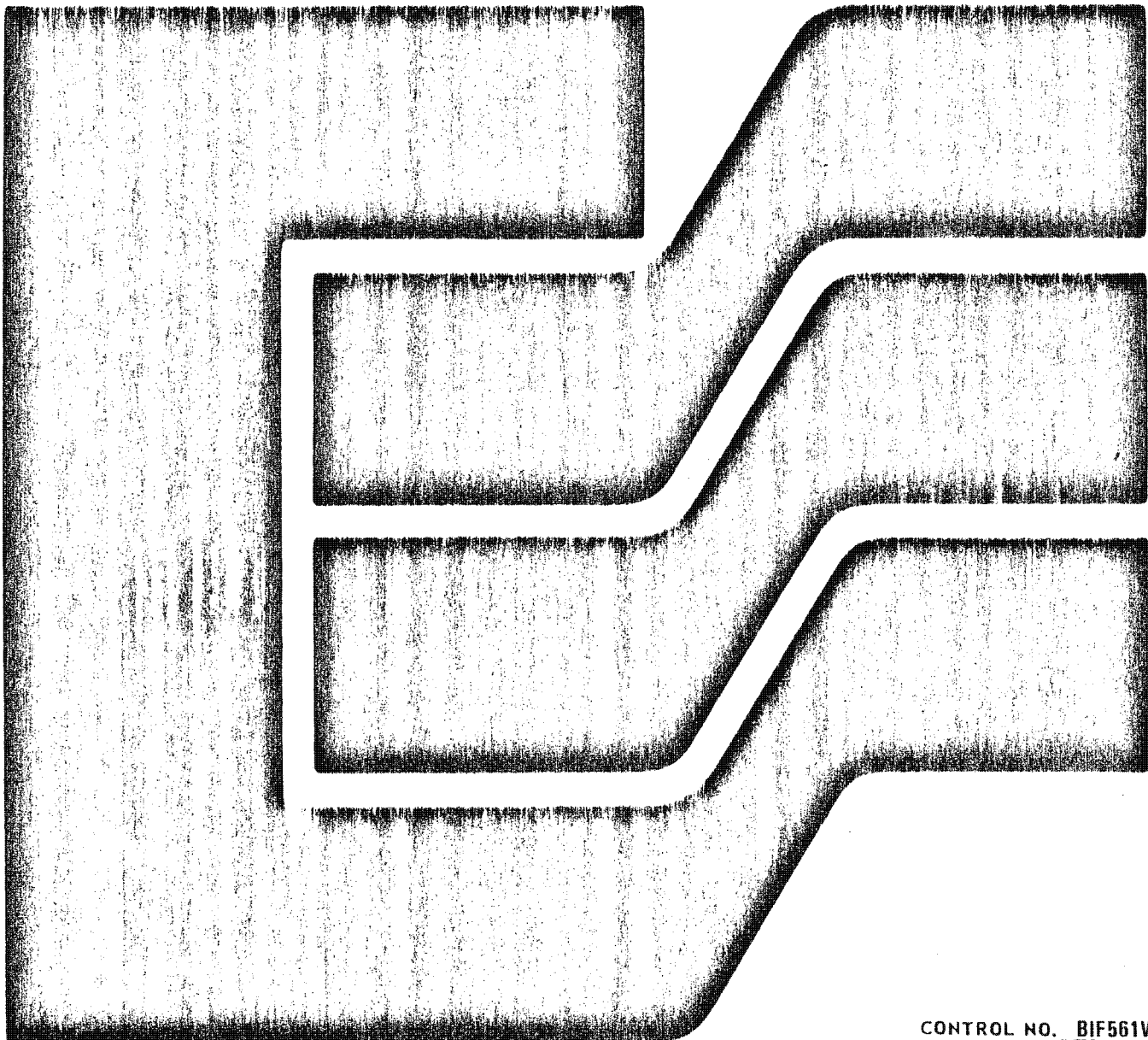


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