FLYING HIGH
The 4th MRBC Antenna Riggers

by Charles H. Briscoe
Media broadcasters personify the image of radio and television stations. Audiences elevate the most popular like Walter Cronkite and Rush Limbaugh to celebrity status. Voice quality and a convincing tone further acceptance by listeners and facilitate recognition. However, to broaden interest and achieve marketing success voice broadcasts have to be transmitted long distances. Antennas provide direction and range to electrically boosted radio wave transmissions. The U.S. Army soldiers who erect and maintain this critical link in radio broadcasting and long range reception are called antenna riggers.

This article will explain what the antenna riggers of the 4th Mobile Radio Broadcasting Company (MRBC), 1st Radio Broadcasting and Leaflet Group (RB&L) did, when and where they did it, and the equipment they used during the Korean War. Articles from the 1st RB&L weekly newspaper, The Proper Gander, contemporary news stories, veteran interviews, official documents, U.S. Army field manuals (FMs), and the unit “yearbooks” for 1952 and 2002 provided information. To appreciate the accomplishments of these Psywarriors during the Korean War, an understanding of the 4th MRBC organization, missions, and capabilities is needed.

According to its Table of Distribution (T/D) 250-1203 effective 18 July 1950, the 4th MRBC was to “conduct strategic propaganda by radio broadcasting against an enemy and disseminating information to friendly elements in enemy-held territory.” The headquarters included a small radio (Morse Code) monitoring section. Each of the three mobile radio broadcasting platoons were authorized four officers and twenty-two enlisted soldiers. As organized radio platoon personnel could operate as small independent detachments to meet immediate mission requirements. This capability was critical key in the summer of 1951 when Seoul and a significant part of South Korea were controlled by the Communists for a second time.

Independent broadcasting was not possible without radios, receivers, transmitters, and antennas. Three new commercial radio systems (specially-modified for mobility) and antenna sets accompanied the last large 1st RB&L contingent to Japan in mid-September 1951. Seven officers and sixty-three enlisted men and the large MRBC unit equipment came to Yokohama aboard the USNS General John Pope. During the voyage “vigilance was maintained against Saboteurs, Communist Guerrillas, and Apaches” by dedicated Psywarriors. The “alert guardians” disembarked from the Pope in OD (olive drab) uniforms, combat boots, helmets, and packs with duffle bags, overnight bags, and carbines in hand to join “the Fighting First at GHQ.” Among them were the antenna riggers from the three mobile radio platoons.

While being bussed to the Finance Building in Tokyo, antenna rigger Private First Class (PFC) Keith H. McDaniel,
Towers ranged from 180 to 365 feet high, making work on them only for those sure of foot and comfortable with heights.

A snatch block pulley lifting apparatus, or ‘gin pole,’ was used to assemble towers.

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Typically two climbers worked on a tower, here CPL Keith McDaniel (facing) is working a tower above the Han River.

KBS station on a hill overlooking the harbor. Three times a day we walked down that hill for meals with another outfit. Showers were close to the train station,” remembered CPL Keith McDaniel. The antenna sets, AN/MRT-5A tuning shelters, and 6 x 6 trucks to carry them were waiting for the riggers.

The crated antenna systems and tuning shelters had arrived by ship from Decatur Army Signal Depot, IL. They were stored in a burned-out warehouse on the Pusan docks. Two 6 x 6 trucks and a trailer were needed to carry one antenna set, the antenna tuning shelter, a generator, and a half dozen riggers with their individual equipment.

CPL McDaniel explained, “The first antenna to be erected was at Pusan by the ocean. It was a 180-footer with a blinking aerial warning light. The original KBS tower had been hit by lightning several times. When we arrived the resistor ball was just lying on the ground. We mixed our own cement to ‘fix’ the antenna base and thirty-four guy wire supports [augers and anchor rods]. As soon as the first section of antenna was assembled, vertically locked into the base, and stabilized by guy wires, I strapped on my rigger belt with tool bag containing wrenches, nuts and bolts, and small sledge hammer. Then, I put my leather safety strap around my waist and began climbing the ladder side to the top of that first ten foot section to rig a ‘gin pole’ [snatch block pulley lifting apparatus]. This enabled the men below to winch up the next section which I bolted to the first section. Then I moved the guy wires up to the next level and disconnected the ‘gin pole.’ With the ‘gin pole’ over my shoulder, I climbed up to the top, unhooking and reattaching my safety strap as I went.”

