetcar ride.

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