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“Radio illiterates” visit HCJB’s hydro plant



Penstock leading into generator building in Papallacta.

by Dean Miller

What do three pipefitters, two college professors, a nurse, an office manager and a mother with three children and an accounting degree know about shortwave radio?

When our one-week work team, from Toldeo, Ohio, arrived at HCJB last year, our perception of radio was limited to switching on a favorite local AM or FM

station back home. We knew that after traveling a few miles from home, the station would fade out and we would have to look for another one on the radio dial. Without question we were a “radio-illiterate” group.

In Ecuador we were introduced to the concept of worldwide radio. “The idea literally blew my mind!” a colleague commented. Our host told us that radio broadcasts from HCJB

are heard in many parts of the world. Programs are broadcast in 15 different languages with as many as six to eight different languages beamed simultaneously to different parts of the globe. To the “radio-illiterate,” this was nearly incomprehensible.

On a beautiful Saturday afternoon we left Quito in a van--to go up over the Andes mountains to the small town of Papallacta to

(cont. on p. 2)

“Radio illiterates” (cont. from p. 1)

see HCJB’s hydroelectric plant. The question in our minds was, “What does this have to do with missionary radio broadcasting?”

Studios, production offices, news rooms, and antennas all made sense as related to broadcasting. But, what role does a hydroelectric plant located in the high Andes of Ecuador play in the operation of a shortwave radio station

“Our initial impression was one of astonishment.”

whose broadcasts span the globe? The answer to this question became clear a couple of hours later after a spectacular drive through the Ecuadorian countryside.

As we traveled and climbed in altitude through the mountains, the handiwork of God was awesome. Several times we stopped to get out of the vehicle and take pictures. Each time we returned to the car we wondered what was wrong--why were we short of breath? When our host told us we were at 12,000 feet (approximately 3,600 meters) above sea level, oxygen depletion took on new meaning.

After leaving the hard surface road, we traveled along a rocky, stone-covered road and came to a ridge. Below, situated in a beautiful valley, was the town of Papallacta, where HCJB’s hydroelectric plant is located. Our initial impression was one of astonishment. It didn’t match our preconceptions. On the way to Papallacta we’d pictured a huge electrical

generation plant, like the one located along the shores of Lake Erie near our hometown of Toledo, Ohio: a three-to four-story building with tall smokestacks and miles of high-tension electrical wires spreading out from the building.

But here in Papallacta we saw a small dam backing up the water of a mountain stream, forming a little lake. Extending down the mountainside from the dam were two giant tubes carrying water from the dam to a garage-like building below, where two generators produce electrical power. Electrical power is generated and then transmitted over a single set of electrical wires which stretch out over the rugged terrain of 19 miles (approximately 30 kilometers) to Pifo, HCJB’s antenna and transmitter site, providing



1,400-foot-long (430-meter) and 1,903-foot (580-meter) penstock - Papallacta

electricity for the high-power transmitters controlling the antennas. The antennas, in turn, direct radio signals worldwide. Side benefits of the generation of electricity include free electricity not only for the two missionary families who live there but also for the 400-some inhabitants of Papallacta.

We left Papallacta with a greater appreciation of how a hydroelectric plant is being used for spreading the message of God throughout the world. We also felt a little bit more “radio-literate.”

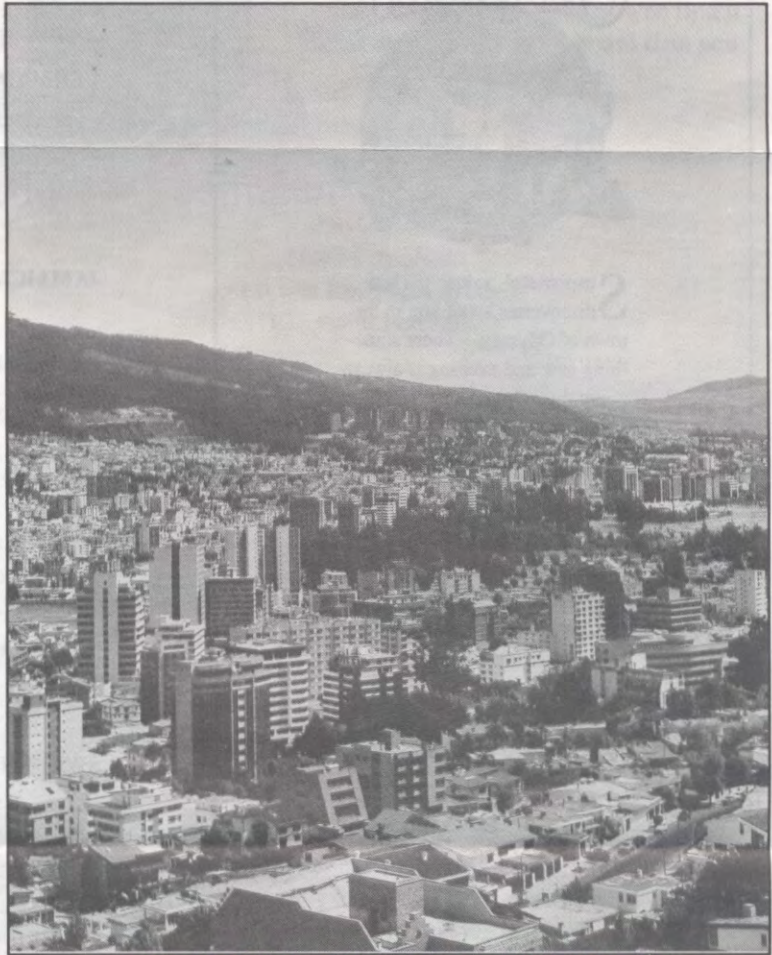
Dean F. Miller is a professor at the University of Toledo in Toledo, Ohio, and was one of the one-week work team at HCJB from Washington Congregational Church (Toledo, Ohio).