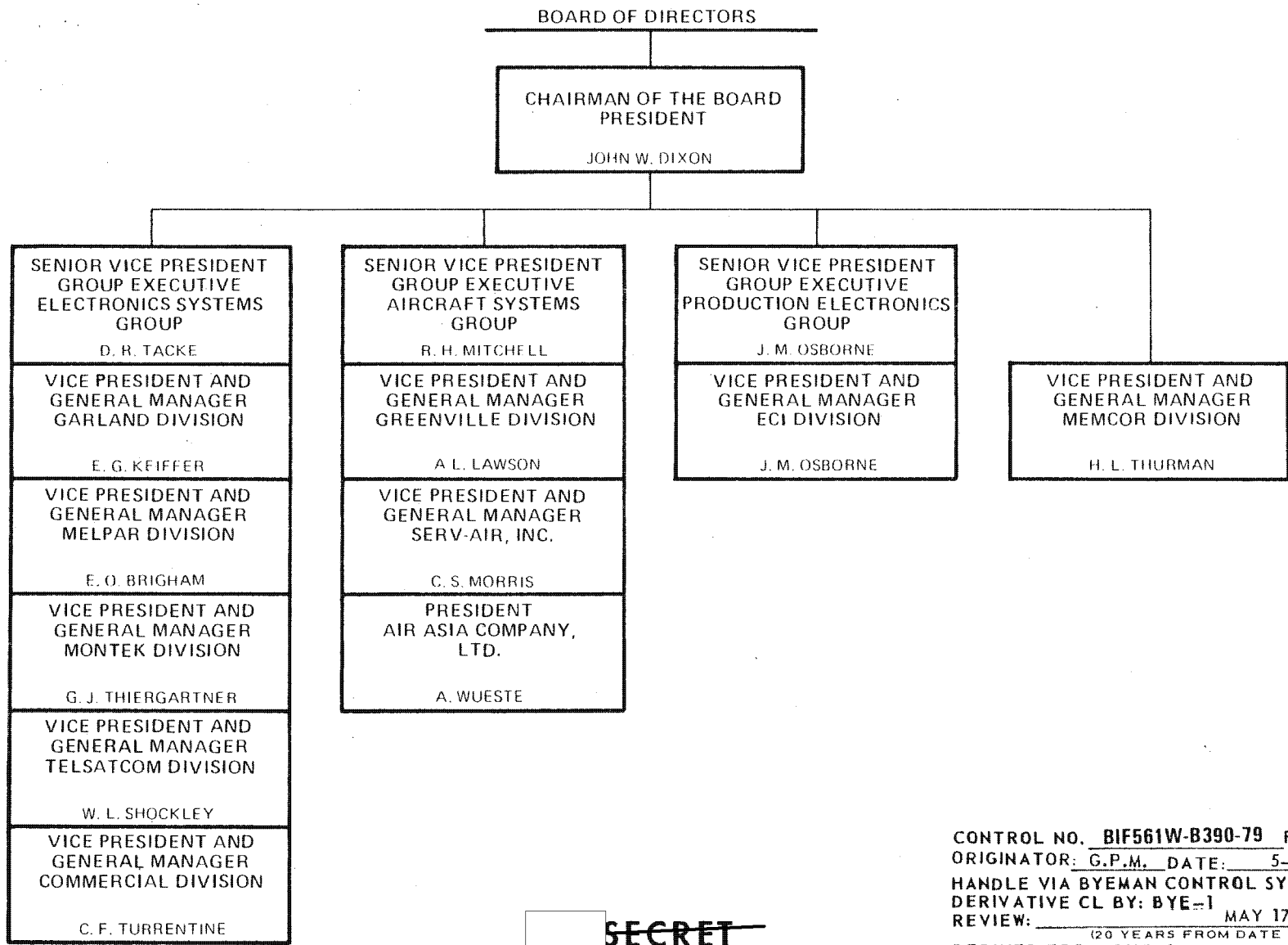
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E-SYSTEMS ORGANIZATION



