



BIF0034/2-237755-83

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No. of Pages: 12

Unit 10

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LORRI II

W-BAND ADDITIONS 

25X1

PROPOSAL DISCUSSIONS


WARNING - THIS DOCUMENT SHALL NOT BE USED
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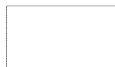
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CONTROL SYSTEM ONLY

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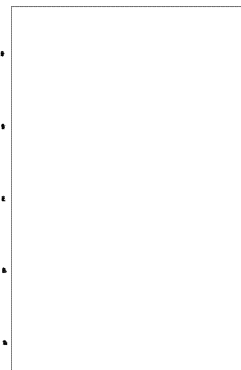


W-BAND ADDITIONS



AGENDA

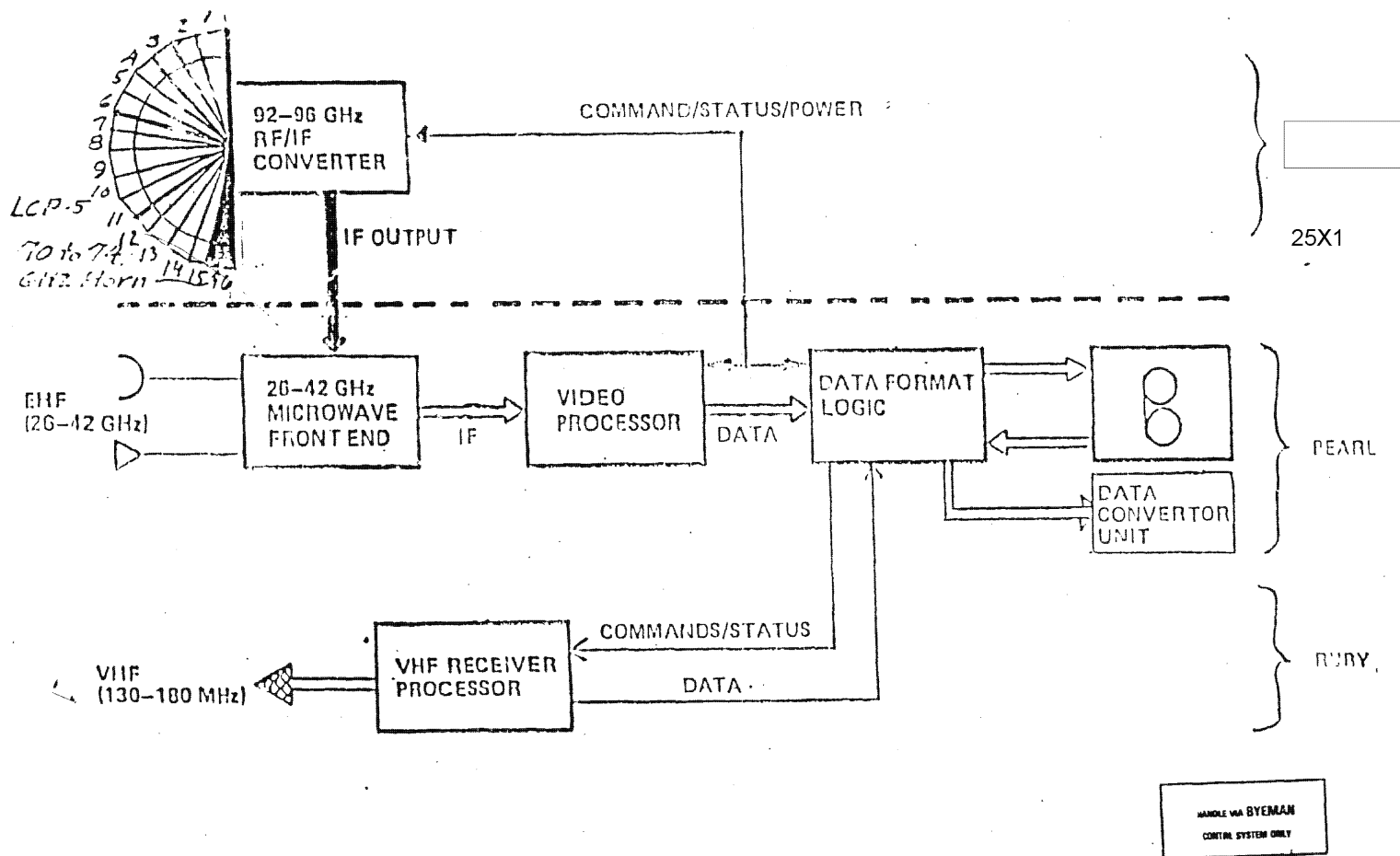
- INTRODUCTION.....
- PLAN.....
- LCP SUMMARIES.....
- ROM SUMMARY.....
- PROPOSAL SCHEDULE.....