New QSL cards ...

Have you ever wondered what HCJB's home city looks like?

Well, wonder no more! This year, HCJB Radio is offering a very unique collection of QSL cards, one for each month of the year. Why unique? Well, each card features a different view of Quito, Ecuador. But when all twelve are collected and placed side by side, they form a gorgeous, full-color panoramic view of our host city.

If you've already missed some months, don't worry. Just send in a new reception report and request the month you are missing. It's that simple. Don't miss your chance to collect the beautiful 1996 HCJB QSL Card Set.



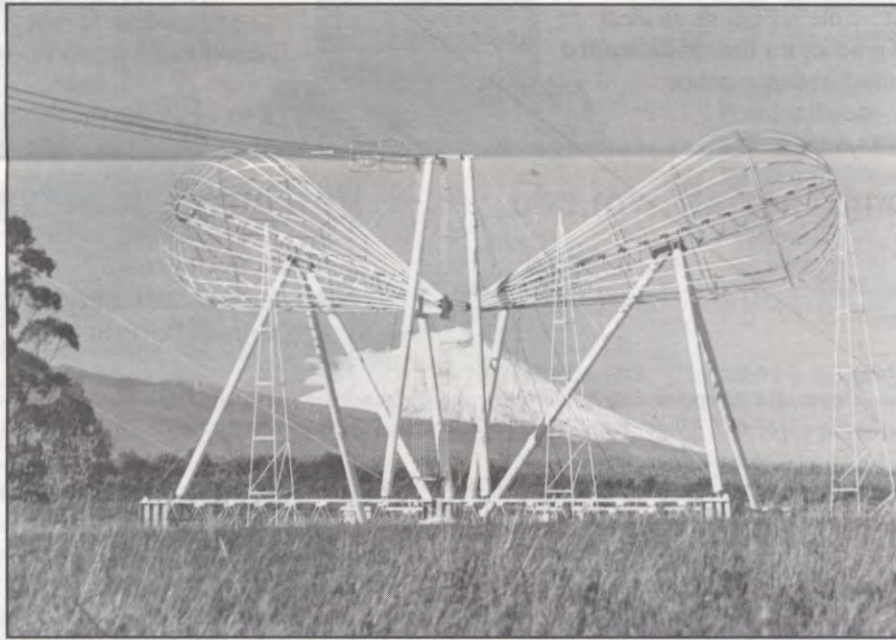
A sample QSL card—from the month of February.

BEHIND the scenes

by Allison Pollock

7he production studios for HCJB programming may be in Quito, but those programs would sit on a shelf collecting dust if it weren't for HCJB's antenna site located 19 miles (30 km) from the city, in Pifo.

When the inauguration of the site at Pifo was held in 1951, two transmitters were being used to broadcast programs around the world. "We now have 14 transmitters ranging in power from 1,000 to 500,000 watts," says missionary



HCJB's steerable (movable) antenna, built by HCJB engineers, is used primarily for beaming programs to very distant targets with great precision. It is an extra high-gain antenna with a very narrow beam. Since it is steerable, the beam can be aimed directly at the target. Since it is a high-beam antenna, it can be used by our most powerful transmitters, such as the HC500 kw.

engineer Steve Sutherland, who lives in Pifo.

The transmitters relay programs in 15 different languages. Each day they send approximately 190 hours of programming to many locations around the world.

At the "antenna farm" in Pifo many people are working to keep things running: 24 Ecuadorian employees, an Ecuadorian engineer and four U.S. and Canadian engineers. At 7 a.m., engineers report to work. They are each assigned certain transmitters for inspection and repair (including cleaning and lubrication); they look for overheated components, burnt or broken wiring, and loose connections. When something is damaged, engineers do everything they can to repair it. Some of the problems that develop depend on the type and age of the transmitter. "Older homemade units generally develop problems with power-tube and component failures: resistors, relays, capacitors, transformers or low-voltage power supplies," says Steve. HC-100 transmitters [multi-band short-

wave, state-of-the-art, computer-controlled transmitters, designed and built by HCJB engineers] can have problems with metering circuitries, voltage switching modules, tuning servos, and capacitors. The cooling system can also have water leaks.

