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EARPOP

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11 Oct 1965/ [ ] /cab

12 October 1965

MEMORANDUM FOR CSWG

SUBJECT: Mission 7160 Description

Attached for your information is Mission 7160 Description.

*B*

FRANK S. BUZARD  
Colonel, USAF

Attachments

- cy 1 - Addressee
- Cy 2 - SS-6
- Cy 3 - SS-1
- Cy 4 - RF#1
- Cy 5 - RF#2

1965 OCT 12 15 52

SAFSS

EXCLUDED FROM AUTOMATIC DOWNGRADING AND DECLASSIFICATION SCHEDULE  
DOD DIR. SEC. 1.4

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HANDLE VIA DYC/MW

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PAGE 1 of 2  
DATE 11 Oct 65 BY 8670/CS

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## MISSION 7160 DESCRIPTION

CAPABILITY: (See figures attached).

NOM. RF 640-8330 MC in 4 bands, superheterodynes with serial-parallel scan.

On-orbit digitizes: RF 9 bits ( $\approx 1.5\%$ ), FW 6 bits, PRI 9 bits.

A narrow band analog backup (25 kc, 24 minute) recorder will resolve interleaving.

Locations of emitter can be determined in ground processing using vehicle ephemeris, orientation and signal-inhibit intercept antenna patterns ( $\approx 105$  to  $115$  u. mi. on a single intercept).

Multiple intercepts can improve locations (to  $\approx 50$  mi).

## OBJECTIVES:

To update ROE in 3 of the 4 top priority bands, all of the second priority bands and the first of three third priority bands (see p. 12 COMOB D-69/82).

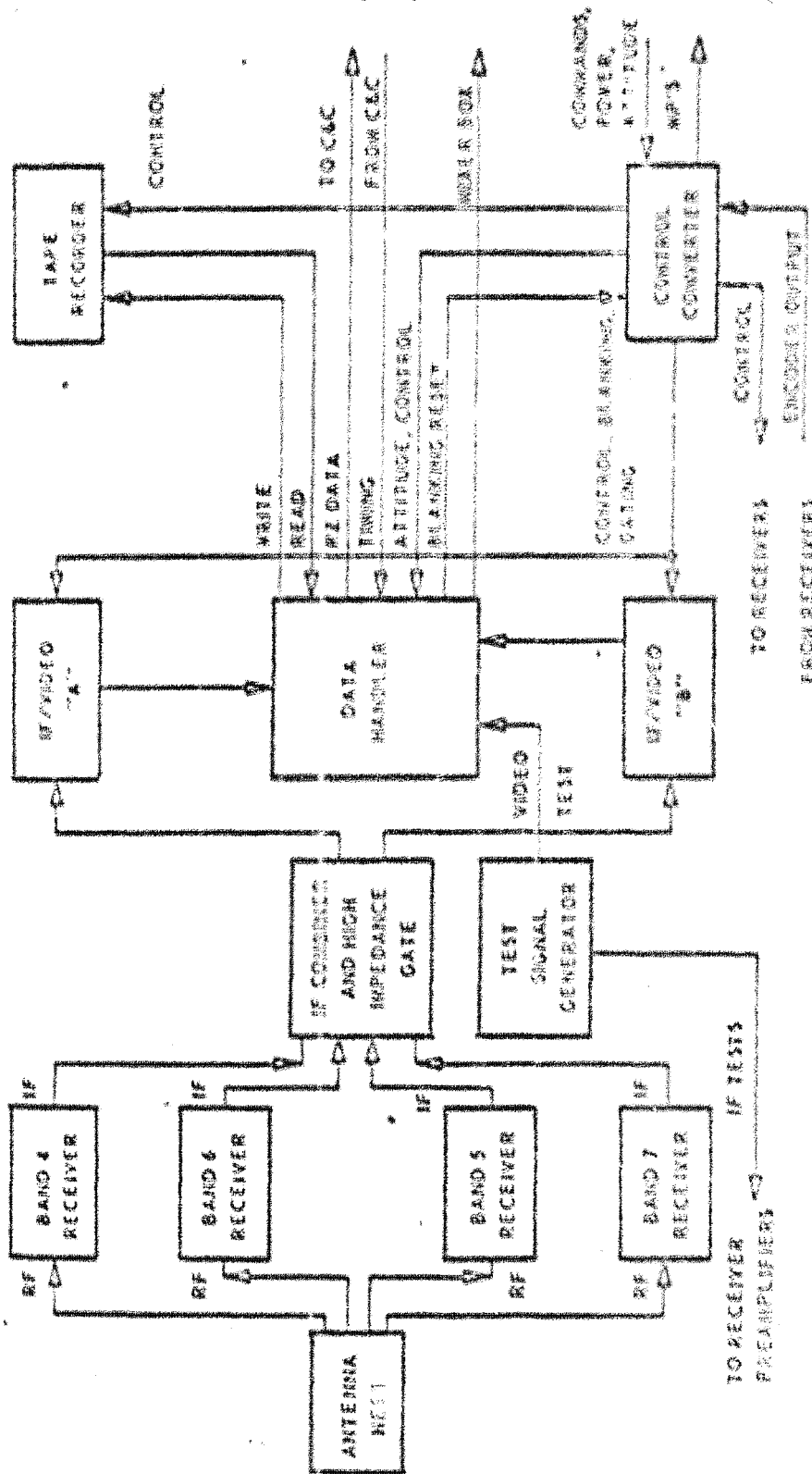
A limited GENERAL SEARCH capability also is provided by the analog data.