Riggers worked an antenna tower in pairs.

CPL Billy J. Eakes stressed how hard and difficult it was working on a tower. “Two climbers worked on a tower together. Our wrenches were open jaw, not adjustable Crescents. Manipulating the screw mechanism on a Crescent wrench while wearing gloves was too difficult on the tower. We did a couple of sections and then took a break. A day’s effort was usually four to six sections,” remembered Eakes. It was also dangerous on the ground during construction.

“The antenna guys on the ground wore their steel pots, avoided the ever expanding danger ring directly below us, and maintained an alert eye upward. It was cold and windy working on the tower and you dropped things occasionally. By the time the guys down below heard a warning yell, it was too late. The object was at least halfway to the ground,” recalled McDaniel. “Guy wire tension was regularly adjusted to keep the antenna tower vertical. I used my dog tags as a field expedient plumb bob. It was simple, but it worked.”

After the
Psywarriors representing the FECOM and EUSA elements were awarded the ROK Presidential Unit Citation (PUC) by Dr. Clarence Ryee, the ROK Director of Public Information, at the inauguration of Radio Taegu on 18 May 1952. Standing L to R: COL J. Woodall Greene, FECOM G-3 Psywar, LTC Homer E. Shields and MAJ Robert A. Leadley (1st RB&L), LTC Claude Matchett (EUSA G-3 Psywar), 2LT Eddie Deerfield (4th MRBC Radio Pusan), 1LT Jerry Stose (1st RB&L), MAJ Phillip Loomis (EUSA G-3 Psywar), and CPT Herbert Avedon (1st L&L); Squatting L to R: 2LT Roy Guth, PFC Victor Lee, CPL Arnold Tepfer, 1LT William J. Eilers, CPL Devere Doerr, and 1LT Ernest H. Luick (4th MRBC, 1st RB&L).

antenna was erected, the light and radio transmitter had to be installed at the top.

The radio transmitter and the antenna required tuning to be functional. After connecting the transmission line, operators calibrated the transmitter and antenna from the Antenna Tuning Shelter (556/GRC) mounted in their 6 x 6 truck bed. This was the final touch to a complicated construction project that spanned a 400 square feet area on the ground. The antenna, resting on a steel base plate, was grounded by thirty-six 200-foot wires radiating outward every 10 degrees, and kept erect by a skeletal cone-shaped system of guy wires. A wire fence was erected around the “field” by a local Korean work gang. This simple mission was a good rehearsal for Taegu.

The Radio Taegu team, led by First Lieutenants (1LT) Ernest H. Luick and Jack G. Morris, initially shared an old factory building with the 62nd Engineer Topographical (Topo) Company supporting Eighth Army (EUSA). The KBS station was located outside of Taegu. While topo engineers enlarged 1/50,000 WWII Japanese map sheets to 1/25,000 scale and converted aerial photos into maps, the Radio Taegu group focused on getting HLKG back into operation. SGT Eugene S. Deschenes, the team antenna rigger, taught CPL Arnold Tepfer, a Cooper Union (NYC) electrical engineer (1949) cum laude “jack of all trades” how to drive. Tepfer became proficient on the 6 x 6 truck, 5/4 weapons carrier, and a Russian [former North Korean Peoples Army (NKPA)] jeep. The fixed station radio repairman took over Deschenes’ daily job of collecting Korean day laborers and transporting them to and from the antenna site. He also was the detachment typist.

On 18 May 1952, Radio Taegu, HLKG, went on the air. It had the most powerful radio beam on the Korean peninsula. Installing the 10 KW high-power transmitter became a joint 4th MRBC/KBS mission done by radiomen, antenna riggers, and technicians. The Japanese-made antenna was topped by twin halo ring transmitter-receivers. Republic of Korea (ROK) officials recognized the 4th MRBC antenna riggers for their work.