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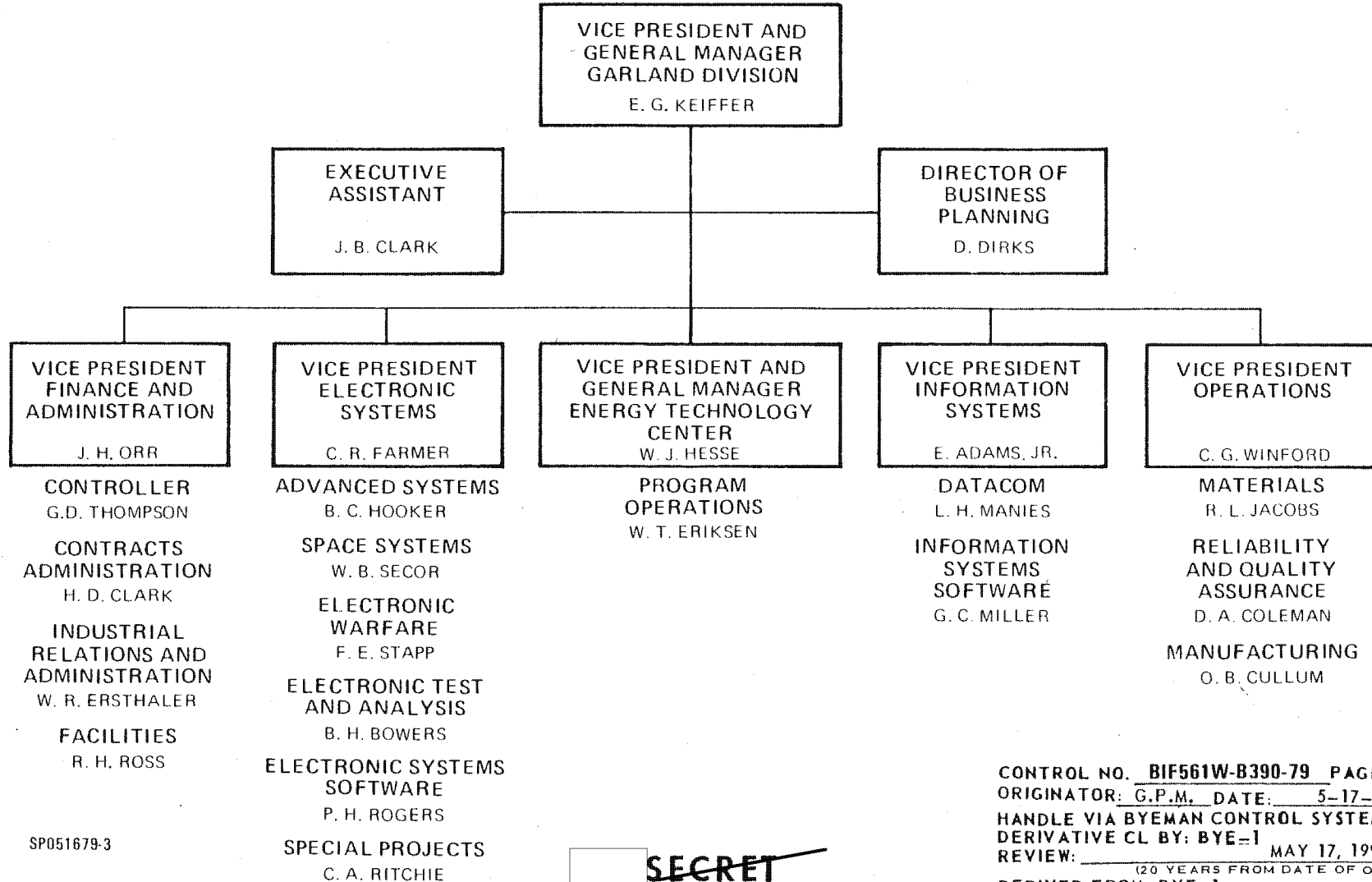
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ELECTRONICS SYSTEMS GROUP