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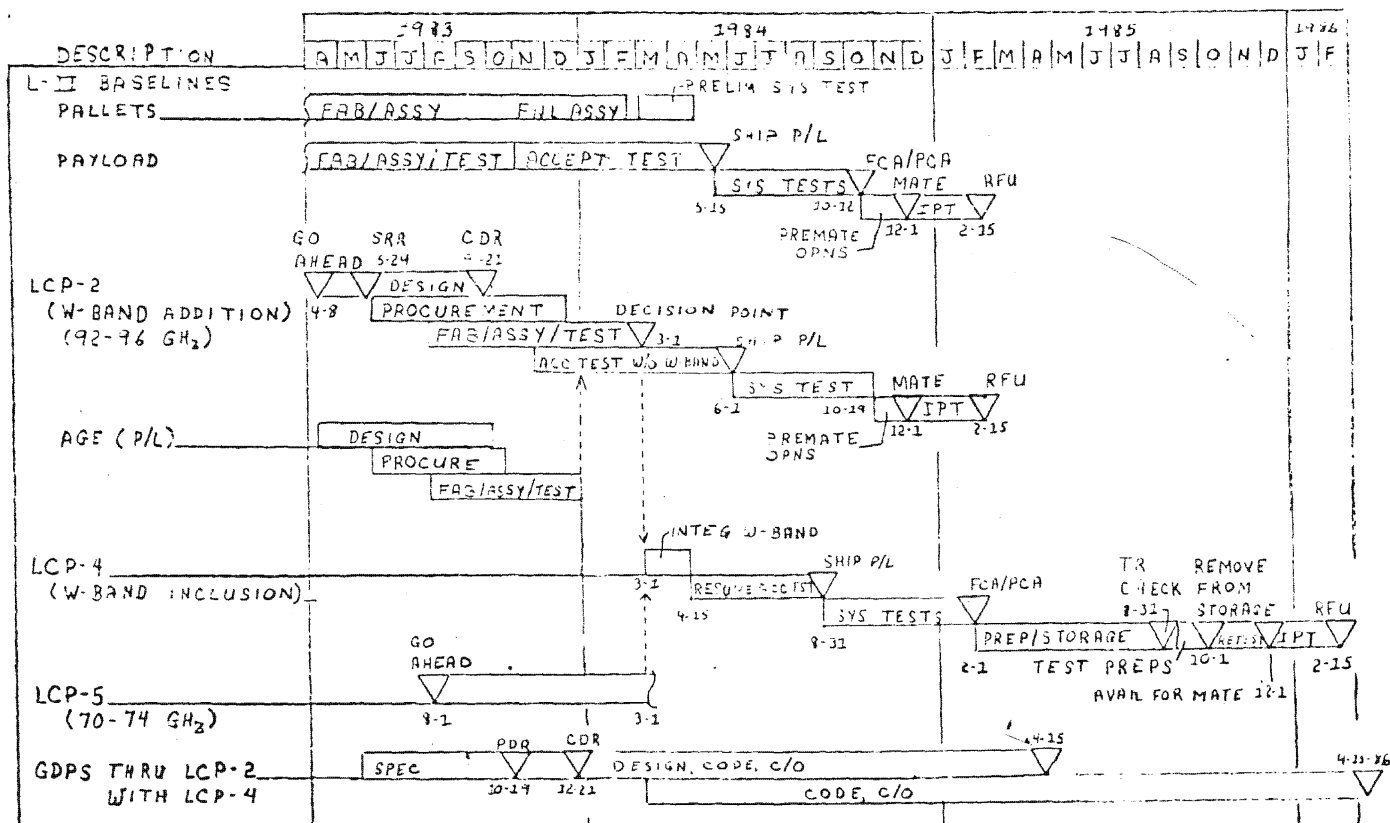
SYSTEM CONCEPT