During the Radio Taegu dedication ceremony, the ROK Director of Public Information, Dr. Clarence Ryee, presented their Presidential Unit Citation (PUC) to the 4th MRBC radio and rigger teams, the 1st RB&L, the Far East Command (FECOM) G-3 Psywar Section, the Eighth U.S. Army (EUSA) G-3 Psywar Section, and the 1st L&L Company. Major General (MG) Lee Jeung Chan, Chief of Staff, ROK Army presented Defense Ministry Commendation Certificates to twelve 1st RB&L personnel (LTC Shields, CPT Leadley, and LTs Eilers, Luick, Deerfield, Frank H. Preston, Jr., Brebeck, Terry Stose, and Roy Guth, CPLs Devere Doerr and Tepfer and PFC Victor Lee), FECOM Psywar, EUSA G-3 Psywar, and 1st L&L officers. Born in the States, but raised in P’yongyang, PFC Lee translated for the senior U.S. officers during the ceremony. He joined the U.S. Army after escaping the North Korean capital with his mother and sister when his Protestant minister father was taken away by the Communists. Visits from the Tokyo Psywarrior leadership seemed coincidental. CPL Tepfer was quite direct: “Bi-monthly visits by Tokyo ‘brass’ were calculated. They came to Korea a day or two before end of month and stayed a few days into the next. Candidly, they were playing the two months combat
The 4th MRBC antenna riggers installed a new double-doublet (T-bar) mast atop the Radio Seoul antenna to improve reception quality from Radio Pusan.

1LT Robert B. Shall, Radio Officer for the Radio Seoul detachment, sits outside the entrance of HLKA.

CPL Arnold Tepfer, the fixed station radio repairman at Radio Taegu, was presented a ROK Defense Ministry Commendation Certificate by MG Lee Jeung Chan, Chief of Staff, ROK Army, during the inauguration of the station on 18 May 1952.

The riggers missed the Tokyo visitors. They had returned to Seoul, where significant progress had been made at HLKA.

According to the 4th MRBC Ye Olde Broadcastre of 28 April 1952, the antenna rigger team had to offload a new Japanese 10 KW transmitter and antenna (180 feet) filling a boxcar and two gondola cars in the Seoul railyard. It took all available personnel a day to unload 106 heavy wooden crates for their new job: Taejon. But, instead of driving to Taejon, the riggers had to go by railroad which meant reloading everything aboard another train.

The most exciting part of the Taejon assignment was getting there via ammunition train. With their trucks and antenna tuning shelter loaded aboard a flatcar and the 10 KW transmitter and antenna crates in boxcars, the riggers climbed into a Pullman car. Unfortunately, the Pusan-Taejon railway was a favorite guerrilla target. All windows were kept open in the Pullman so the “passengers” could take up firing positions with their carbines. It was a dirty, smelly cold ride. The antenna men arrived without incident covered with soot and reeking of coal smoke.

The KBS antenna site for Radio Taejon provided another surprise. Korean day laborers had disinterred numerous remains from an unmarked grave site while digging antenna ground wire trenches. When the American rigger team arrived, a pile of bodies was awaiting removal. The area had to be thoroughly fumigated before the thirty-six wires could be buried and cement poured for the guy wire augers.

“The antenna site selected for Radio Taejon could best be described as an outpost,” said CPL McDaniel. “It was by an old building with some old barbed wire around it. There were no Americans anywhere around...just a pile of dead Koreans. We had our 6 x 6 truck carrying the antenna shelter and another loaded with personal gear and C-Rations. Every day we unloaded crated equipment from the railhead and hauled it to the work site. There was a well nearby for water, so we used halazone tablets. I became suspicious of the taste and took some to the field hospital for testing. The water was contaminated. The lab technician recommended that we get some local Koreans..."
to check the well for bodies. Sure enough, they found six. They were pulled out, but we never drank that water again. We filled up water cans at the hospital.”

“Since we were all alone out there,” continued McDaniel. “We took turns pulling guard shifts at night and kept a guy posted on the high ground while we worked. It was really cold at night. Even with folding cots, I slept in a sleeping bag with my clothes on and a parka over me. Since we were exposed, alone, and had no radio [to talk with Radio Taejon], we did that job in record time and took off for Seoul as soon as we finished.”