GARLAND DIVISION



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PROGRAMS

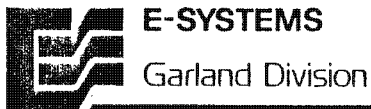
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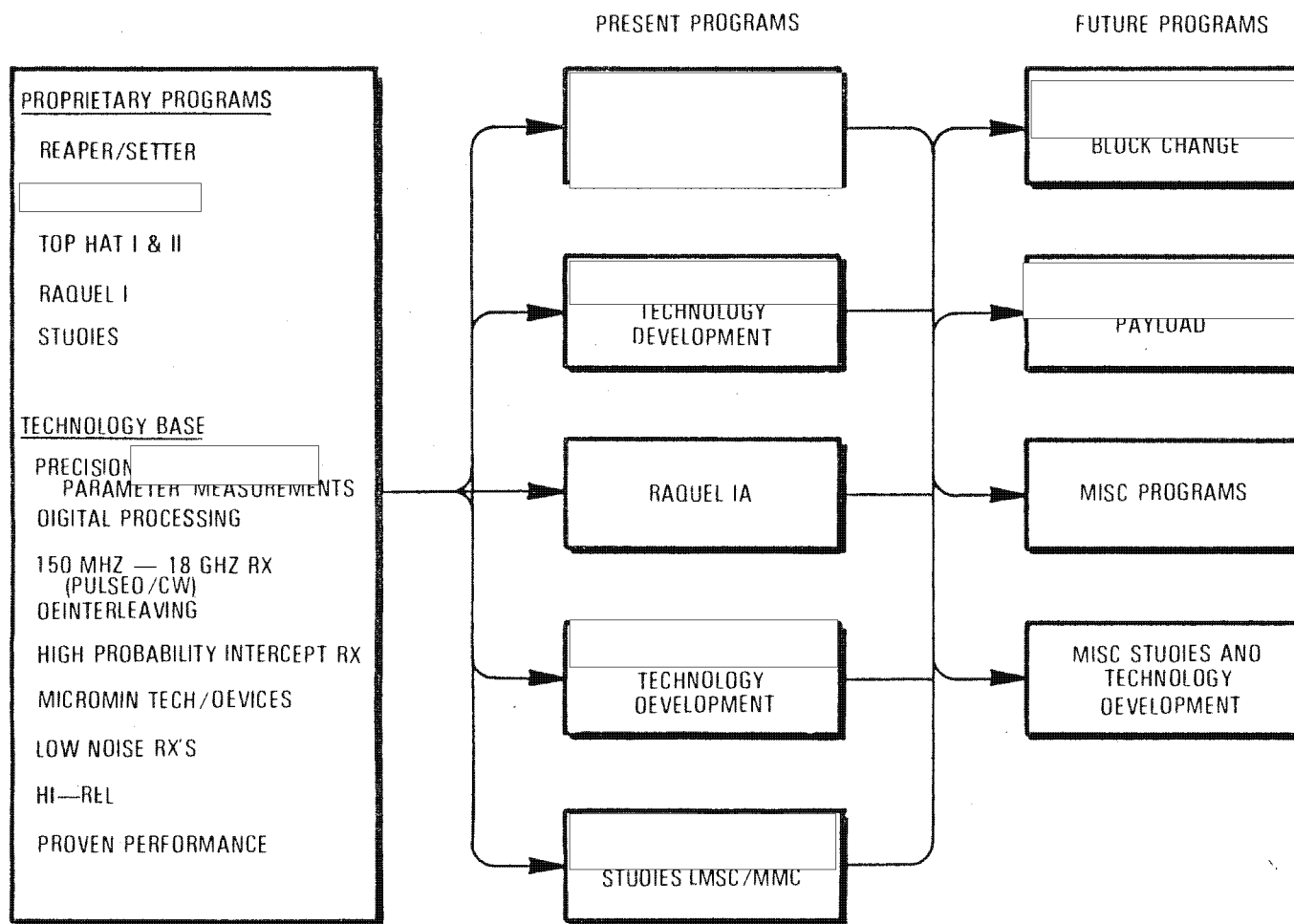
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PRODUCT LINE OVERVIEW



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CONTROL NO. BIF561W-B390-79 PAGE: 5
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E-SYSTEMS PAYLOAD LAUNCH HISTORY

