

~~CONFIDENTIAL~~

SPM 8-1001

Director of Communications

19 December 1958

Chief, Special Programs Staff, OC

Requirements for Application of Thermoplastic Recording Techniques

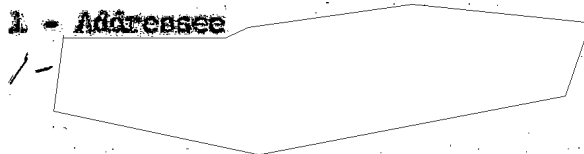
Forwarded as an attachment is an outline of ideas on utilization of the thermoplastic recording techniques. These may be useful in future discussions with representatives of the General Electric Company, tentatively scheduled for 7 January 1959.



50X1

Attachment: 1

Distribution:
Original & 1 - Addressee



50X1

DOC	1	REV DATE	11 MAR 1960	BY	064540
ORIG COMP	033	OPI	56	TYPE	02
ORIG CLASS	C	PAGES	4	REV CLASS	C
JUST	22	NEXT REV	2010	AUTH:	

50X1



~~CONFIDENTIAL~~

50X1

C-O-N-F-I-D-E-N-T-A-L

REQUIREMENTS

WIDE FREQUENCY BAND RECORDINGS

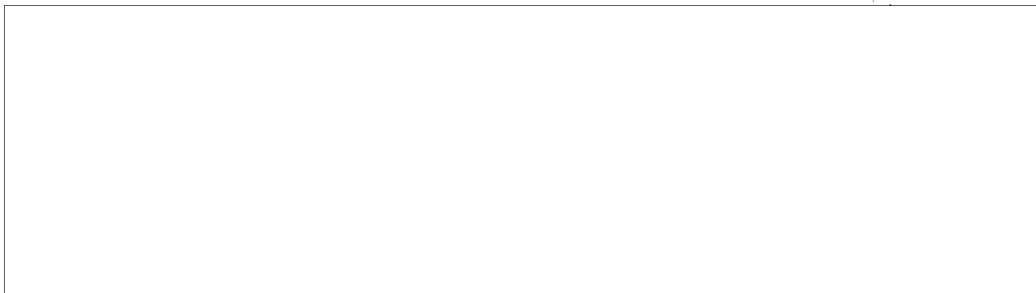
THERMOPLASTIC TECHNIQUES

1. The following selected requirements support development and production of wide frequency band recording systems:

a. There is a critical need for a recording technique which will permit direct recording of signal parameters obtained through high gain Aperiodic band pass receivers.

b. Present wide band recording techniques capable of recording signals such as telemetry, etc., are complicated by the complex systems required to control the recorder, to provide logging information and the need for data reduction of the recording, and the time factors and delay incident to analysis and transforming of the magnetic recording into useful data.

c. Principles of thermoplastic recording as demonstrated by the General Electric Company, indicate that the thermoplastic system, having frequency response estimated as high as 500 mc/s, would if reduced to practice allow for design and construction of an intercept receiver/recorder which would simplify time consuming techniques now employed in the recording, data reduction and analysis of electronic intercepts. This appears true because thermoplastic recording preserves and can present data in a form which is analizable directly.

