



DOCUMENT 702-91

FREQUENCY MANAGEMENT GROUP

**FLIGHT TEST DIGITIZED/
COMPRESSED VIDEO SPECTRUM ALLOCATION**

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INTRODUCTION

This document was prepared by the Range Commanders Council (RCC) Frequency Management Group (FMG) in response to RCC task FM-4, Flight Test Video Encryption System. It is intended to identify a common, recommended frequency band for the operation of range flight test digitized/compressed video systems.

BACKGROUND

In the early 1980s, the National Security Agency (NSA) recommended that all test range communications transmissions be secured. At the time, all range flight test video transmissions were made using nonencrypted conventional analog video systems. To use standard NSA encryptors, it became necessary to digitize and compress these analog video signals. By the late 1980s, it became obvious that a standard digitized/compressed video system, operating in a common portion of the frequency spectrum, needed to be developed. This task was initiated to determine the common frequency spectrum to be used by this digitized/compressed video system.

RECOMMENDED SPECTRUM

The FMG reviewed the various frequency bands available for flight test digitized/compressed video operations and recommends that the 2310 - 2390 MHz band be used, provided the following conditions are met:

- a. state-of-the-art synthesized transmitters must be used,
- b. the transmitters must be capable of tuning across the entire 2310 - 2390 MHz band and must be able to be retuned in the field, and
- c. all operations must be able to be frequency scheduled.

If the above conditions can not be met or if analog (non-digitized/compressed) video is used, then the 1710 - 1850 MHz band or the 4400 - 4990 MHz band should be used.

Exceptions to the above recommendations may be possible at individual range locations on a case-by-case basis. However, for those programs which expect to operate at more than one range location, compliance with the above recommendations is strongly advised.

Please note that prior to any flight test video transmissions in the above frequency bands, a formal frequency assignment must be obtained through applicable frequency management channels. Questions concerning frequency assignments should be referred to the applicable range frequency manager.