SYSTEM	FREQUENCY	TARGETS	FLIGHT DATE	PERFORMANCE
BIRD DOG I	4.95 - 5.077 GHZ	FOREIGN DEFENSE RADARS	FEBRUARY 1964	11 DAYS
BIRD DOG I	4.95 - 5.077 GHZ	FOREIGN DEFENSE RADARS	JULY 1964	12 DAYS
BIRD DOG II	0.521 - 0.648 GHZ	FOREIGN DEFENSE RADARS	NOVEMBER 1964	4 DAYS
SQUARE TWENTY	1.55 - 1.75 GHZ		OCTOBER 1965	12 DAYS
SETTER I	2.68 - 2.935 GHZ	FOREIGN DEFENSE RADARS	FEBRUARY 1966	41 DAYS
SETTER IA	2.96 - 2.935 GHZ	FOREIGN DEFENSE RADARS	DECEMBER 1966	159 DAYS
SETTER IB	2.6 - 3.2 GHZ	FOREIGN DEFENSE RADARS	JULY 1967	159 DAYS
SETTER IB-II	2.6 - 3.2 GHZ	FOREIGN DEFENSE RADARS	JANUARY 1968	436 DAYS
REAPER I	1.8 - 3.3 GHZ	FOREIGN DEFENSE RADARS	OCTOBER 1968	367 DAYS
REAPER II	1.8 - 3.3 GHZ	FOREIGN DEFENSE RADARS	JULY 1969	396 DAYS
CONVOY	0.160-0.900GHZ	ABM RADARS	JULY 1969	390 DAYS
TOP HAT I	0.45 - 1.0 GHZ		NOVEMBER 1970	44 MONTHS
REAPER III	1.8 - 3.3 GHZ	FOREIGN DEFENSE RADARS	AUGUST 1970	531 DAYS
REAPER IV	1.8 - 3.3 GHZ	FOREIGN DEFENSE RADARS	JULY 1971	455 DAYS
TOP HAT II	0.45 - 1.0 GHZ		APRIL 1974	STILL OPERATING
RAQUEL I	4 - 18 GHZ		NOVEMBER 1974	STILL OPERATING
RAQUEL IA	4 - 18 GHZ		SPRING 1978	STILL OPERATING

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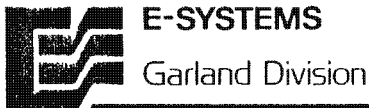
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REAPER PAYLOAD

MISSION:

RADAR ORDER OF BATTLE & TECHNICAL INTELLIGENCE
ELINT COLLECTION SYSTEM FOR STRAWMAN STABILIZED AGENDA - P770

CONTRACT:


DESIGN, DEVELOPMENT & QUALIFICATION - 5 FLIGHT SYSTEMS & 2 GROUND SUPPORT SYSTEMS
SAFSP CONTRACT


PROGRAM STATUS:

DELIVERY:

- 1 REAPER MARCH 1968 - LAUNCHED OCTOBER 1968
- 2 REAPER OCTOBER 1968 - LAUNCHED JULY 1969
- 3 REAPER AUGUST 1969 - LAUNCHED AUGUST 1970
- 4 REAPER JANUARY 1971 - LAUNCHED JULY 1971
- 5 REAPER STORAGE

FEATURES:

