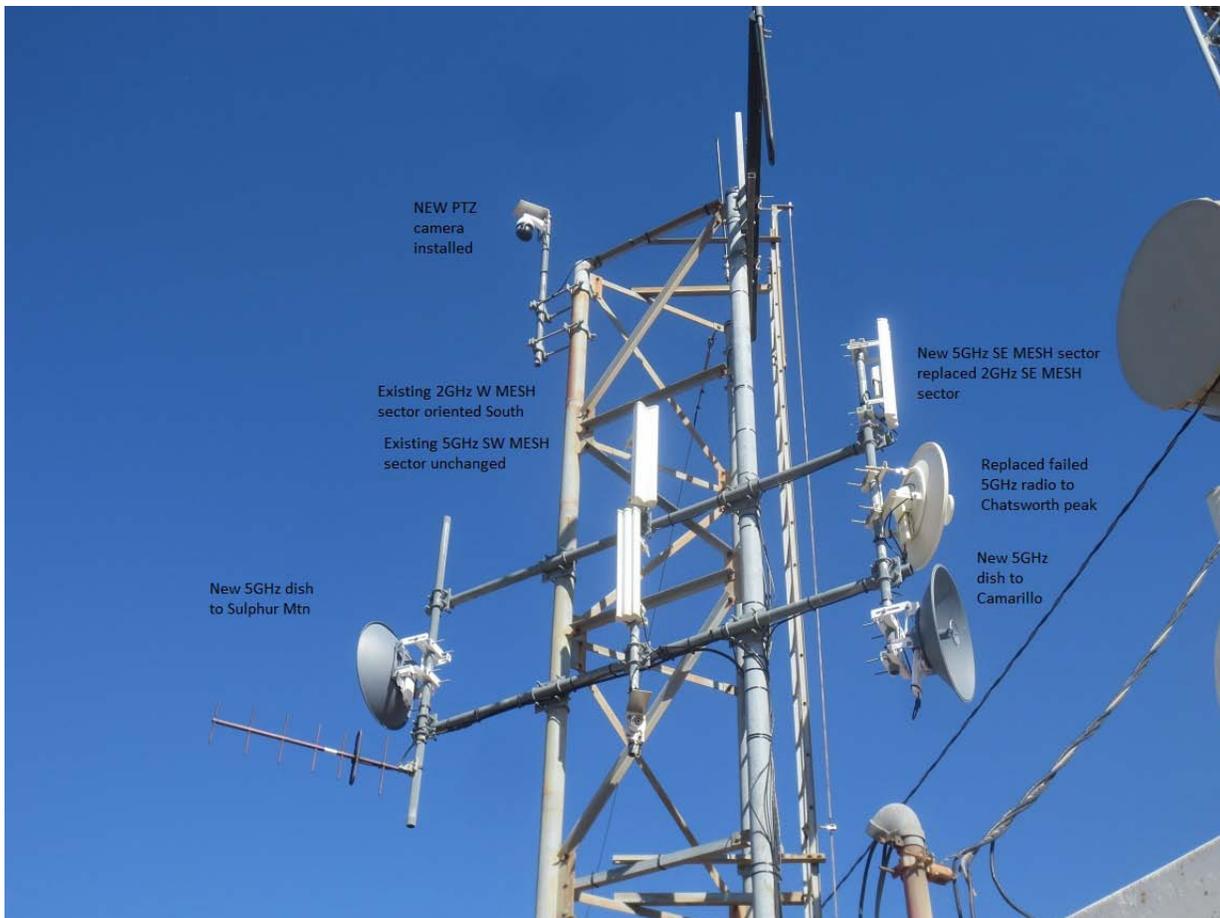


Hello All,

I would like to share some [PVARC](#) system updates that were made in October and November 2019.

On Tuesday October 29th, Rob W6RH, Eric KG6WXC and myself ventured to South Mountain to finish an installation that was started earlier in the month. The first trip to South Mtn was to upgrade the 5GHz links to Camarillo Hills and to Sulphur Mtn. The 25db dishes were upgraded to 30db dishes along with a newer technology radio system. These dishes and radios provided substantial signal to noise improvements and improved noise rejection resulting in a vastly more reliable network. This South Mtn upgrade was phase two of the project. Many weeks before South Mtn, the dish and radio at the Camarillo Hills site was upgraded. October also saw the dish and radio at Sulphur Mtn dish upgraded. All these upgrades have produced remarkable improvement in signal quality, throughput and noise immunity.



Getting back to the October 29th trip, this day saw the addition of a Pan Tilt Zoom camera, replacement of the 2GHz SE Mesh sector radio/antenna with a 5GHz SE Mesh sector radio/antenna and realignment of the 2GHz Mesh sector radio/antenna from SW to S.

