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Federal Communications Commission
c/o Carl Huey

July 6, 2000

Dear Mr. Huey:

I am the team leader of the University of Texas at Austin Department of Aerospace Engineering Balloon Avionics Group. We currently working on our senior design project. Fredericksburg High School is constructing a rocket that will be launched from White Sands, New Mexico on August 4th of this year. Our class, in conjunction with the Fredericksburg team, is developing the payload to be launched from the rocket once it reaches maximum altitude.

The payload of the rocket is a high altitude balloon that will be ejected from the rocket at an altitude of approximately 68,000 ft. It is the mission of my team to develop the package onboard the balloon. It is our goal to transmit both video images and GPS data from the balloon to the ground via amateur radio frequencies.

Because we are members of a state funded university, we fall under government operations and cannot qualify as amateur broadcasters. We require an experimental license so that we can purchase the transmitter equipment we desire. Unfortunately, our work on this project began in mid-June. We have only recently discovered that we will be unable to purchase the necessary transmitter equipment without an experimental license. We have also learned that it takes a minimum of 90 days to acquire such a license. We therefore need special temporary authorization (as described in 47CFR5.61) if we wish for our mission to succeed.

All relevant information regarding our request is listed below:

- Transmissions will last from 08:00 – 14:00, August 4, 2000. There is a slight possibility that the launch would be delayed a week for weather and the time of operation would therefore be 08:00 – 14:00, August 11, 2000.
- The transmitter station will be onboard a balloon and will therefore qualify as a mobile station.
- We will be transmitting from the White Sands Missile Range (32.4° N, 106.5° W)
- We wish to use 2 TXA5-RC transmitters from PC Electronics. We plan on overlaying GPS data on one camera transmission with the use of a ODS-GPS overlay board from PC Electronics.
- Each camera will transmit on a separate frequency. We plan on using 434.0 MHz and 439.25 MHz.
- Each transmitter will radiate 1 W of power.

- According to 47CFR2.201, our radio emission designator can be characterized by F3F, an frequency modulated single-channel analog television signal.
- The transmitter will be at an altitude of 53,000 ft.

Pat Boyle, our point-of-contact at White Sands Missile Range, has granted us the necessary clearances to use the frequencies mentioned above, and WSMR will be providing the necessary equipment to receive the transmissions from the package. Due to the remoteness of WSMR, the low ERP of our transmitters, and the mountains surrounding the area (thus reducing line-of-sight transmissions), the possibility of our transmissions interfering with any amateur radio operations is minimal. If you have any questions, feel free to contact me at 512-328-4892, 512-914-1919 (cellular), or butler@draco.ae.utexas.edu. My team and I appreciate your time and effort in helping us to ensure mission success.

Sincerely,

Dan Butler

Mr. Huey,

Joe Knight, Section Manager for ARRL in New Mexico, has sent our group an e-mail concerning our flight at White Sands. He stated that he has no problem in authorizing our operation at White Sands, provided we have a licensed HAM operator on site. One student with a HAM license in our group will be operating the equipment.

Joe Knight's contact info (if needed):

Joe T. Knight, W5PDY
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