
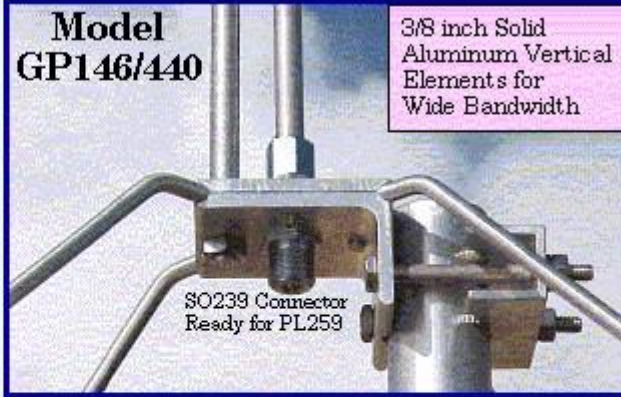


WORK THE ISS WITH YOUR DUAL BAND FM and Data capable RADIO.  
The ISS station can be used for both Voice and Data transmissions  
including SSTV.

## Dual Band Ground Plane

	
<b>Model GP146/440</b>	<b>Model GP146/440</b>
2 Meter 1/4 Wave Ground Plane & OSJ 440	1.5:1 SWR Bandwidth 144 MHz. to 148 MHz.
	3/8 inch Solid Aluminum Vertical Elements for Wide Bandwidth
	SO239 Connector Ready for PL259
<b>Model GP146/440</b>	<b>Model GP 146</b>
	All Stainless Mounting Hardware
	is the same except it doesn't have the 440 Element

Arrow Antenna <https://www.arrowantennas.com>

### MINIMUM REQUIREMENTS for Voice and Packet/data/SSTV operation.

1. Dual band FM radio with a DATA port (1200b). Sometimes called "packet" capable. Memory channels that can be independently programmed with transmit frequency, receive frequency, tone, offset and band. Sometime called "full duplex".
2. Dual band 144/440 Mhz antenna. I use a fiberglass dual band in my attic.
3. USB powered sound card interface (e.g. Signalink, Digirig)

4. TNC/modem) function (hardware or software). “Soundmodem” is software.

5. Satellite tracker app (e.g. ISS detector app on phone). N2YO.com has this functionality as well.

### Links of interest

- [https://www.youtube.com/watch?v=xrLQYr\\_G5L8](https://www.youtube.com/watch?v=xrLQYr_G5L8) : cross band ISS repeater how-to video
- <https://amsat-uk.org/beginners/how-to-hear-the-iss/> : how to hear the ISS
- <https://www.amsat.org/amateur-radio-on-the-iss/> : more about ham radio on the ISS
- <https://www.amsat.org/status/> : list of satellites heard by station
- <https://db.satnogs.org> : satellite database
- <https://www.amsat.org/track/> : how to track the ISS
- <https://www.n2yo.com> : comprehensive satellite tracking website
- <https://www.amsat.org> : AMSAT organizational info
- <https://play.google.com/store/apps/details?id=com.runar.issdetector> : Android sat tracker
- <https://apps.apple.com/us/app/iss-detector/id1198597805> : IOS sat tracker
- <http://uz7.ho.ua/packetradio.htm> : Soundmodem (software TNC functionality).  
Packet and APRS contacts (free).
- <https://www.ariss.org/current-status-of-iss-stations.html> : status of the equipment on  
ISS. Is it up? Is it off-the-air?
- <https://moonbounce.dk/hamradio/greencube-terminal-program.html> : Greencube terminal program  
(free). Packet and APRS contacts
- <https://www.gsl.net/on6mu/uissdownload.htm> : UISS packet program (free).  
Packet and APRS contacts
- <https://radiogalena.es/yoniq/> : SSTV software (free)
- <https://www.dxzone.com/grid-square-locator-system-explained/> : Grid square primer
- <https://www.work-sat.com> : page dedicated to working the ISS

## Frequencies for SO-50, AO-91, PO-101, and the ISS

(Updated 01/01/2024)

### SO-50

Channel #	Alpha	TX Freq	TX Tone	RX Freq	RX Tone
501	50 +2	145.850	67.0	436.805	None
502	50 +1	145.850	67.0	436.800	None
503	50 74	145.850	74.4	436.795	None
<b>504</b>	<b>SO-50</b>	<b>145.850</b>	<b>67.0</b>	<b>436.795</b>	<b>None</b>
505	50 -1	145.850	67.0	436.790	None
506	50 -2	145.850	67.0	436.785	None

### AO-91 - ONLY when in Sunlight!

911	AOS 2	435.240	67.0	145.960	None
912	AOS 1	435.245	67.0	145.960	None
<b>913</b>	<b>AO-91</b>	<b>435.250</b>	<b>67.0</b>	<b>145.960</b>	<b>None</b>
914	LOS 1	435.255	67.0	145.960	None
915	LOS 2	435.260	67.0	145.960	None

### ISS Frequencies

PO-101 / Diwata-2	AMSAT's AO-27
<i>Ops Schedule: <a href="https://twitter.com/Diwata2PH">https://twitter.com/Diwata2PH</a></i>	<i>Not currently online.</i>
Downlink 145.900, Uplink 437.500 141.3	Downlink 436.795, Uplink 145.850 67.0

FM Voice - ITU Region 1	FM Voice - ITU Regions 2/3
<i>Europe, Middle East, Africa, North Asia</i>	<i>N./S. America, Caribbean, Australia, S. Asia</i>
<b>145.800 downlink    145.200 uplink</b>	<b>145.800 downlink    144.490 uplink</b>

**FM SSTV downlink    145.800**

**AX.25 1200-baud packet    145.825**

**ISS Crossband Repeater    UPLINK: 145.99 - 67.0 CTCSS**

**Accommodate for the Doppler phenomenon on the 437.800 DOWNLINK:**

437.810	437.805	<b>437.800</b>	437.795	437.790
AOS		MID		LOS

**Clint Bradford K6LCS    [work-sat.com](http://work-sat.com)    (909) 999-SATS**