

This is a one way communication to test a wave form for a DoD customer. We are using the Advanced S-Band Transmitter, or "ASTRA," for the test. This transmitter is a self-contained device that houses a radio frequency (RF) transmitter, interfaces, functional control, power control, and timing circuitry. The transmitter receives continuous data and synchronous clock as input. ASTRA is a multimode telemetry transmitter that provides the option of transmitting either pulse-code modulation/frequency modulation (PCM/FM) or shaped-offset quadrature phase shift keyed (SOQPSK) telemetry formats within the IRIG lower S-band of 2200-2290 MHz. ASTRA is compliant with IRIG "-TG" variant of SOQPSK.

The ASTRA transmitter is used in the transmission of data to receiving systems that are within communications link. The transmitter accomplishes this function by accepting data and clock, modulating the data onto a programmable RF carrier, and amplifying this modulated carrier. The transmit power of the ASTRA will vary between 100mW to 10 Watts to stress the telemetry stream and establish the receiver BER. The data rate will vary between 100 kbps to 1.5Mbps.

The aircraft will have a commercial receiver on board and fly radial patterns from APL at altitude from 1kft agl to 30Kft agl in 5kft increments.