

Taiwan’s Railways—Winter of ’09

by Lexcie Lu

I spent my childhood in Taiwan, an island of 23 million inhabitants in the Pacific Ocean off the eastern coast of China. Although I wasn’t part of a railroad family, vague memories five-hour trips from Southern Formosa to my grandmother’s house in suburban Taipei—and “last trips” aboard the wooden commuter cars before the French came and tore it down to build Taipei Transit’s Red Line—brought me back there in the winter of 2009.

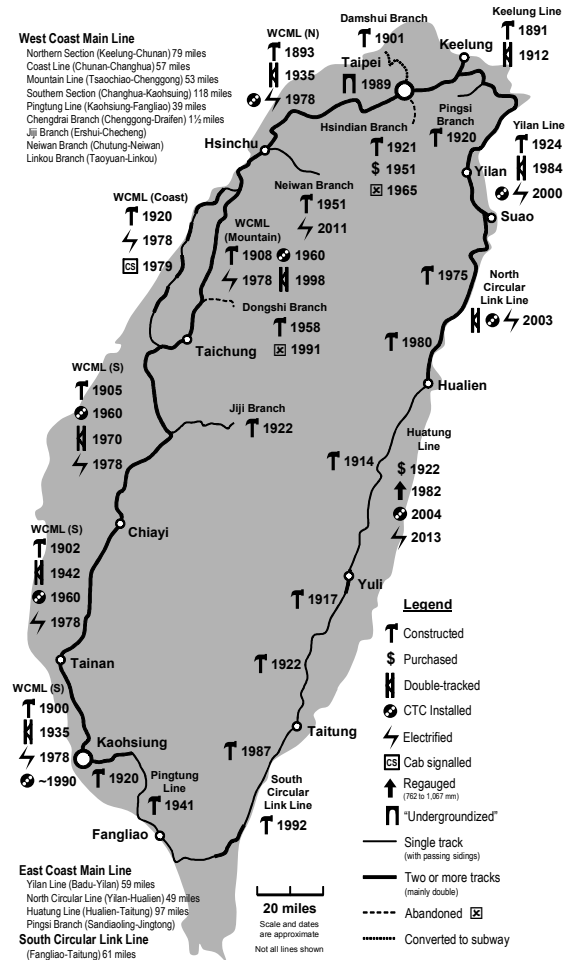
Taiwan’s railways were built in stages beginning in 1891 under China’s Qing dynasty, although network planning and most operating practices were rooted in the island’s Japanese occupation period (1895-1945). Lines today connect the island in a circle (1,067mm gauge), with the last mainline link around Taiwan’s South coast (and across the Central Mountain Range) finally completed in 1992.

From the dark days of 1979 when Jimmy Carter severed ties with Formosa to build a relationship with “communist” China, the island has transformed itself from a maker of cheap plastic Christmas decorations—I remember helping my aunt make them—to a high-tech powerhouse with “New Starts” transit systems in three cities and the Taiwan High Speed Rail (THSR) based on Shinkansen vehicles and European signalling. But I didn’t want to ride *that*. I went looking for my locomotive-hauled wooden cars.

“They’re all gone,” my dad said matter-of-factly, “and you need a reservation to ride the Yu-Lan Express, but we couldn’t get you one in time.” The Yu-Lan Express is an all first-class, round-the-island service designed for tourists. They even serve “Western” sandwiches on-board. Like Amtrak’s “rainbow era”, this train is hauled by the General Electric (GE) E200-series electric locomotives in electrified territory, and the Electro-Motive Division (EMD) R100-series road diesels rest of the way, you could imagine my disappointment. “So the Americans don’t have a diplomatic relationship with us, but we can still buy their locomotives—and fighter jets,” a local railbuff told me.



Yilan. I knew that they had electrified the East Coast Main Line, and figured that the express would be a boring E1000 push-pull set with streamlined locomotives on both ends. Maybe streamlining was cool in the 1950s, but I was trying to avoid sleek looking trains, especially ones that were made in the 1990s.



I was right on that count, but for the local I found an even more recent EMU700. It's Japanese alright, and a very nice commuter unit—with station announcements in four languages: Mandarin, Formosan Hokien, Hakka, and yes, English—but it had the quaint factor of a SEPTA Silverliner V.