COVERS MOST DENSE RADAR ENVIRONMENT IN SOVIET 

ACCURATE & RELIABLE DIRECTION FINDING  - 95% CONFIDENCE

DEINTERLEAVES & PRESORTS DATA - MINIMUM GROUND PROCESSING

WIDE BAND RECORDING OF TECHNICAL INTELLIGENCE

HIGH RELIABILITY PROGRAM - INCENTIVE FOR LIFE ON ORBIT

WEIGHT 230 LBS. POWER 230 WATTS

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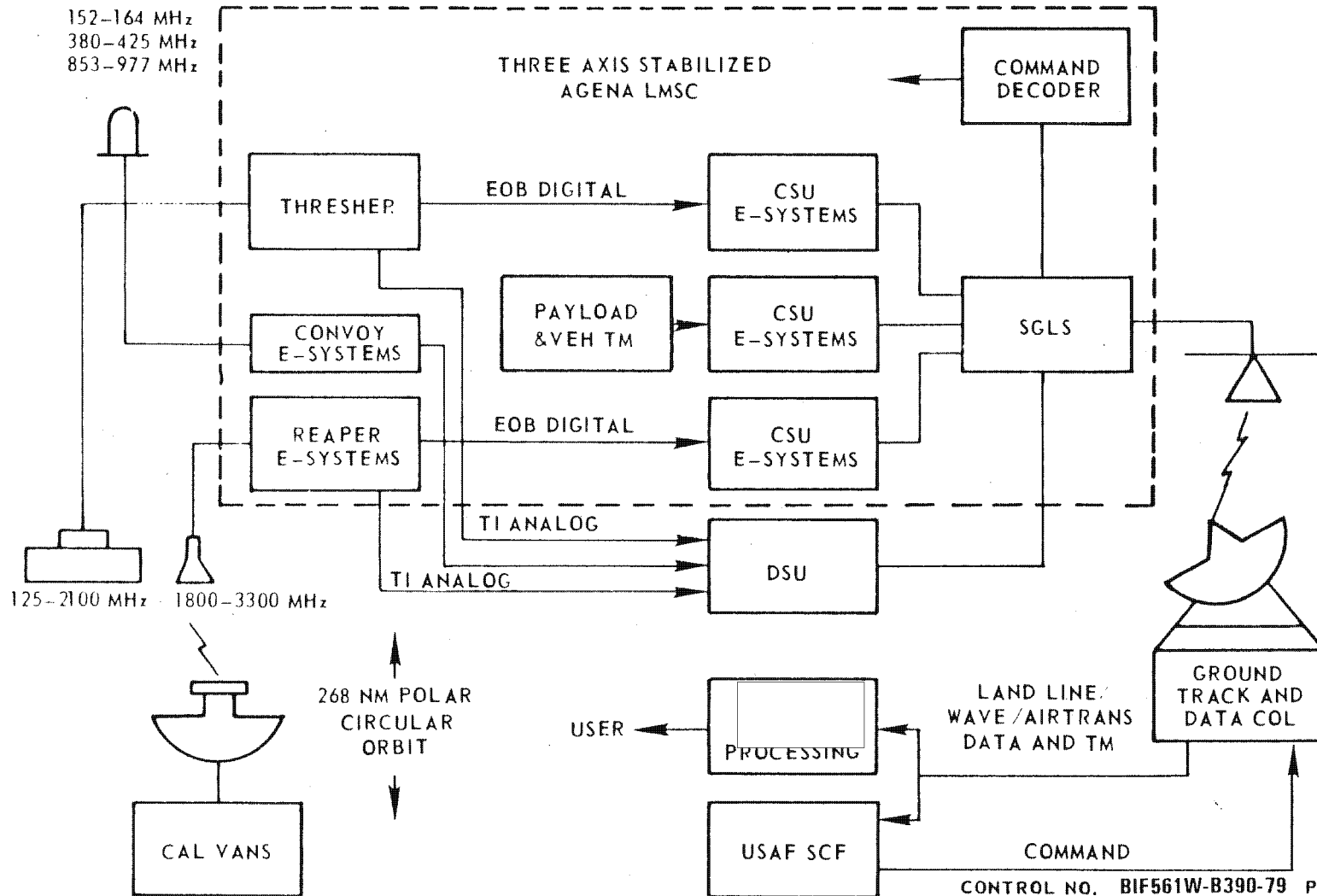
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STRAWMAN