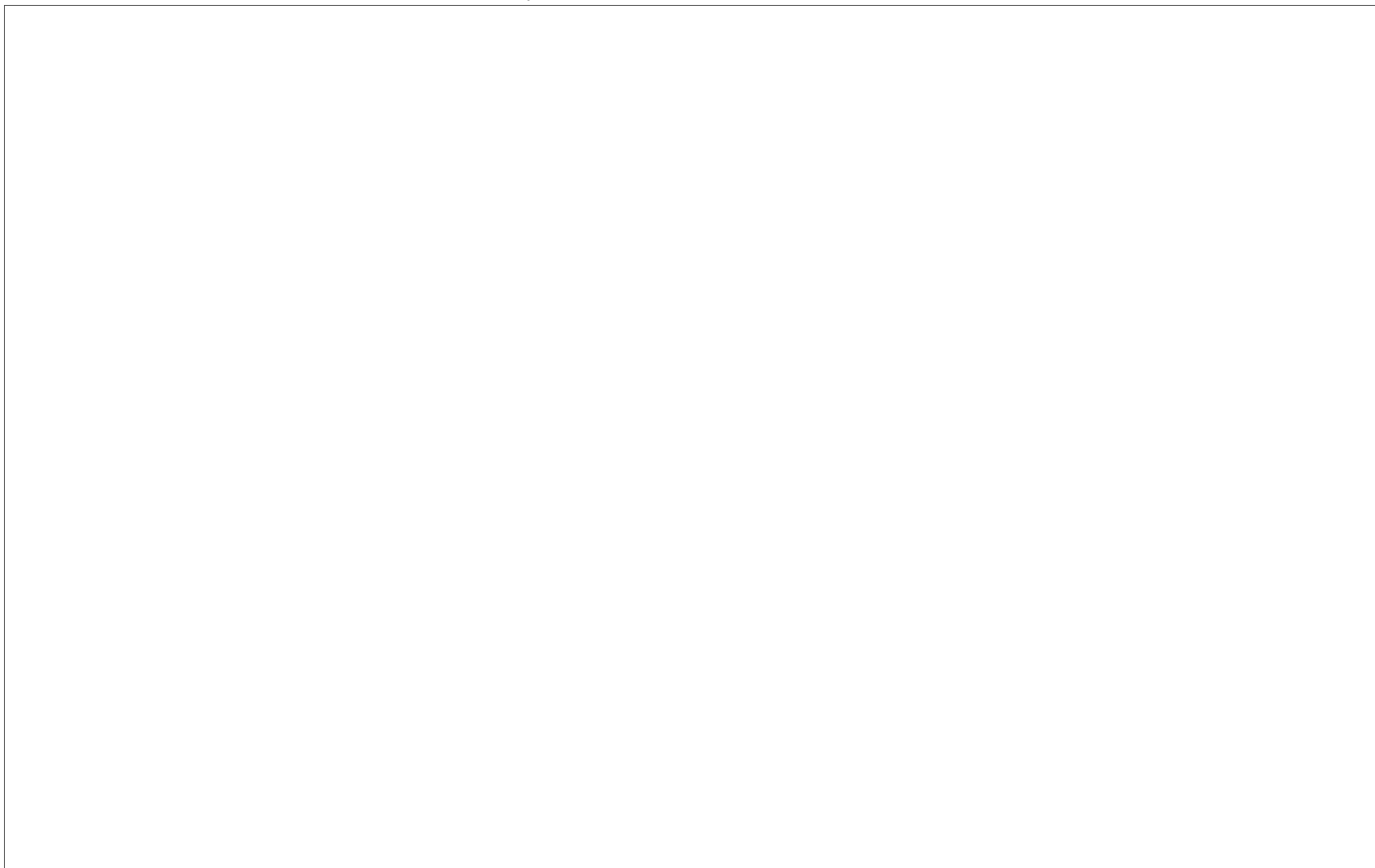


50X1

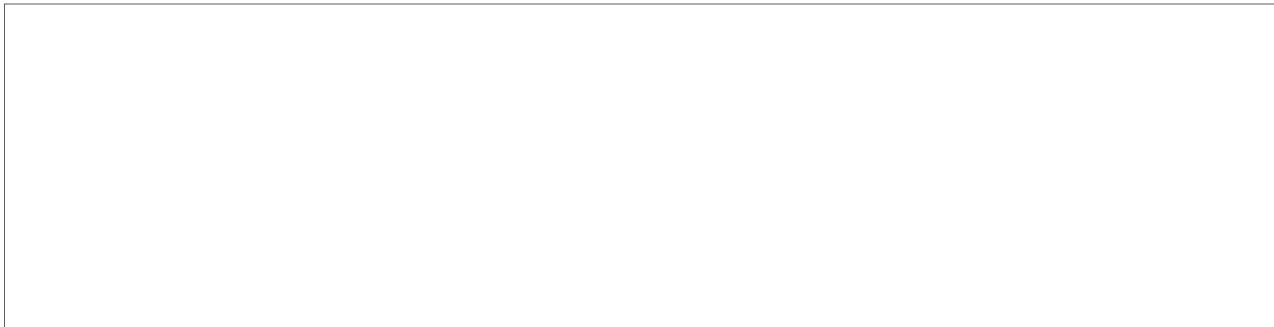
e. In/the/field ...

C-O-N-F-I-D-E-N-T-A-L

C-O-N-F-I-D-E-N-T-I-A-L



3. The General Electric Company has stated that the thermoplastic recording technique is applicable to the side looking mapping type radar and that it holds promise for improved resolution in that system. Based on this claim, it is clear that there is a specific requirement for utilization of such recorder so designed as to allow its incorporation in existing side looking radar systems.



50X1

COMMENT: From the demonstration/lecture notes and discussion, it appears that there would be no factor prohibiting a fairly high degree of miniaturization of the system as proposed by General Electric.

6. ... 50X1

C-O-N-F-I-D-E-N-T-I-A-L

C-O-N-F-I-D-E-N-T-A-L

6. has advised the undersigned that the Technical Services Staff (DDP) is interested in the application of such recorder techniques to: 50X1

a. An improved audio intercept, i.e., intelligibility of recordings taken under a variety of conditions bears a direct relationship to the band pass that can be used in such recordings.

b. The side looking radar systems mentioned above and,

c. The possibility that this recording technique may be applicable to some photographic problems and requirements handled by TSS.

50X1

DATE: 1 Dec 58

C-O-N-F-I-D-E-N-T-I-A-L