It's been over ten years since WB2UDC coordinated a contact with the Space Shuttle Columbia for a group of children in New York City, and six years since he joined the CQ "family" as a regular contributor with an article about that experience. Last summer, we asked Bob to cover another kids-to-space contact for us from his perspective as a space-contact "veteran."

Believe in Your Dreams
Anatomy of an ARISS Contact

BY BOB HOPKINS,* WB2UDC

I
n the summer of 2007, CO visited and reported on the Berkeley Heights (NJ) Summer Playground Camp where the New Providence Amateur Radio Club (NPARC) set up a ham station, N2XJ, and allowed kids to get on the air¹. Now in its fifth season, NPARC added a new twist to an already well-run and engaging program—an ARISS contact. We thought we would come back for another look.

ARISS, Amateur Radio on the International Space Station, is a NASA-, ARRL-, and AMSAT-sponsored educational program. The goal is to have students, with the help of the ham radio community, plan and carry out a ham radio contact from Earth to space. I know first-hand that setting up something like this can be a whole lot of fun, and a whole lot of work, and I can tell you that with success also comes great satisfaction. However, this summer's visit was my first experience as an observer².

See the box for the announcement that was passed out to the program's participants. On the eventful day, I was totally prepared to witness the excitement. To completely identify myself as a ham, I donned my NASA T-shirt, callsign badge, and callsign baseball cap, and I put my HT on my belt (did I mention that I also have a callsign belt buckle?). I left early. To further immerse myself in the space experience, I programmed my GPS satellite navigation device to direct me, turn by turn, to the event site. The location was about 40 minutes from my home and I wanted to arrive a couple of hours before everything got hectic. I needed time to talk with the members of NPARC and with the children in the program.

I'm not one to be too superstitious, but there were many mysterious signs that things would go well. That morning, I read in The Star Ledger, our local newspaper, that on Aug 13th in “1960: The first two-way telephone conversation by satellite took place with the help of Echo 1.” Also, on my way to camp, as I passed a local bank after getting off the interstate, I noticed that the time/temp on its digital clock was 9:15 AM, with a temperature of 73 degrees! Another good sign. Unfortunately for me, there was construction on the most direct route to the site and my GPS went a bit crazy and directed me in circles for a moment or two. I know it is not the case, but sometimes I think the GPS's tone of voice gets more irritated when I do not follow its directions.

The day camp was in a small park adjacent to a middle school. There were a little over 100 children and about 20 adults in the area. It was easy to spot where the contact was going to take place, because the first thing I noticed was a very interesting antenna—two beams, one mounted vertically and the other horizontally. Between them was a boom made out of PVC with a rotator for elevation. The boom was then set on a tripod with another rotator for directionality. All of this was fixed to a pad made out of ten 4-by-4-by-6 foot pieces of lumber (see photo A). For transmitting and receiving, they had a Yaesu multi-mode 2-meter transceiver driving a 100-watt VHF amplifier, and then hard-line coax feed to the antenna farm. I instantly got the impression that these folks were very serious about their Earth station. Even the microphone was set up with an extra long cable so that it could easily be moved up and down the length of the 20-foot table (photo B).

The first individual I found was Barry Cohen, K2JV (photo C). Barry filled me in on the details, showed me the equipment, and then told me, "It's all about the kids, you know." And he really meant it! The entire ARISS contact was...