CPL McDaniel and several riggers first climbed the Nippon Electric antenna to inspect the assembly by the Koreans. CPL Tepfer, who carried the local laborers from Taegu in a 6 x 6, remembered watching the antenna erection: “I admired how the Koreans put it up. It was obvious that they were ‘learning as they went.’ They got three or four sections up. Since they had not tightened the guy wires properly, the tower started swaying. Three workman on the structure were hanging on for dear life as the ground men scrambled around below to set tension on all sides using ‘Kentucky windage.’ It was something to behold. No wonder our guys wanted to inspect it before installing the transmitter.”

The assembly was determined to be safe, so the MRBC riggers proceeded to install the 10 KW transmitter/receiver on top. After checking reception from various locations, a barbed wire fence was put up around the antenna field and the American antenna men left for Seoul, driving instead of taking the train. It was CPL Clifford M.G. Kim, a Radio Taejon powerman, who reported that the tower had “254 rungs” and “a wonderful view from the top” which meant that it was more than 300-feet high.

At Seoul more work awaited the rigger team. Repairing the Radio Seoul antenna towers was the toughest and most dangerous mission undertaken by the 4th MRBC riggers. Their twin RCA radio antenna towers had been seriously damaged by shrapnel, shellfire, and bullets during two Communist takeovers and subsequent recoveries by UN forces in October 1950 and April 1952. CPL McDaniel described the task: “The 270-foot and 365-foot antenna towers, linked together by cable, were ten miles north of Seoul. That was a really big job. We had three riggers working aloft at the same time.”
The original KBS station site in Pusan above the beach proved to be the best location.

time, Eakes [Billy J.], Keenan [William S.], and me. Below, there were three watchers constantly keeping track of us. Working that high up we dropped a lot because the ‘pucker factor’ was real high,” chuckled McDaniel.³² “There were lots of steps missing on the 270 footer. It looked like Swiss cheese,” recalled CPL Eakes. “The 365-foot tower was in pretty good shape. When we were done Billy Keenan and I climbed it so he could take pictures with his Brownie camera.”³³

McDaniel continued. “Remember, those towers were assembled like giant Erector sets. Damaged girder sections had to be replaced. We had rusted nuts to loosen and remove. Bolts usually had to be hammered out so there was a lot of flying debris. The broken and damaged sections were lashed to the ‘gin pole pulley’ and tediously lowered to the ground by the guys down below. Replacement sections were gang-pulled upward to us, from 20 to 365 feet in the air. It was scary and exciting both. ‘Hanging in the breeze’ was cold, hard physical work. We wore field jackets with soft caps and leather gloves. When I climbed down after several hours aloft I was whipped. On the tower at dusk the artillery firing along the front line looked like lightning in a West Texas thunderstorm,” said McDaniel.³⁴ “The final part was installing a double-doublet mast atop the 365-footer to improve reception quality from Pusan. It was several weeks before we finished that job. We trucked out and back to the compound every day.”³⁵

In between jobs the antenna riggers relaxed in Seoul. Their only regular mission was to inspect the antenna towers and accompany the tuners as they calibrated broadcast signals around the transmitter site. The riggers enjoyed mess hall food, hot showers, the beer ration, access to a post exchange, and a nearby, raucous Korean vaudeville show. After a 4th MRBC studio engineer accidentally shot himself CPLs McDaniel and Mass volunteered for some adventure.

“Supplies were ready to be picked up at Kunsan, about 120 miles from Seoul. The bad news was that 70 miles of the trip was in guerrilla-controlled territory where the people were not very friendly. A trucker had been shot in the leg and two fellas in a jeep were beheaded by a wire across the road. The toughest rigger, [CPL] Clay Mass, agreed to go along as long as we got extra ammo for our carbines. I took ninety rounds and we set off in a 6 X 6 truck. The first 45 miles was easy until we blew a tire. Claybourne had changed a ‘six by’ tire, but I never had. Still, we did it in record time! The ‘pucker factor’ was real high. By the time we got loaded up, it was pouring down rain. Just outside of Kunsan, we picked up a Catholic
nun with a dozen orphan kids. In retrospect, that simple act of kindness probably saved our lives,” reflected CPL Keith McDaniel. That incident was short lived because SGT Kenneth Sexton selected a team of riggers for a Pusan assignment.

