

About my CTC machine...

My CTC machine was designed and built for the Panhandle and Santa Fe Railway by the Union Switch and Signal Company of Swissvale, PA in April 1948. It was installed in the dispatcher's office on the second floor of the Santa Fe general office building in Amarillo, Texas in June 1948.

The machine controlled 104 miles of main line between Amarillo and Clovis, New Mexico, known as the Third District of the Plains Division. Called a "Style-C Control Machine," the unit consisted of two 30-inch cabinets on each side of a 60-inch cabinet for a total of 90 columns (stations).

In spring 1986, Russell Crump (working for the Santa Fe in Amarillo at the time) told me that plans were underway to replace the Style-C machine with a new computer driven Division Operating Center and that the old green machines would be sold for scrap. David Barrow and I placed bids and for the sum of \$100, I "won" the Third District unit.

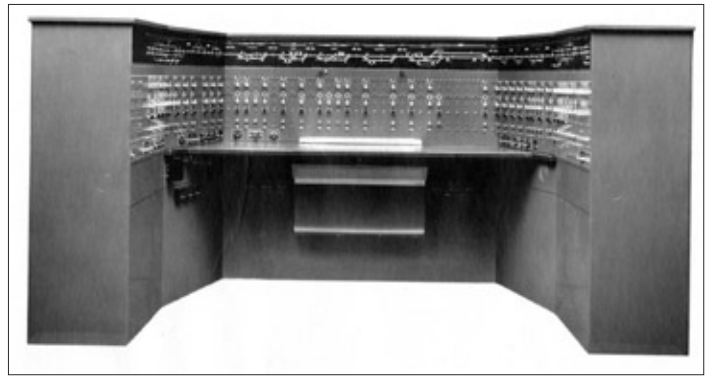
My dad and I drove to Amarillo from Dallas on May 2, 1986 with a trailer and began the job of dismantling the cabinet. David and a couple of his Austin helpers flew to Amarillo in his King Air! David only wanted to salvage the controls and external hardware.

Dad and I hired a couple of laborers from the employment center and started the job. I decided that several hundred pounds of relays and the chart recorder would have to stay so we left them in place. As we started cutting cables, a shower of sparks came up from the floor. Someone forgot to cut the power to the unit! Eventually the chief signal maintainer was located and power was eventually cut. I could just imagine a series of train wrecks along the main line!

As if that wasn't enough, a wildcat strike broke out at the Santa Fe and we were afraid we would not be able to get the machine out of the building. We convinced the strikers that we were just private citizens and not employees so the salvage proceeded unheeded!

It took two days, but we managed to get all the cabinets in the U-Haul trailer and back to Dallas where I began the job of cataloging and planning what I was going to do with this monster.

I stripped all the control levers, indicators and badge plates from



Builder's photo of the Third District control machine made in April 1948 at the Swissvale, PA plant prior to delivery to the Santa Fe.

-Mike Burgett Collection



The machine as we bought it on May 2, 1986. Someone from the railroad had already "saved" the track panels! I was able to get the right hand panel back to use as a guide.



Here is the dispatcher's office in the Santa Fe building in Amarillo about 1962. The Third District machine is in the background. To its right is the Second District "pup" which controlled from Pampa to Mendota and the large Second District machine controlling from Waynoka to Canadian at far right. The First District machine (Wellington to Waynoka) is located in another room.

-Santa Fe Railway Photo

the two extreme 30-inch end cabinets. All the parts were carefully boxed and packed away. At the time, I had no place for any kind of CTC unit nor was there an effective method of control and interface to a model railroad. So, the units went into a mini-warehouse.

By 1989, a divorce had claimed most all my model railroad equipment but my new future wife and I had our sights set on a house. Unfortunately there was no place there for a layout. Needing cash to pay off the ex-wife's debts, I sold the three remaining cabinets to Fred Thomas of Tulsa, OK. Fred came down with a truck and carted them back to Oklahoma.

