



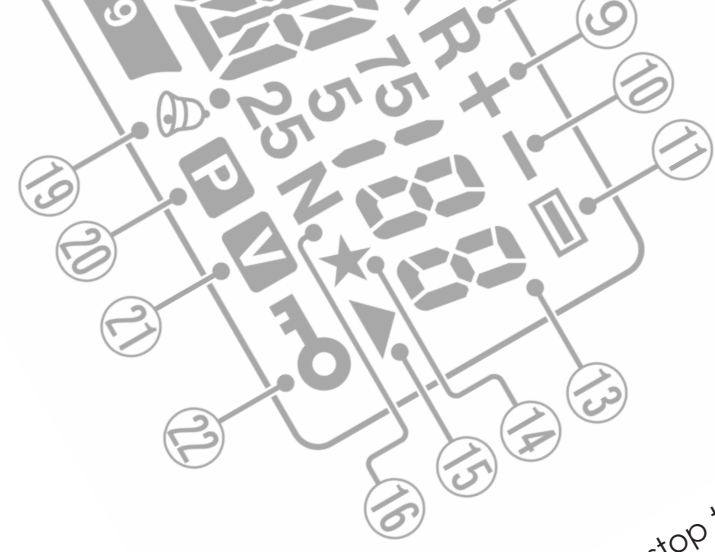
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INTERNATIONAL TALENT

With an Amateur Radio License granted from the Federal Communications Commission, a universe of possibilities opens up. One of the most extraordinary things a license holder can do is speak directly with astronauts aboard the International Space Station.

This type of activity usually manifests in conjunction with school events, offering students the ability to ask questions of the astronauts as the Space Station flies down time and will call out on the radio at random to see who is listening in on Earth below. In fact, this was a regular occurrence toward the end of 2018.

This is all made possible through relatively inexpensive equipment. With a few hundred dollars in hand, the right radio and antenna can be purchased to begin a licensee's journey with communication in space.

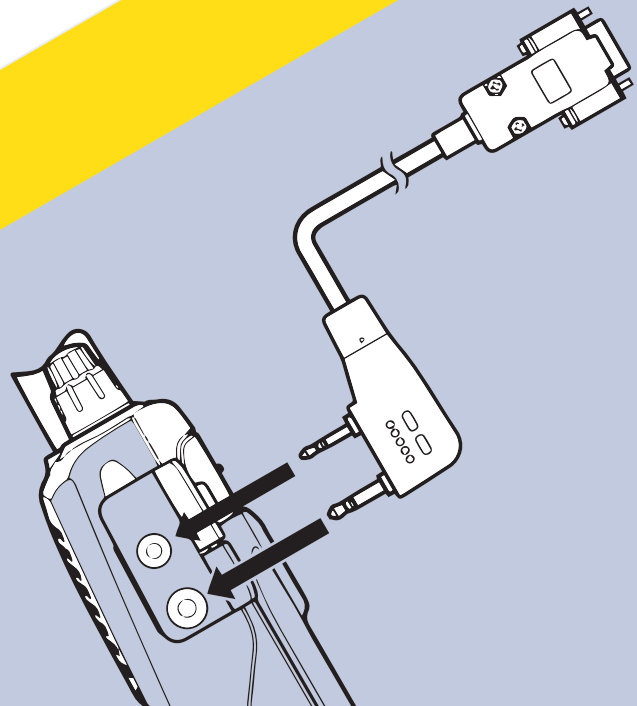
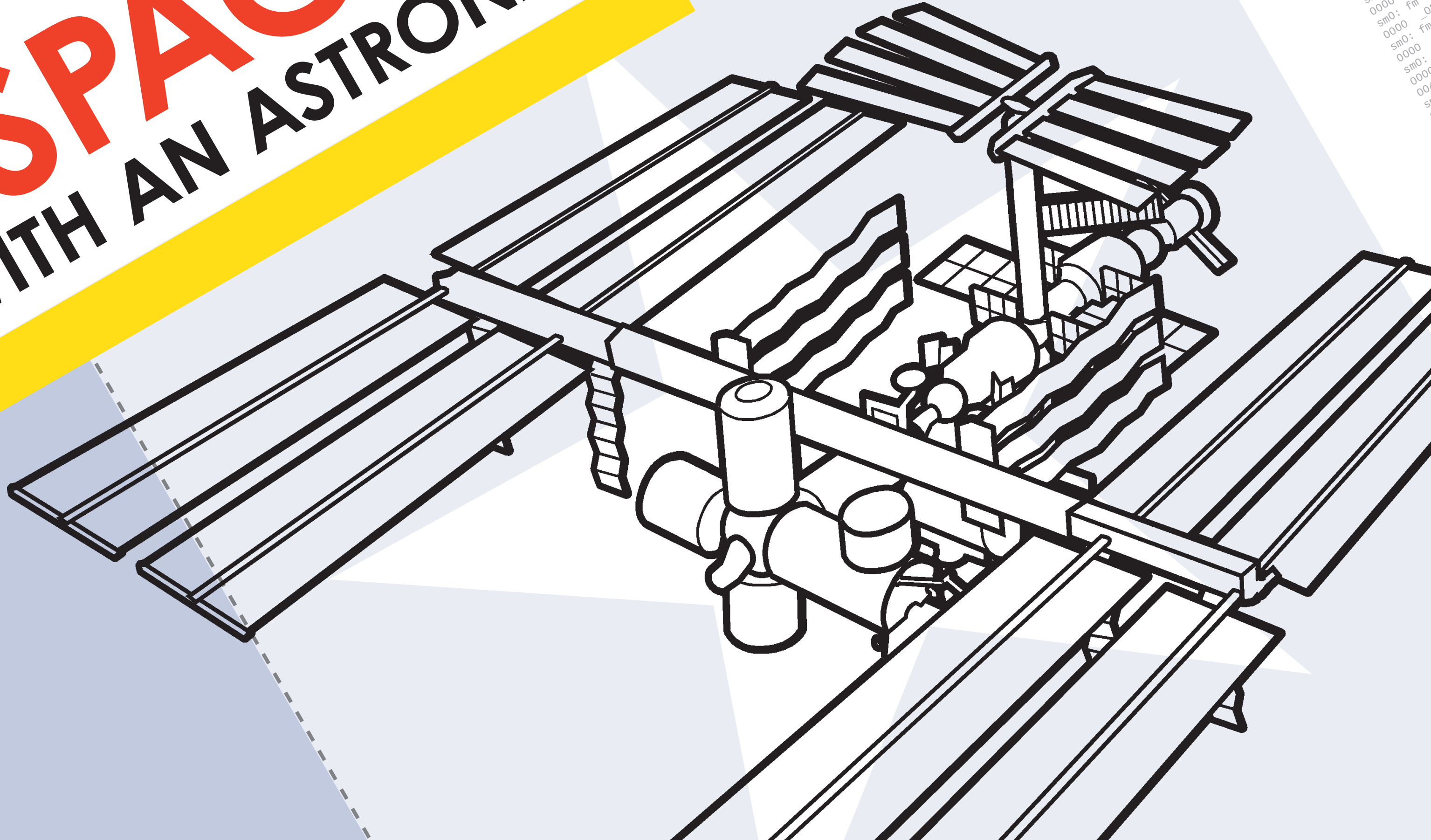


