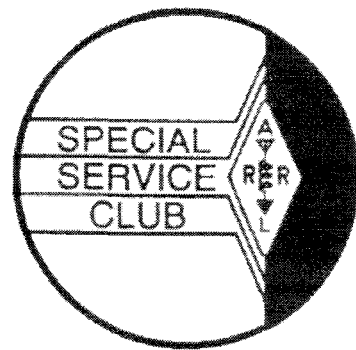


Mike And Key



An ARRL Special Services Club

Founded 1914

SARC Calendar

November

- 3rd APRS SIG Meeting:
Sacramento Blood Bank,
1625 Stockton Blvd. at
7:00PM
- 10th General Meeting: Sacramento
Blood Bank, 1625 Stockton
Blvd. Sacramento at 7:00 PM.
Informal get-together at 6:30
PM.
- 13th Saturday Morning breakfast
9:00 AM at Bradshaws
- 24th Executive Committee
Meeting, Keith Crandall's
QTH at 7:00 PM.

December

- 1st APRS SIG Meeting:
Sacramento Blood Bank, 1625
Stockton Blvd. at 6:30PM
- 8th General Meeting: Sacramento
Blood Bank, 1625 Stockton
Blvd. Sacramento at 7:00 PM.
Informal get-together at 6:30
PM.
- 11th Saturday Morning breakfast
9:00 AM at Bradshaws
- 29th Executive Committee
Meeting: Keith Crandall's
QTH at 7:00 PM.

Kit Building SIG to continue in December

By Tom Preston, KQ6EO.

The December SIG meeting on December 1st will be a kit building meeting, so that we can finish the kits we started in November. Frank, WD6DCV, passed out the "PIXIE 2" QRP CW Transceiver kits, 40 Meter crystals, and the nine-volt battery clips. About ten kit builders then started in on their projects. Soon the talents needed to complete the kits came to light. There were those with enough electronics savvy to interpret the instructions, those with eyes good enough to read the numbers on the componets, those who were good at soldering and could teach others how to solder, and several other little talents. We all had a lot of fun working together and everyone had a great time. As our time was running out most people were just getting all the components soldered on the printer circuit board, so we decided to continue in December finishing up our kits.

A CENTURY OF "GOOD ROADS"

by Norman F. Root, Chairman
Caltrans Centennial Coordinating
Committee
Submitted by Les Ballinger,
WA6EQQ

A century ago, California's road were in deplorable condition. They were an unplanned and poorly maintained network of trails and haphazard private toll roads. The early trails and toll roads were simply pathways cleared on the ground. They had been beaten to death under hoof and iron wheel by thousands of tons of gold mine bound freight over the prior 45 years.

During the dry season they were clouds of choking dust, and were axle deep quagmires during wet weather. Traffic congestion, thought to be a modern phenomena, was real on the old narrow trails. It is reported that teamsters who had to pull off the trail for repairs often had to wait several hours to get back into the traffic stream.

Continued on page 2

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PREZ SEZ

By Tom Preston, KQ6EO

Greetings fellow members:

The kit building SIG turned out very well. I think that those with little or no experience found they could learn the basics needed very quickly, and that it was challenging and fun. I also think that the experienced builders found the building in a group and the teaching aspect made it challenging and fun.

You know, as I look back at the year our greatest successes have been the activities based mainly on the interaction of the group. The kit building was a case in point. It had a focus, building the kits, but was freeform in nature and everyone had a great time. The best Saturday morning breakfasts have been when we decided to go somewhere together afterwards, like the trip to the electronics surplus store where we all just kind of fooled around until noon and then we went and had lunch. I hope we can find more ways to enjoy this interaction in the future

73 until next month.

