

## **Additional antenna description.**

NOTE:

The antenna on the aircraft is a steerable antenna that has the ability to move on both the horizontal and vertical planes. It will be transmitting to a ground station below.

### Type of modulation:

Modulation is COFDM (Coded, orthogonal, frequency division multiplexing) . COFDM uses 2000 carriers in an 8MHz bandwidth. It is therefore a multi carrier system.

### The maximum speed:

Each carrier is modulated with either at QPSK or 16QAM. Maximum total thru put (or speed) of the 2000 carriers at 16QAM modulation is 20Mbits/s

### Maximum audio modulating frequency:

Not applicable. There is no audio carrier.. the system transports data which may or may not include digital audio.

### Frequency deviation of carrier:

Each carrier deviates only a few KHz. Total deviation of the 2000 carriers is 8MHz

### Pulse duration and repetition rate:

There is no pulse duration it is a constant carrier system.

### For complex emissions:

COFDM is a multi-carrier system with a total maximum fixed bandwidth of 8MHz. 4MHz either side of the nominal center frequency. Modulation of the carriers is either QPSK or 16QAM.