

EXHIBIT 1
FCC FORM 442
ITEMS 4f, 4g

UHF Demonstration Radar
Pulse Characteristics

Radar Transmitter:

Tx Frequency	420 to 450 MHz, 2 and 4 MHz LFM
Pulse rise time	0.1 μ Sec
Pulse widths	60 μ Sec
Pulse fall time	0.1 μ Sec
Compression ratio	120:1 and 240:1
Pulse Repetition Frequency	1 kHz

Using the Mason-Zimmerman approximation with the above data, the -20dB bandwidths were determined to be 2.95 and 5.53 MHz.

EXHIBIT 2
FCC FORM 442
ITEM 5c

This experimental transmitter will be mounted on a test aircraft. The initial area of operation beginning approximately 7/1/00 will be a 370 km radius centered around NAD 27 coordinates 39-11-01 N, 076-41-09 W. Within this area are the following sites of interest: Northrop Grumman Corporation Friendship site, Patuxent River Naval Air Station, and Maryland's Eastern shore. Later flights (after 1/1/01) may also include a 180 km radius of Rome, NY.

UPDATE:

We have been requested to conduct demonstrations of the radar by Mr. Paul Gilgallin of AFRL (301) 330-4409, over Stockbridge, NY and/or Ft. Drum. We are therefore requesting an additional operating area, at the same 5500m maximum altitude, central to both locations: An 80 km radius of Lewis County, NY at NAD-83 coordinates 43-31N, 75-36W, will cover both locations and remain over US territory. We have been asked to be prepared to begin flights over this area by August 15, 2001.

EXHIBIT 3
FCC FORM 442
ITEM 10

Northrop Grumman Corporation is developing an experimental radar transmitter capable of foliage penetration. The purpose of this experiment is to test and evaluate the new transmitter and collect target data. A recent contract awarded by DARPA (F30602-00-C-0096) requires data collection operations up to 5500m AMSL. Mr. Paul Gilgallin of USAF Rome Labs is the program manager. We request that the current XD station class be retained because R&D efforts will continue in parallel and after this contract expires Information gained from these tests will be applied in the development future radars that may be able to locate targets in vegetation presently not visible to current systems.