From 1989 until 2003, I drifted out of model railroading. I gave all the parts to Keith Jordan who traded them to Rod Loder where they found homes in some of Rod's beautiful reproduction machines.

In 2003 we added a second story on our home and I decided to get back into railroading. I planned to model the Third District of the Plains Division and since Bruce Chubb had perfected his CMRI System, an operational CTC machine was a real possibility.

Fred Thomas passed away several years ago. I contacted his widow and found out that my old machine was still in Fred's basement, untouched from 1989! Mrs. Thomas remembered me and said I could have it so Bill Childers and I hustled to Tulsa and brought it back to Dallas in October 2004.

Several months and several gallons of Simple Green later, all the components and wires were removed and cleaned up. My pistol case tumbler was pressed into action to polish the plated parts.

I weighed several options for the new installation. The dispatcher's office was little more than a 4 x 6 foot closet so there was no way the complete cabinets would fit in the room. We looked into having new front panels made after checking with Rod Loder about laser cutting all the holes. A friend suggested I simple cut off the original front panels since I was not going to use the cabinets. I made a squaring jig and proceeded to cut the mild steel panels to the width I needed. It worked! I built a cabinet frame out of clear Popular and began to test fit all the components.

Meanwhile the final configuration of the track schematic panels was worked out. Figuring out exactly where all the switches and signals would go was the most difficult job. Many hours were spent modeling the possible locations. I built dummy signals for the layout as location aids. When all was ready, I finalized the artwork (drawn in Adobe Illustrator using the one remaining prototype panel as a guide). A local engraver who maintains an acid-etch line took care of making the three track panels and necessary badge plates.

I had to punch all the holes for the indicator lamps in the track panels. Plus we had to figure out a way to cut out the switch and signal badge plates from the .030 aluminum etchings. Thankfully I have friends with well-equipped machine shops!

Paint for the machine was matched by my local professional paint store who did a lot of work for me back in the ham radio days. My dealer matched a sample from the old machine using a Benjamin Moore oil based enamel used for industrial coatings.

Some holes needed to be filled in the cut-off front panels and I did a lot of wet-sanding to make the surface clear for painting. I sprayed two coats of paint and allowed everything to dry for a week. A coat of paste wax was applied before the components were attached.

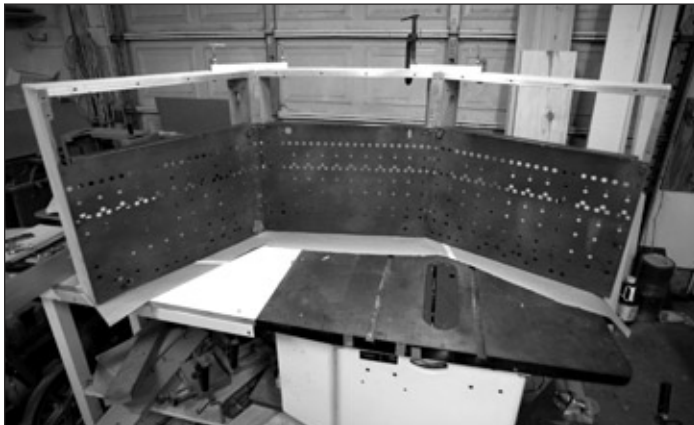
The biggest time consumer was preparation of well over 300 holes plugs of various sizes. I used a wire brush in a bench grinder to remove the paint and attached them to cardboard with lines of glue from my hot glue gun for priming and painting.

There are an incredible number of small parts and screws in this sucker! Mostly they are all original US&S components. Some of the small screws were replaced as the slotted heads were worn.

It took me a week to wire all the panels for the CMRI system. I probably used over 500 feet of #22 wire to make the connections to the input and output boards. The cables were laced with wax cord.

After a few days of fiddling with software, the machine was cut-in and now serves as a status indicator for the ABS signal system of the layout. Software development for a fully functional CTC system is now underway.

-August 2005



Above: Face frame with panels.



Above: Test installation.

Below: Wired back of track panel.