The journey doesn't have to stop there. In addition to voice communications, a licensee can use a simple computer in conjunction with their radio to relay short text messages (data packets) through the Space Station for others to hear back on Earth.

The Space Station is equipped with special hardware, making all this possible.

TALK WITH AN ASTRONAUT

SPACE STATION



RELAY DATA PACKETS

```
0000 }WIARN->APRS TCP/IP,WIARN-1*;*;145.150w*11111
smd: wr145.150MHz T123 -060 WCARES Net Non PM
0000 fm W4ACC-10 to APX208 via W4IDX-7* W4GM-1*
smd: =3443 97M/08742.27WOPHGT230COLBERT EMA Iga
0000 fm KU4B-2 to APOT21 via WIARN-1* WIDEI
smd: /151246h3627.79N/08628.38W>309/0351W0
0000 fm KU4B-2 to APOT21 via WIARN-1* WIDEI
smd: /151303h3627.91N/08628.55W>324/0331W
0000 fm KU4B-2 to APOT21 via WIARN-1* WIDEI
smd: /151303h3627.91N/08628.55W>335/01
0000 fm KU4B-2 to APOT21 via WIARN-1* W
smd: /151303h3627.91N/08628.55W>335/01
0000 fm KU4B-2 to APOT21 via WAGG
smd: /151315h3628.00N/08628.55W>324/0331W
0000 fm KU4B-2 to APOT21 via WAGG
smd: /151315h3628.00N/08628.55W>324/0331W
0000 fm WBARRQ-9 to APX210 via W4ID
smd: RK;L2J/"68J145.210MHz T173
0000 fm N5AAA-1 to APTT4 via W4ID
smd: J443.17513531.79N/08708.05W
0000 fm NUCOR to APTT4 via W4ID
smd: I3438.09N/08704.82W_L2D/
0000 fm WBARRQ-9 to SEPQ9X via
smd: "KONHUJ/"6:1145.210M
0000 fm WIARN->APRS TCP/IP
smd: }WIARN->APRS T173
0000 wr145.210MHz APX2
0000 fm N5AAA-1 to APX2
0000 fm N5AAA-1 to BE
smd: J147.1213532.90N
0000 fm KAEGC-1 to BE
smd: I3524.90N/0866
0000 fm W4ACC-10 to BE
smd: I442.125+
0000 em T100.
0000 fm K4MGY t
smd: K4MGY-1
0000 fm W4X
smd: /021
0000 fm K
smd: /0
0000 fm
smd: /0
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