A CENTURY OF "GOOD ROADS"

continued

Transportation was slow, expensive and dangerous. Trails between towns were, by default, the ignored responsibility of the counties. Finally, the California Legislature, in March of 1895, hearing the cry of the "Good Roads Movement", assumed responsibility for a system of wagon roads to connect the county seats. California was one of the very first states to name a State

Bureau of Highways Commission. The Legislature named R. C. Irvine of Sacramento, Marsden Manson of San Francisco, and J. L. Maude, of Riverside to the first road commission. They met for the first time, on April 11, 1895, in the office of the State Surveyor General. The three Commissioners spent the next year and a half logging over 16,500 miles over trails in a buckboard, to determine an appropriate State network of roads. The Commissioners recommended a 14,000 mile network, which has become the basis of today's Highway system, to the Legislature in 1896. Even though, some of the recommended mileage has still never been built. The Commissioners felt that, "The State highways should be the great arteries of a road system from which should branch out the minor highways serving counties and districts. They should be located along those lines which the physical features of the State forever fix as the easiest lines of communication, and should be constructed and maintained by the State. The Bureau has mapped out such a system as would traverse the great belts of timber, fruit, agricultural, and mineral wealth within our State; connect all the large centers of population within the limits of the State, reach the county seat of every county, and tap the lines of county roads.". The Commissioners then began to study road building techniques. Commissioner Manson even traveled to Europe to study the science of techniques there. One of the first action by the Legislature was to buy the Lake Tahoe Wagon Toll Road as the first State road. This route later became know as Highway 50 through Placerville. The owner of most other toll roads were more than glad to give their roads to the State due to their poor condition.

Time wore on, but road improvements were slow in coming. Just because the State assumed responsibility for a road system, did not in itself cause improvement without spending money.

By the turn of the century, bicycles had replaced horses as the vehicle of choice for transportation. Bicyclist groups sprung up everywhere. The League of American Wheelmen became a formidable advocacy power demanding "good roads", and are credited with getting the first paved streets.

There were "Good Roads Movements" as early as the 1850s, but it took until the end of the century before much really happened. The term "Good Roads Movement" is loosely applied to any road advocacy action taken up through the 1920s. "Good Roads" was a popular rally cry heard during the bond issue campaigns of the early 1900s. "Good Roads" clubs had sprung up almost everywhere by the early teens.

Eventually, the first highway improvement bond act was enacted in 1909. The act provided \$18 million to build the State Highway system. The Governor appointed Austin B. Fletcher, a nationally renowned highway engineer to head the State road building effort. Many thought that \$18 million being such an enormous amount of money would never be able to be spent. But it didn't take Fletcher long to realize that \$18 million wasn't nearly enough money to get the job done. So the State struck a deal with the counties that if the counties would provide the right of way and build the bridges then the State would build the roads in between. A couple of counties felt that was blackmail and refused to participate. But as they saw the other counties getting their state

roads while they go none, they developed a redirection in attitude. Further economies were realized by building the lateral roads with convict labor. A practice that lasted well into the 1970s. The 1916 State Highway system was greatly downsized from the one recommended by the original Highway commission, 5560 miles. The system was two North South trunk routes, which later became U.S. Routes 99 and 101, with laterals connecting those few county seats that were not on the truck routes. Two of the more interesting and unusual roads built in the early days was the plank road across the Yuma Sand Dunes and the boardwalk trestle built across the sandy surf at Rincon Beach.

Two other plank roads are known; one was on the sandy grades above the Colorado River near Needles, which was part of the Old National Trails Highway, now Interstate 40. The other was actually a punched road discovered under 12 inches of redwood duff during a 1990 reconnaissance for a new highway through Del Norte Coast Redwoods. Before the boardwalk trestle over Rincon Beach on Highway 101, between Ventura and Santa Barbara, the early Spaniards simply rode in the ebbing surf at low tide on this section of El Camino Real.

When the first bond issue money ran out, State highway construction came to a halt and the employees were laid off. Another bond act in 1919 resumed construction of the State system. This new bond act was strongly supported by a resurgence of the earlier "Good Roads" movement started by the bicyclists two decades earlier. But this time it was the automobile driver's clubs that pushed for better roads. The automobile was now the vehicle of choice. Most of the highway system was still not much better than it had been in 1895.