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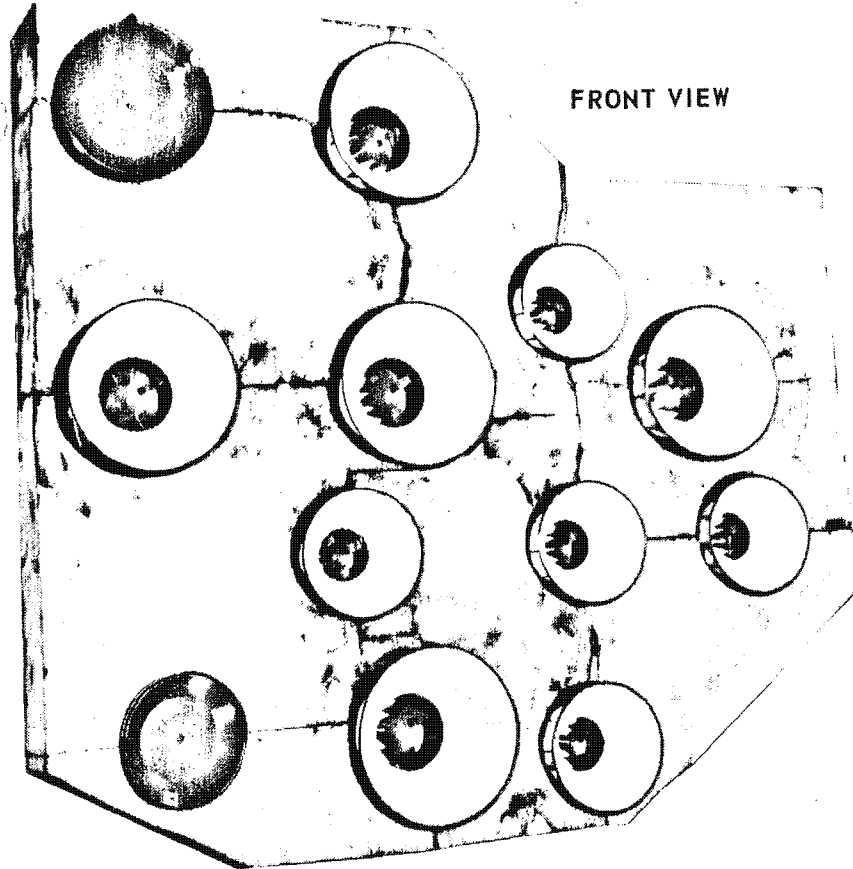
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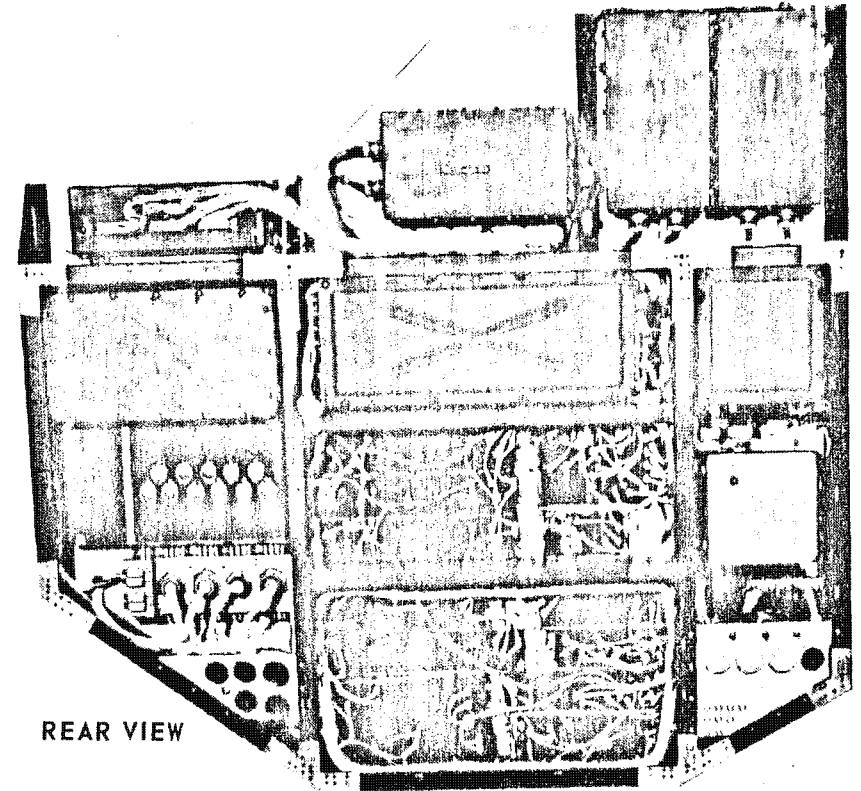
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REAPER PAYLOAD



FRONT VIEW



REAR VIEW

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CONTROL NO. BIF561W-B390-79 PAGE: 9
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