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30 Aug 65

General Search

Technical Parameters

10. Introduction: COMOR has identified the frequency bands which intelligence indicates are most likely to be used. Bands are listed below in their order of priority. From collection we must be able to determine whether the signals from the emitters within these frequencies are pulsed or continuous wave. If pulsed we must have specific technical information, the parameters and tolerances of which are specified.

11. Radio Frequency Coverage from 30 to 15,500 Mcs. Listed in Order of Priority

Priority 1. ERL Priorities 1A and 1C related, in priority order:

a.	100 - 915 mcs	c.	2600 - 3300 mcs
b.	1100 - 2400 mcs		

Priority 2. ERL Priority 2C related, in priority order:

a.	4900 - 5100 mcs	f.	4000 - 4900 mcs
b.	6500 - 6700 mcs	g.	5100 - 6500 mcs
c.	8000 - 9500 mcs	h.	6700 - 8000 mcs
d.	14000 -15500 mcs	i.	9500 -14000 mcs
e.	3300 - 3900 mcs		(at atmospheric windows)

Priority 3. ERL Priorities 3A, 3D, and 3E related, in priority order:

a.	915 - 1100 mcs	c.	3900 - 4000 mcs
b.	2400 - 2600 mcs	d.	30 - 100 mcs

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12. Information Tolerances, Pulsed Emitters, ELINT. Information tolerances mandatory for the satisfaction of General Search requirements are marked with an asterisk. The remaining tolerances while not critical are, however, useful and are listed according to their respective merit.

*a. Detection of signals--In order to intercept useful data suitable for processing into intelligence information, it is necessary to insure the detection of signals from emitters at the horizon with a radiated power of 50 kw at 30 mcs to 100 kw at 3500 mcs linearly decreasing to 30 kw at 15, 500 mcs for pulsed type emitters.

*b. Measurement of PRF-- Within ± 1 per cent at rates up to 5000 pps and within ± 5 per cent above 5000 pps.

*c. Measurements of signal frequency-- 30 mcs - 15, 500 mcs - ± 5 per cent. (This tolerance is not sufficiently stringent to permit automatic identification of all intercepted data, a necessity if NSA is to be able to process rapidly in response to the possible ELINT indication of imminence of hostile actions. NSA's preliminary study indicates that the technical stringency is in the order of the following:

30 mcs - 1500 mcs - ± 1%
1500 mcs - 6500 mcs - ± 0.5%
6500 mcs -15500 mcs - ± 0.3%

At this time NSA anticipates that in some cases the tolerance requirements will be less stringent, in some cases possibly more. As NSA pursues this study it will work closely with the to insure that the latter has the full benefit of NSA's study a id conclusions which will also be reported to COMOR.)

*d. Measurement of scan rate within ± 1%.

*e. Determination of signal intercept time within ± one second.

*f. Determination of signal emitter location within [redacted]

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[redacted]

[redacted]

[redacted]

13. Information Tolerances, [redacted], ELINT.

a. Detection of [redacted]

b. Identification of frequency band in which the signal is received.

c. Location of [redacted] miles.

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Technical Parameters

22. Radio Frequency Coverage:

Priority Group I:

a. 150 - 175

b. 1800 - 2500

c. 2600 - 3250

d. 4930 - 5095

Priority Group II:

a. 700 - 915

b. 550 - 680

Priority Group III:

a. 6550 - 6700

b. 8000 - 10000

c. 103 - 110

23. Information Tolerances:

The following information tolerances are mandatory for the satisfaction of EOB requirements with the exception of the indicated trade-off between scan rate [redacted]

*a. Location: Within [redacted] necessary; Within [redacted] desired.

*b. Measurements of signal frequency.

103 - 10000 mcs ± 5%

(This tolerance is not sufficiently stringent to permit automatic identification of all intercepted data, a necessity if NSA is to be able to process rapidly in response to EOB requirements. NSA's preliminary study indicates that the technical stringency is in the order of the following:

103 - 915 mcs ± 1.0%
1800 - 5095 mcs ± 0.5%
6550 - 10000 mcs ± 0.3%

At this time NSA anticipates that in some cases the tolerance requirements will be less stringent, in some cases possibly more. As NSA pursues this study it will work closely with the [redacted] to insure that the latter has the full benefit of NSA's study and conclusions which will also be reported to COMOR.)

*c. PRF: ± 1%

*d. Scan Rate: ± 5% (when PW is not provided).

[redacted]

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Directed Covenant

Technical Parameters

30. Radio Frequency Coverage: 150 - 165 mcs.

31. Information Tolerances:
All stated information tolerances are mandatory for satisfaction of ABM/AES radar requirements.

a. RF: ± 0.001%
b. PRF: ± .01%
c. [redacted]
d. SR: ± 1%
e. Location: Within [redacted]
f. Time of Intercept: ± 1 milsec
g. [redacted]
h. Beamwidth: ± 5%
i. Pulse-to-Pulse Stability: ± 10 u/sec
j. [redacted]

[redacted]

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[redacted]

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