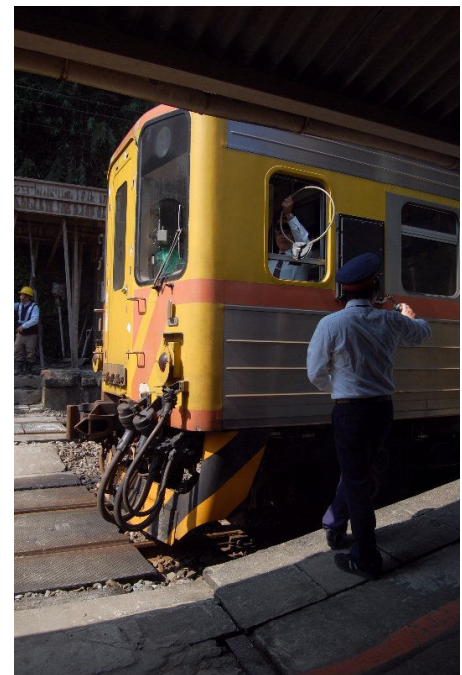
Passing the Qidu carbarn in suburban Taipei, I saw a state-of-art maintenance facility that could easily have been Long Island's Hillside or MBTA's Boston Engine Terminal, and no sign of the former freight yard. Poking out of the barn door is an EMU300—a 24-car “non-standard”

order awarded as consolation prize to Italy's SOCIMI when they protested the EMU200 procurement in 1986. It turned out to be one of their final products before bankruptcy. Possibly the most beautiful and luxurious EMU to ever run in Taiwan, it was at first assigned to premium non-stop runs. It even had special dispensation to travel at a blistering 130 km/h (81 mph). I figured that there was hope for “heritage traction” if Taiwan Railways Administration (TRA) was bothering to maintain a fleet of just 24-cars. More importantly, I gotta ride that thing!

Another glance at the yard revealed a stainless-steel “catenary maintenance vehicle”, formerly Tokyu's DR2700. Looking kind of like a Budd Car, this was the mythical “East Coast Tze-Chiang” that dad would tell me about when he rode on business trips. Before the East Coast Electrification in 2000, the express service to Yilan was a non-air-conditioned diesel railcar. Ordered with scarce foreign reserves to celebrate Chaing Kai-Shek's 80th birthday, they were named “Pride of China” and endorsed with patriotic slogans. Today, local rail buffs

call them “White Steeler,” but I will never get to ride them. I don't know which one is worse: seeing them intact knowing that you could have ridden them as a child, or just hearing my dad say “they're all gone now.”

Hopping off the local at Rueifang, I realized I had just enough time to go up the mountain to Chingtung and back down on the Pingsi branch. A former coal mining railroad, it is now mostly a tourist operation that does double-duty as a rural lifeline. The single line is token-worked, meaning that stationmasters must exchange “staff” movement authorities with train operators. The train was a Tokyu DRC1000—cool, I got my Budd Car ride, albeit a new air-conditioned one. The tunnels were blasted out of solid rock—no concrete lining—and even the car design pays homage to





the tunnels, with a round “portal” hiding engine exhaust ducts about half way down the car. If you’re wondering how I got the tunnel pictures, no, I didn’t get a cab ride; the rear cab door was left open, so I helped myself to the reverse railfan window. In the 1980s I would have been accused of espionage.

At Chingtung I found a surprise. The old-fashioned wooden ticket gates (kind of like New York City Subway’s “slam gates” before the 1994 MetroCard system) were still in operation, but more importantly the ticket window sold Edmondson tickets from an authentic ticket rack!

Plus a mechanical interlocking machine where you could see the bars of interlocking steel that physically prevents conflicting movements (marked British-style “Up” and “Down” lines to boot.) This is museum-grade stuff on a live, working, railroad. I later learned that Shifen station on this route—with a grade crossing midway across the high-level platform—is so famous that Japanese tourists travel there just to see trains.

Walking around the station area, the village elders have apparently “claimed” part of the right-of-way to dry their clothes. This is the 1980s Taipei I remember. In those days, my cousin talked about how the bad boys in her class would break into the abandoned train station to read comic books. Now I wish I had done that, to steal the expired Edmondson tickets.

Hopping a local train to continue south, we passed a “Happiness Cement Company” cement train—in otherwise drab grey hoppers, a little red icon of a home is displayed. The train came complete with a black caboose, and we met it at Dali. I couldn’t get a photo, but made up for it later with an EMD R20-class with an empty unit coal train leaving Linkou Power Station.