When not working on transmitters, the engineers focus on special projects, such as wiring the control circuit for a water-cooled antenna

load which will be used to do proof of performance on each transmitter.

During the day there is an on-call engineer who takes care of problems occurring during the 7 a.m.-5 p.m. workday. Approximately every third weekend an engineer is on call. They never know what will happen, but engineers should be prepared to repair any transmitter problem, take care of tuning problems, or reconnect Pifo with the hydro site in Papallacta, 19 miles (30 km) away, when they are disconnected due to power failure.

Not just anyone can work as an engineer at Pifo. Educational background must include at least one of the following: two years at an electronics trade school, a military electronics background, or an engineering degree from a four-year school. A requirement of all engineers is that they be called of God and willing to do whatever needs to be done.

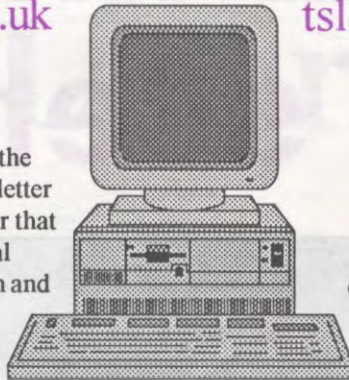
Allison Pollock was a recent summer missionary in HCJB's public information department.

Electronic Pen Pals

croland@cix.compulink.co.uk

*Cheniston K. Roland
(Violin Historian)
Liverpool, England*

"My main interests are SWL, writing, the violin, and computers. I can write a limited letter in both Italian and Spanish but would prefer that a pen pal write to me in English, an ideal situation as I can practice my limited Italian and Spanish while they practice their English."



tsl@frank.physics.dcu.ie

*Thomas S. Leahy,
Post graduate student
School of Physical Sciences,
Dublin City University,
Dublin 9, Ireland*

"I think Electronic Pen Pals is a great idea, at least for those of us who find it easier to put finger to keyboard than pen to paper!"

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*Russell H. Chandler
Williamsburg, Virginia
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Jimgunsch@aol.com

*Jim Gunsch
Sioux City, Iowa*

(It was Jim's idea to begin "Electronic Pen Pals.")

If you're interested in corresponding by electronic mail, please send your complete e-mail address to: ANDEX, HCJB, Casilla 17-17-691, Quito, Ecuador, South America (or via e-mail to: English@mhs.HCJB.com.ec)

Person to Person

wrong approach. God's Spirit told me, and then I got smacked again with my son Joseph's plea, "Daddy, don't leave Benjamin here."

It was impatient (and exasperated) parenting. I'd already announced to

Joseph and Benjamin several times that we were going to the playground together. Socks on, shoes on, they were finally ready. But when Benjamin again busied himself with play, I faked my exit. Benjamin came running and Joseph looked up into my eyes with his plea. My tactic got the desired action, but I quickly apologized. I assured Joseph and Benjamin I would never leave without them. They made nothing more of the matter. But God had a related lesson for me later that day. At work, as I exited my office building, I heard someone crying. She was on the other side of the HCJB fence. Upon leaving the "compound" I found her ...

Almost as soon as I said good-bye I knew it was the



Ralph Kurtenbach, English Language programmer, and his wife, Kathy, with sons Joseph and Benjamin. Levi, born in Feb. 1996, not pictured.

maybe two years old, alone, and crying her eyes out. Wondering how long until I'd find her mother, I walked over and held out my hand. She took it. We turned to walk, and immediately I saw a slightly older brother walking toward us. My new friend stopped crying, then began walking close by her brother's side. I noticed other siblings and her mother walking about a block away. The little girl looked very compliant, so I suppose the mother had won a struggle of wills with the girl.

I watched for a long time as the two little ones made their way back to the rest of the family. A verse of Scripture played through my mind, then replayed: "For He hath said, 'I will never leave thee, nor forsake thee.' So that we may boldly say, 'The Lord is my helper, and I will not fear what man shall do unto me'" (Heb. 13:5). Once you're in God's family, you can be assured that God is your helper and that He'll never leave you nor forsake you. Our Heavenly Father is more constant, more consistent than any earthly father. He won't feign departure just to secure obedience in His children. He won't tell a white lie. He is Truth, and His truth provides freedom at the same time it provides security. He is Love, and He chastens His children because of His love.

You can learn more about this perfect, loving Father by writing me and asking for the pamphlet, "I Will Never Leave You," by Joni Eareckson Tada. Write to HCJB, Box 17-17-691, Quito, Ecuador, South America.

No child of God need look into God's eyes and say, "Daddy don't leave Benjamin." - *Ralph Kurtenbach*

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"Adventures in Odyssey" airs on the Americas release on Saturdays at 1230 UTC (0730 EST), to eastern North America on Fridays at 0330 UTC (2230 EST), and to Europe on Fridays at 2100 UTC (1600 EST).

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