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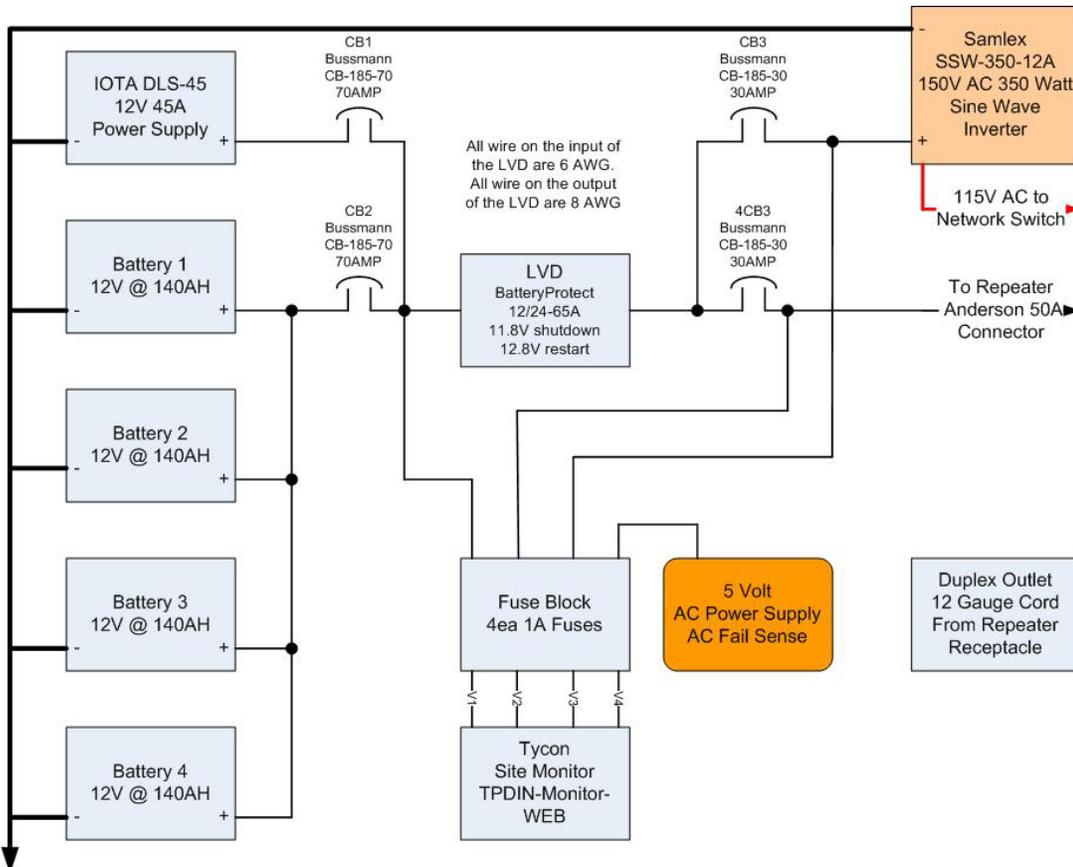
On Saturday November 16th myself and a small army ventured to Chatsworth Peak to provide some site upgrades and equipment relocation. The work party participants were: Rob W6RH, Bill AB6BW, Eric KE6MLF, Dave KM6FQ, Orv W6BI, Jay WB6YQN, Emmett WA6COT and myself Paul WD6EBY. So what did we do?

#### Battery Backup-

First off, it took many years to raise the funds for this battery backup system which could not have been completed without the generous donations from Clubs and individuals. This was truly a community project, thank you all for your support.



The long awaited battery backup system was installed today. The system provides 560 amp hours of battery from four each 140 amp hour batteries (105 lbs each) a 45 amp power supply/charger, 110volt pure sine wave inverter and a remote telemetry monitoring system.



As this system is fed from the batteries and the power supply/charger there is no transition time when AC fails or is restored. (see schematic). With the load of the repeaters and the constant load of the Mesh network, this battery system should provide backup power for around 32 hours. This gives us time to bring a generator to the hilltop to keep the batteries charges.



#### PTZ Camera Relocation-

Wind. The wind at Chatsworth Peak can get pretty fierce with recorded speeds exceeding 85 MPH. Anything on the hilltop must be heavenly secured. The tower is heavily secured but apparently not heavily enough. With the Pan Tilt Zoom camera mounted at the top of the tower we were experiencing a vibration form the tower that was translating to a jittery camera image. The camera was relocated to a heavy pole on repeater's building which will provide for a more stable image. A couple of adjustment still need to be made and then this camera will be again available on the Mesh. The shimmy of the tower will be addressed the spring.

#### Antenna-

The 4bay Telewave antenna was to be taken down this project was called off due to high winds. When I left home there was no wind to speak of in Camarillo, not so on the hilltop. For safety, the tower climbers Rob and Eric canceled the day's tower work. This project will be rescheduled. So what's so important about this antenna? This antenna will eventually be installed on the 145.20 Sulphur Mtn repeaters. Why do you ask? The current repeater antenna is a Station Master Collinear 5.8db antenna. While the repeater is usable on a mobile in Van Nuys its performance suffers in the foothills around Sulphur Mtn. The 4bay antenna had a broader radiation angle and I believe its instillation will improve its foothill's coverage.



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#### Current System issues-

A couple of days prior to the Chatsworth Peak work, the Network system at South Mtn went dark. At present I do not know the reason for this outage but is not AC power related as the site has power. The network is currently rerouted through public internet. Camarillo and Thousand Oaks are at present an island. I will need to make another trip to South Mtn to determine the cause for this failure. My hope is to repair or replace the problem parts on that trip.

That's all I have for now. Please let me know if you have any questions.  
Take care all.

Paul Strauss

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