An advanced engineering objective is to test the SETTER automatic precision location finding technique and refine the digital-analog correlation capability in the MULTIGROUP system.

EXPECTED LIFETIME: 30-60 days.

SCHEDULED LAUNCH DATE: Early 1966.

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BLOCK DIAGRAM OF COMBAT III DIGITAL CHANNEL

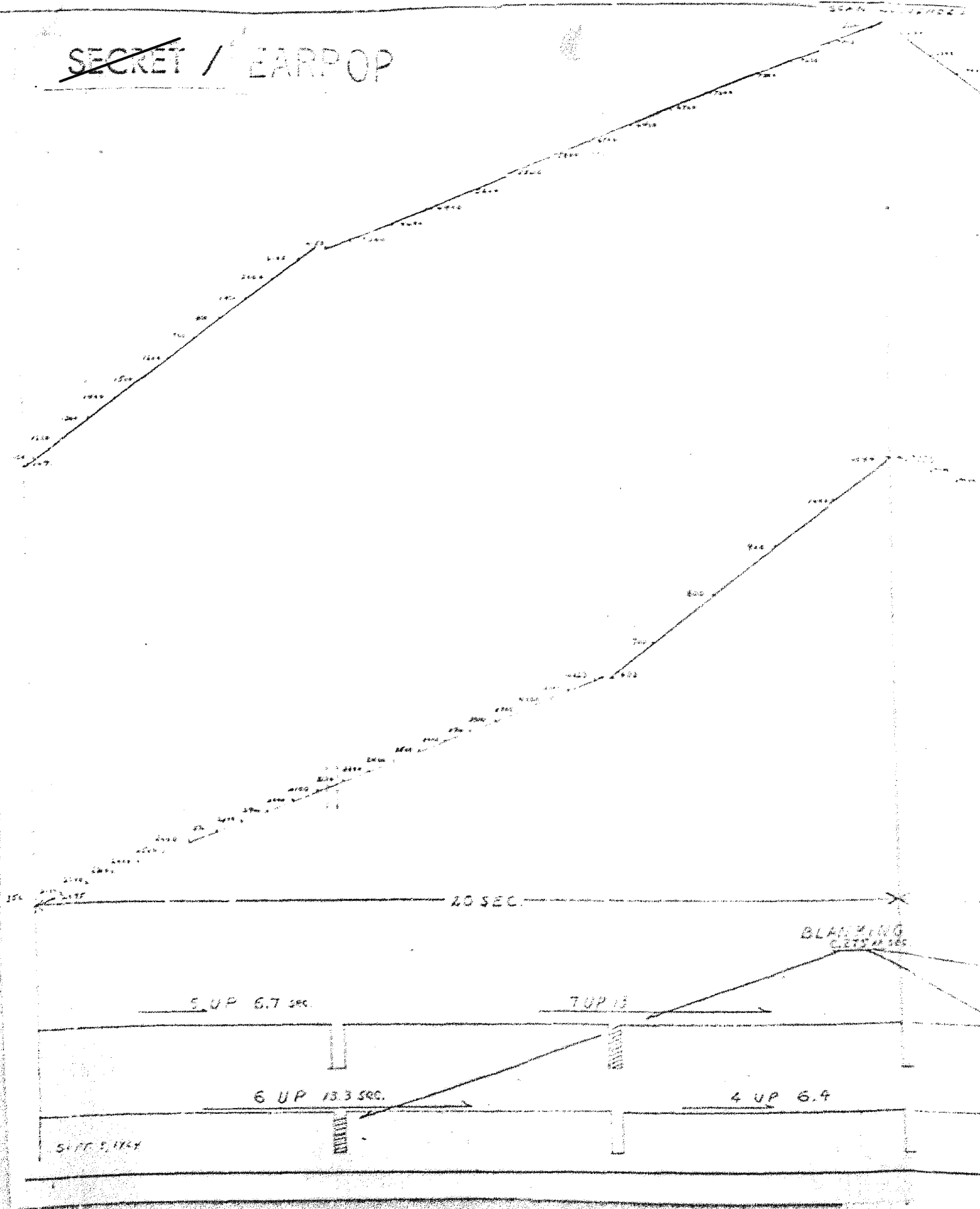
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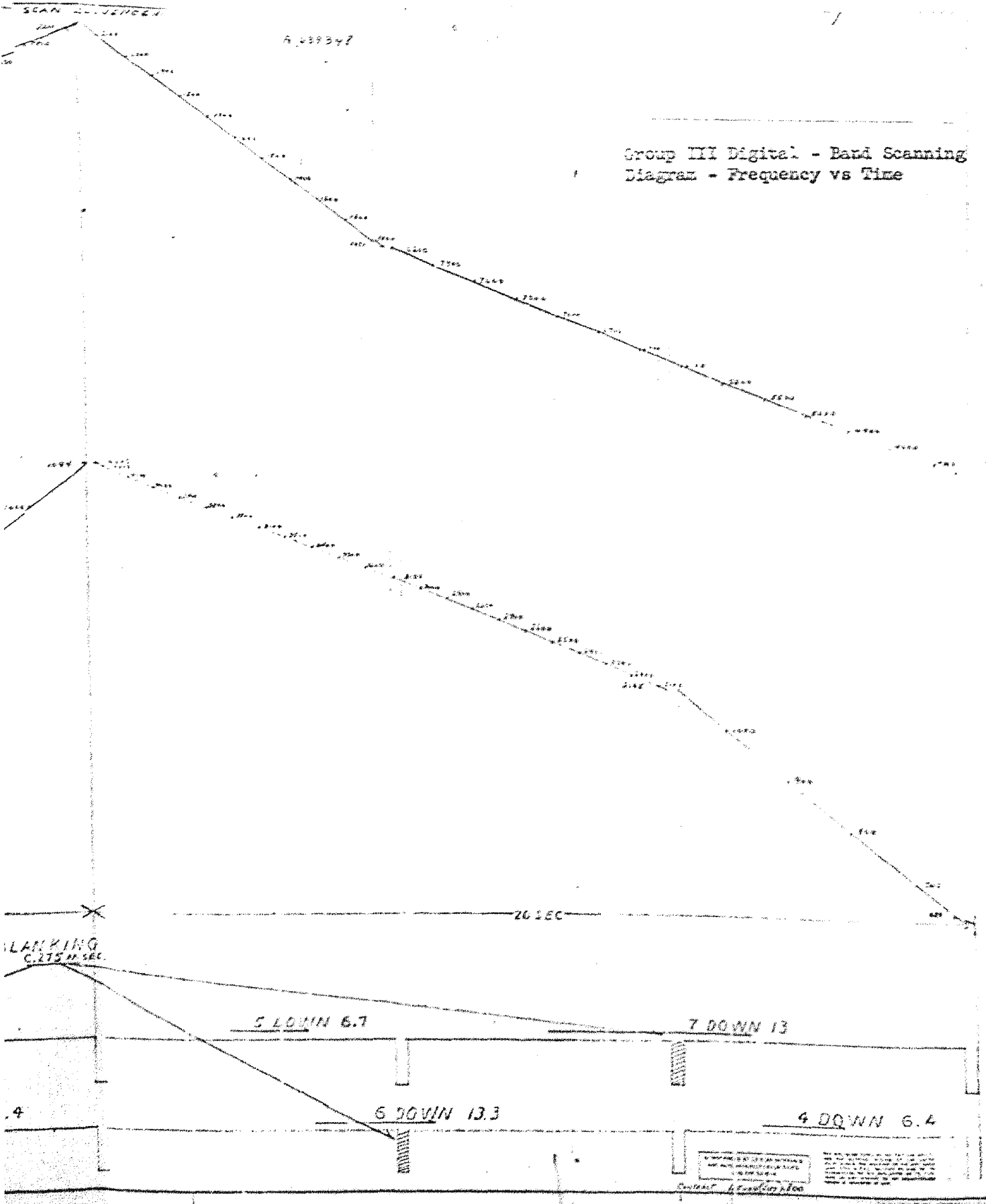
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TABLE 1

<u>Verification Period (2-pulses)</u>	
Band 4 and 5	12.8 millisec
Band 6 and 7	5.0 millisec
<u>Intercept Processing Time</u>	
Band 4 and 5	28.9 millisec
Band 6 and 7	16.6 millisec
<u>Recorder Start Interval</u>	6.8 millisec, nominal
<u>Maximum Intercept Recording Rate</u>	63 per second (limited by data handler)
<u>Bit Length</u>	
Tape readout	100 $\pm$ 20 $\mu$ sec
Direct readout	100 $\pm$ 2 $\mu$ sec
<u>Intercept Word Length</u>	
Time interval (per word) tape readout	6.8 millisec $\pm$ 20 percent
Time interval (per word) direct readout	6.8 millisec $\pm$ 1 percent
<u>Intercept Recording Capability</u>	7500 words minimum
<u>Intercept and Attitude Word interspace on Readout</u>	3.7 to 15 millisec (8 millisec nominal)

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