On the Air

W6AK

146.91 – PL 100

442.80 + PL 100

224.1 - (coming soon)

Sacramento Valley Noon Net
Every day at Noon

On the Net

<http://home.sprynet.com/~w6ak>

w6ak@arrl.net

Meetings

General Meetings are the second Wednesday of every month at the Sacramento Blood Center, 1625 Stockton Blvd. Sacramento. 7:00 PM

Please Join Us

The automobile clubs, primarily the Automobile Club of Southern California, provided technical research and made recommendations to the Commission on road building techniques and locations. The Automobile clubs did all of the directional and regulatory signing, and effort that didn't phase out until the 1960s.

The Highway Commission's choice of road building material was concrete pavement placed directly on the ground. Much of the concrete pavement in the Central Valley, placed under the first bond act, began to crumble as rice farming became popular. Water from roadside paddies seeped into the soil under the pavement, losing its dry state strength. Highway engineers had to learn to

construct supporting structural sections out of graded gravels that were self draining. The State was embarrassed by the loss of much of its central valley pavement. By the time the bond acts money was used up, in 1923, the innovative concept of a practical automotive fuel tank took over. After all, now that gasoline driven vehicles were the dominant mode of transportation, what could be more fair? Users pay in proportion to their amount of use. And the highway system became pay as you go, no more bond indebtedness to pay off. Californians liked the idea. After the First World War, States were given surplus military trucks for use in highway maintenance. Gas tax funds began making road maintenance, rehabilitation and new construction possible in earnest. Most states by now had established state highway departments. The states got together and formed the American Association of State Highway Officials, an organization through which national design standards were established and a national system of highways laid out. This is when the system of U.S. numbered routes came into use. Common route names were dropped.

Completion of the Carquinez Straits Bridge, in 1927, along with the earlier Yolo Causeway opened a direct route to the Bay Area over the Yolo flood plain West of Sacramento and the Delta waterways. Until it was built, ground transportation from the Central Valley to the Bay area was

South through Stockton, then over the Altamont Pass into the South Bay area, and then North into Oakland, then by ferry boat to San Francisco. Most Sacramento Valley agricultural commerce was by ship down the Sacramento-San Joaquin River system. Ironically the shipping captains were staging one of their regular strikes to raise shipping rates when the bridge was opened to traffic. Commerce immediately switched to trucking and, over night, shipping was dead. The cross country Lincoln Highway was rerouted directly to the Bay area over this new route.

The national effort of the early 1930s was improvements and paving of secondary roads, so called farm to market roads. The national slogan of the U. S. Bureau of Public Roads was to "Get the Farmer Out of the Mud". In 1933, the State Legislature passed the land mark Breed Bill which tripled the State Highway mileage overnight. The bill also established the transportation funding equity distribution formulas between Northern and Southern California and between the counties, that are essentially still in use today. One of the accomplishments of the 30s decade was completion of the Pacific Coast Highway, State Route 1, providing great scenic and recreational opportunities for Californians. The Redwood Highway was also completed during this decade which provided land access to cities of the north coast for the first time. Prior to this, access to those coastal town was by steam ship up the coast from San

Francisco.

An unusual construction method was used to remove 10 million yards of excavation from Oregon Hill on Route 299, during the late 30s. This was on the site of the La Grange gold mine. Hydraulic monitors and water system were still left after the mine closed in 1918. A large part of the mountain had already been hydraulicked away and the valley filled with debris by the former mining operation. Honor Camp 25 put the hydraulic mining system back to work digging a 2000 feet wide by 210 feet deep cut through the pass and channeling the debris flow to build up the roadway embankment. It's doubtful that this kind of operation would be approved today with our environmental laws. The Great Depression years spawned the big bridge era. Dreams for a San Francisco-Oakland Bay Bridge had been simmering for years but it took Nation Recovery Act funding to get such an enormous task moving. It was also National Recovery Act money that built Shasta Dam requiring the rerouting of Route 99 and the construction of The Pit River Bridge. Other big bridges followed; built over California bays, estuaries and rivers as late as the 1960s; Richmond-San Rafael, San Mateo-Hayward, Coronado Island, Terminal Island, Benecia-Martinez, and West Branch of the Feather River Bridges.