At Toucheng (“Head Town”—what an arrogant name!), it’s time to get a bento. Railway bentos is another Japanese phenomenon that so permeated Taiwan Railways that made it heaven for Japanese enthusiasts. The regulation bentos used to be served in sturdy aluminium tins that were reclaimed for reuse; today it is served in disposable packages, but tastes just as good. Or bad—the good kind of bad—like the infamous British Rail sandwiches, you simply *had* to have it, to the tune of 8 millions sandwiches sold annually.

For its part, Taiwan’s Railway bentos are sold in New York’s Chinatown as a specialty item, although it’s not really that authentic—they don’t have the secret TRA sauce. There are now food trucks running around with this stuff all over the U.S., usually billed just as “Taiwanese cooking”. The fried pork chop, teriyaki egg, pickled vegetables, and rice actually has its origins in the Japanese “tonkatsu”. I make a mental note to start a British Rail sandwich chain upon my return to the States, but I just don’t think it has quite the same cache.

Trainspotting in Taiwan is like watching a United Nations parade. So far today I’ve seen American, Italian, Japanese, Korean, South African, and Taiwanese “home made” equipment. There’s PRR-style position light signals, New Jersey handbrakes, a sign imploring riders not to “randomly touch emergency valve”, and even a “gibbous” floor between cars. It’s getting dark—still no wooden cars. Exhausted, I hop a loco-hauled limited to Hualien and tie up for the night, although not before watching the electric-to-diesel engine change, just like you once could in New Haven.





Few days later, I get dropped off at Jinlun on a whim, without checking the schedules. This is not a smart move on the Southern Circular Link Railway, which serves rural townships with a few thousand residents. After fording the river on foot—okay, we cheated and actually walked the highway bridge—and finding the train station, I was informed that the express had just left, the next train was a local, and there were no more expresses until nightfall. Score! A diesel with a 1957 Nippon-Sharyo “Guan-Guang Hao” car (SPK 32749) and two Indian commuter coaches. Nothing wooden, but these were the commuter

cars with pneumatic doors that ran on the Taipei-Damtsui branch before it became the “Red” Line. Dad told me that he would used to arrive just as the train is leaving; to avoid being late to high school, he would run after it and hang to the outside of the train until the next stop. While I bask in nostalgia, my wife is more excited about the fact that it’s *the* R-110 on the move—*the* namesake of *the* prototype New York City Transit New Technology Subway Car.

TRA, unlike U.S. passenger railroads, print planned equipment assignments in their public schedules. Having bagged the old Damtsui Line commuter cars (I think dad was right, the wooden ones are long gone), I see that Italian EMU300 booked for a Shalu-Suao relief trip. I plan a day-trip to Hsinchu intending to catch it on the way back north and go all the way to the yard. On the local we pass Shulin Yard and make a station stop at Yingge and see *the* EMU300



dumped on the platform

loop track. Now more than 20 years old, EMU300’s availability is even more problematic than before.

Not willing to let a perfectly good day go to waste, I realize it’s Sunday and the EMU100 relief trip might be running. That’s the British Rail Engineering Limited (BREL) unit, loosely based on BR’s Class 317 and Mark 3 coach design (complete with Faiveley “cross-arm” pantographs when new), ordered in 1978 for the original West Coast Main Line Electrification Programme. There had been several “last runs” with this unit already, so it was truly living on borrowed time. Any other railroad would have simply parked it, rather than run the sole surviving “museum train” once-a-week on a relief trip. Waiting for it in Taipei, the real-time information read “Delayed 6 Mins”—a very encouraging sign. I don’t remember ever being so happy that a train is late!

The EMU100 makes a grand entrance, arriving complete with a backup electric locomotive in rear. We rode with it back to



Qidu Yard and explored the train for one last time. The high voltage cabinet has familiar names like GEC, the console has “Panto Up” and “Panto Down” buttons, yet a new Swedish Automatic Train Protection system was retrofitted. Because of Formosa’s history as a Spanish, Dutch, Japanese, and Chinese colony, and as recipient of significant American and British assistance, Formosa’s islanders have shown an exceptional tolerance and openness to different ideas, and demonstrated great flexibility and resilience under a smorgasbord of outside influences. Formosan philosophy at its best, there is no “not invented here” syndrome. Original British-design equipment was kept where it worked well, and it was modified with components and best practices from all over the world where it no longer met TRA’s needs.



Patriotically named “Self-Strengthening” express, this is the little train that could: clocking up 6.5 million miles per car in 30 years’ of frontline high-speed service—and continues to inspire me every day to be self-reliant and let the improvements come from within. After all, how else could you grow from cheap plastic toys to the best computer technology? Surely, that’s something U.S. passenger railroads can learn from Taiwan.