They were going to erect another transmitter tower to supplement those already in use. “Since they will be living at the site, the men will undoubtedly have one of the finest billets in the Far East [‘Paradise Pines’] this summer. It is a few yards from a beach and ocean,” wrote CPL John “Stod” Stoddard in The Proper Gander. Instead of a large 10 KW transmitter like the one installed at Taegu in mid-May, Radio Pusan was putting a high power 5 KW 800 KC (kilocycles) model atop a 180-foot antenna. During the inauguration by ROK officials and KBS staff on 19 July 1952 Lieutenants William J. Eilers and Edwin M. Sjoholm, Jr. (Radio Seoul) and CPLs Stephen Radgowski, Nicholas H. James, and Arnold Tepfer from Radio Pusan were guests along with antenna riggers, SGT Sexton and CPLs Eakes, Mass, McDaniel, Kennan, and Gonzalez. By then, the 4th MRBC had helped to rebuild KBS radio stations all over South Korea and would continue supporting them until late 1954. The antenna riggers had erected or repaired antenna towers at thirteen locations.

In summary, the 4th MRBC radio and antenna teams rebuilt the KBS with American funded equipment and technical expertise. Starting with Radio Pusan, antenna teams moved to Taegu, Seoul, and Taejon repairing, replacing, and augmenting radio transmitter/receiver towers and maintained them afterwards. Radio Pusan remained the 1st RB&L Psywar radio “hub” in Korea throughout the war. The Armistice brought attendant personnel reductions. The 1953 FECOM T/D reduced the number of antenna riggers in the 4th MRBC Radio Platoons to one, a Senior Rigger sergeant, because the mission had dwindled to sustainment. Quite simply, the MRBC antenna riggers worked themselves out of a job.
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Endnotes


4 Keith H. McDaniel, interviews by Dr. Charles H. Briscoe, 5 and 6 October 2010, USASOC History Office Classified Files, Fort Bragg, NC, hereafter cited by name and date.

5 Army Field Forces T/D 250-1203 dated 18 July 1950, Darcy Collection.

6 McDaniel, interviews, 5 and 6 October 2010.


8 According to the 1st RB&L Program of Instruction (POI) for a Mobile Radio Broadcasting Company (undated), “The riggers erect the transmitter antenna tower, lay the ground system, assemble and raise the temporary balloon antenna (Mx.591/GR). They may also erect receiving antennas as required by the platoon monitoring section.” The balloon antennas were not shipped to Korea. Only the 6th RB&L at Fort Riley, KS, and Fort Bragg, NC, and the U.S. Army Reserve RB&Ls employed balloon antennas. Price Collection; McDaniel interviews, 5 and 6 October 2010.


11 Claybourne A. Mass, interview by Dr. Charles H. Briscoe, 18 October 2010, USASOC History Office Classified Files, Fort Bragg, NC, hereafter cited by name and date; McDaniel interview, 5 October 2010.

12 McDaniel interviews, 5 and 6 October 2010.


14 McDaniel interview, 6 October 2010.

15 Eakes interview, 13 May 2011.

16 McDaniel interview, 6 October 2010.


19 Tepfer interview, 2 November 2010.


22 Life & Times 2002, 202-203.

23 Tepfer interview, 2 November 2010.


27 McDaniel interview, 6 October 2010.

28 McDaniel interview, 6 October 2010.

29 Tepfer interview, 2 November 2010.


32 McDaniel interview, 6 October 2010; Eakes interview, 13 May 2011.

33 Eakes interview, 13 May 2011.

34 McDaniel interview, 6 October 2010.


36 McDaniel interview, 6 October 2010.

37 “This And That Around Seoul,” Ye Olde Broadcastre, Vol. I, No. 8, 1, 28 April 1952, McDaniel Collection; McDaniel interviews, 6 October 2010 and 23 April 2012.


Pusan harbor as viewed from the Radio Pusan hilltop location (Fall 1951).