The freeway era was dreamt of in the late 1930s and the Arroyo Seco Freeway, the first in the West and one of the first in the nation, was

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actually opened in 1940. But World War II intervened and all highway construction was stopped for the duration. The term freeway means control of access. Many thought the concept illegal, to deny access to a public road. But after the Arroyo Seco was opened, and people appreciated the fact that roadside businesses did not spring up to render the new highway functionally useless, the concept was accepted rather than challenged.

Post war efforts were aimed mostly at rehabilitating the war time neglected system. Planning and recovery were slow. California's freeway and expressway system were made possible by the Collier-Burns Act of 1947. But President Eisenhower's twenty year National System of Interstate and Defense Highways proposed in 1954 and funded in 1960 made federal dollars available for a large portion of the system. This era was the heyday of freeway construction. The 1960s were an era of highway construction that has never been equaled before or since. During this era, engineering accomplishments seemed common place. For the second crossing of the Carquinez Straits, use of high strength steels and hybrid welding were first tried and recognized with national awards. Straightening of the West approach to this same bridge involved construction of the "Big Cut", an accomplishment recognized by the American Society of Civil Engineers. Interstate freeways were build through two canyons that had been declared impassable by early pioneers; The Sacramento River Canyon and the Truckee River Canyon. The later was also given an ASCE award of accomplishment. Pine Valley Bridge, Sacramento "boat section", an Interstate highway built below ground water level and held down from floating up with piling and 15

foot thick concrete; are typical of accomplishments of the area. The big flood era was ushered in when a 1955 mythical 1000 year storm washed out several highways in the Central Valley and North Coast. Less than 10 years later the even larger Christmas 1964 flood washed away several bridges and highways on the North Coast. The close frequency of these two storms and their magnitude rewrote the book on prediction and size of storms. During both of these events, highway crews responded under the emergency conditions in heroic fashion to reopen facilities and keep lifelines of transportation open.

Continued next month

Meeting Minutes

October General Meeting Minutes

by Jim Rich, N6SZQ

The Sacramento ARC meet at the Alhambra Annex of the Sacramento Blood Center on Wednesday, October 13. Our President, Tom Preston, KQ6EO, began the meeting with the usual round of introductions for the 18 members and visitors.

We then heard a short tribute to Jim White, WS6K, our Board member and past club President, who had passed away a few days earlier. (See the lead article in last month's Mike and Key for more information.)

We next heard Vern Dawson, K6RRC, discuss Ten Tec's new computer-controlled Amateur Radio transceiver, the Pegasus 550. It weighs only 9.5 pounds, and

lacks a lot of the knobs, dials, buttons, and meters of a traditional transceiver. It doesn't even have a jack for a speaker. All these are not needed, as the radio is monitored and controlled from your PC, and is hooked up to your PC's sound card. It costs just \$895, which does not include a power supply or microphone.

Vern described how you can input frequencies from your easy chair using a remote control. The PC can sweep around a band to see if there is any activity. You can use special logging programs during contests. Finally, you can download software upgrades for the Pegasus 550 from Ten Tec.

We then heard from John Lewis, KD6GSD, and Tony Hernandez, KN6NG. John is the ARRL District Emergency Coordinator for the Sacramento Valley, while Tony is the ARRL Emergency Coordinator for Sacramento County. They hope for improved communications between the various groups of Amateur Radio operators involved with emergency communications. John mentioned efforts underway to form a Sacramento County RACES group, and to improve coordination and cooperation between existing ARES and RACES groups. John activated the local ARES group four times when he held Tony's position. Finally, he mentioned the recent EMSA drill, where 450 hospitals around the State checked in via Amateur Radio. All the messages were funneled through only two net control stations - quite an achievement.

Tony said he hoped to get more hams involved supporting organized emergency communications groups. He asked for Amateur Radio operators who would like to visit schools to talk about and demonstrate ham radio to give him a call