Field Day Visitors Guide

Field day is an annual event sponsored by the ARRL (Amateur Radio Relay League) that places an emphasis on emergency radio operations. Clubs and individuals all across the USA and Canada take their amateur radio equipment into the field and operate under emergency conditions. While the event is not a contest, there are metrics that each field team is measured by to help them judge their readiness to full fill the emergency service tenant of amateur radio.

The metrics measure diversity in radio frequency utilization, modes of operation, power supply and safety. Emergency operations involve a lot more than radio equipment. The field day site is a logistic challenge because it has to support and shelter hundreds of personnel. Like all good operations food and comfort are essential. The site is constructed and tested in about 7 hours including transportation of the equipment from storage. Figure 1 provides a general layout of the field day site.

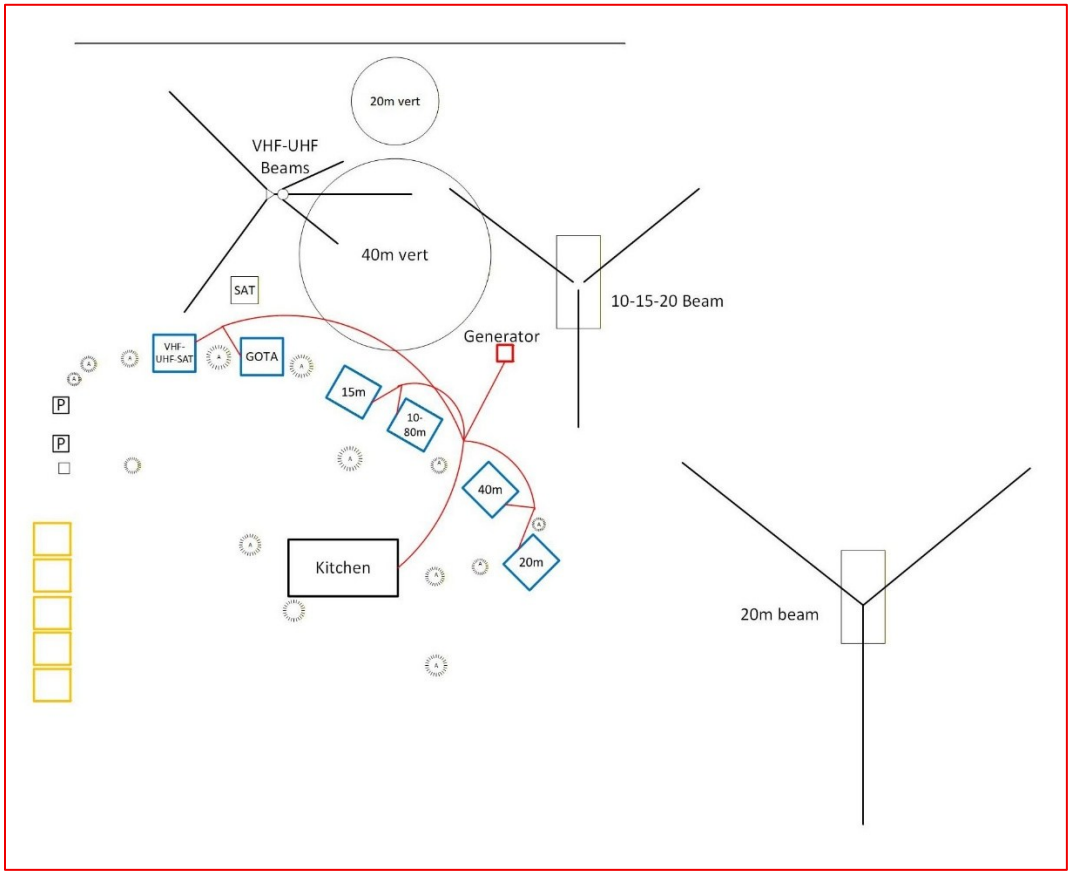

Figure 1 Site layout

Touring the site, you can start with the series of shade structure that contain displays and information about amateur radio activities, sub groups and associated organizations. The next step is to visit each of the operation stations starting with the Satellite and VHF=UHF frequencies. At this operating position frequencies above 50 Mhz are utilized for region communications and satellite communications. Amateur radios operators have launched a number of satellites which can be utilized to communicate over 1000's of miles. The antennas that support this station can be seen on the tower and the tripod behind the operating position. Note how the antennas can track the satellite as it passes overhead.

The next operating position is the GOTA (Get on the air) where visitors, new operators and sometimes veteran operators make radio contacts with other field day sites. The contacts are brief and exchange a description of location, type of club and number of operating stations concurrently in use. You don't have to be experience to get on and try with our experienced coaches at your side everyone can succeed in making a contact. The GOTA station operates on the 7 Mhz and 14 Mhz band which are the used during common amateur radio HF operations.

The remaining operating stations are divided by frequency of operation with some station multi-tasking two or more frequencies. The size of the antennas for each station based on the frequency of operation. For 3.5 Mhz the antenna is 135 feet long while at the 28 Mhz frequency it has three elements each about 15 feet long. All of the station on the field day site are running radio frequency power of under 100 watts or about the same as a light bulb. It is pretty impressive that such a small amount of radio power can be heard around the world. At each operating position identify which antennas are being used to communicate.

Computers are at every operating position. They are used to keep track of all the contacts made and who is operating each station. Computers are also used to run email systems for messages sent and received from the field day site. In the Satellite operation the computers are used to predict the location of the satellite as it passes overhead and also automatically adjust the radio frequency of operation to compensate for doppler effects. These computers are all networked for a highly resilient systems that can tolerate multiple failures and still keep track of the data.

Like any major operation you have to feed and take care of the participants so the food tent is conspicuous along with sanitation equipment. The operations will take place continuously for 24 hours and supporting everyone needs is critical to a successful operation.

The Clark County Amateur Radio Club routinely scores in the top 10 percent nationally on the preparation metrics. The club owns nearly all the equipment used at field day including antennas, towers, trailers, radios, power supplies, generators and shade structures. All of the equipment stands ready to be deployed in disasters and emergencies.

Visit WWW.W7AIA.org for more information about the clubs programs and activities.