

SANTIAGO PEAK SITE SUMMARY JUNE, 2009

LOCATION

Santiago Peak is located on the border of Riverside and Orange Counties at the crest line in the Cleveland National Forest. It is 5687 feet above sea level. The site is a multi use antenna site, rented from Glendale Electronics.

REPEATER

The primary KPARN repeater operates on the six meter amateur radio allocation. Input frequency (repeater receive) is 52.20 MHz, output frequency (repeater transmit) is 52.70MHz. A CTCSS tone of 82.5 is used to activate the repeater and is also transmitted by the repeater. The repeater is a commercial repeater manufacturer by Daniels Electronics of Victoria, British Columbia, Canada (www.danelec.com). The transmitter (exciter) of the repeater drives a two (2) Watts in, 250 Watts out TPL (Manufactured for Daniels Electronics) RF amplifier.

ANTENNA

The antenna is mounted on the tower approximately thirty feet above average terrain. The antenna is manufactured by Kreco of Cresco, Pennsylvania (www.krecoantennas.com). The antenna is a model CO-40A Heavy Duty Co-Axial style. The antenna is fed by one-half inch Andrews Heliax of approximately 50 feet. The antenna cable is terminated inside the repeater building with IS50NX-C2 Polyphaser lightning arrestor attached to a ground bus. The antenna is connected to a Telewave duplexer, model TPRD-0584.

EMERGENCY SYSTEM

In addition to the emergency power system described below, the Daniels repeater operates on a battery back-up power system. Should AC power be lost, a the Daniels repeater operates off of battery, a relay closes and a secondary mobile power amplifier (Mirage A-1015-G) is activated and via same relay connected to the output of the Daniels exciter, as well as to the antenna. This system provides about 50 Watts to the antenna. This battery back-up system should maintain operation of the site without AC power for about eight hours of communication.

BUILDING

The building that contains the KP repeaters was built in the 60s. It is all cinder block with a wood and metal roof. The tower is 120' self supported with an anti climb fence around the bottom.

There is a large wall mounted air conditioner in the building. The generator is an older Onan 45kw propane / gas. The generator is serviced quarterly. The fuel storage is 500 gallons and is normally only filled to 70 -80 %. That should run it for a week or so.

The building is strong with a steel door. The entrance area is behind a chain link fence. There is 24 hour access alarm monitoring with building high temp included. There is CCTV monitoring and a weather station. (<http://www.airsites2000.com/>)