USE ONE LETTER PER BLUE BOX

STFCO 07/2-15 755-80

L II LCP PAYLOAD INTEGRATION SCHEDULE

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W-BAND ADDITION

- LCP-2 - FIRST PROPOSAL
 - SCOPE LIMITED TO:
 - PAYLOAD SUBCONTRACT
 - ACQUISITION OF 16 ELEMENT 92-96 GHz LINEARLY POLARIZED ANTENNA AND RF - IF DOWNCONVERTER ASSEMBLY WITH SINGLE MODE TIME MULTIPLEX ELEMENT CONTROLLER
 - STE REQUIRED TO STIMULATE AT RF AND CONFIRM PERFORMANCE AT IF
 - PERFORMANCE OF PROTOFLIGHT TEST TO THE POINT OF INTEGRATION WITH THE BASELINE L-II (PEARL II AND RUBY) PAYLOAD
 - INCORPORATION OF MODIFICATIONS TO BASELINE L-II PAYLOAD TO PERMIT ADDITION OF W-BAND PAYLOAD WITHOUT RETROFIT.
 - INTEGRATING CONTRACTOR
 - IDENTIFICATION OF REQUIREMENTS SUFFICIENT TO INSURE THAT W-BAND ADDITION WILL FIT, SURVIVE ENVIRONMENT AND INTERFACE WITH OTHER SUBSYSTEMS
 - MODIFICATION OF HOUSEKEEPING SUBSYSTEM COMPONENTS TO PERMIT ADDITION OF W-BAND PAYLOAD WITHOUT RETROFIT
 - DESIGN AND FABRICATION OF NECESSARY MOCKUPS
 - DESIGN OF STE AND GHE.

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W-BAND ADDITION

- SPECIFICALLY EXCLUDED
 - GROUND SEGMENT REQUIREMENTS DEVELOPMENT
 - GROUND SEGMENT DEVELOPMENT.
- NOT ADDRESSED
 - MODIFICATION OF:
 - GSS
 - TEST PLAN
 - PAYLOAD SPEC
 - INSTRUMENTATION SCHEDULE
 - CCLD
 - HOST VEHICLE ICD
 - PROVISION OF SYSTEM AND SS-E ENGINEERING
- LIMITED START CONCEPT WITH OPTION TO CONTINUE
 - REQUIRES DECISION ON 1 MARCH 1984 TO CONTINUE WITH REMAINDER OF ACQUISITION (PHASE II) THROUGH LAUNCH 15 MARCH 1983 AND ONE MONTH OF ON-ORBIT PERFORMANCE DEMONSTRATION
 - PERIOD OF PERFORMANCE THROUGH 28 FEBRUARY 1984

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W-BAND ADDITION

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- PRESERVES BASELINE SYSTEM LAUNCH IN MARCH '35
 - ADDS TWO WEEKS TO PAYLOAD DELIVERY
 - PROPOSED PRICE \$1.975M
 - GO-AHEAD AUTHORIZED 8 APRIL 1983
-
- LCP-2 WITH ERRATA
 - PAYLOAD
 - SCOPE REVISED TO REFLECT CUSTOMER DIRECTION DURING SRR TO CHANGE ANTENNA POLARIZATION TO ALTERNATING RHCP AND LHCP
 - INTEGRATING CONTRACTOR
 - SCOPE REVISED TO:
 - ADD CSE GENERATION OF REQUIREMENTS DOCUMENTS
 - GSS
 - TEST PLAN
 - HV ICD
 - GROUND SEGMENT REQUIREMENTS
 - CCLD
 - INSTRUMENT SCHEDULE

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W-BAND ADDITIONS

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- ADD INITIAL GROUND SEGMENT DEVELOPMENT BASED ON SINGLE MODE GENERAL SEARCH
- REPHASE STE AND GHE (DELAYED TO PHASE II) EXCEPT DCU-II TEST AID AND TV FIXTURE
- ADD PALLET W/H MODS
- ADD SS-E FUNCTIONS
- FULL STARTUP CONCEPT WITH OPTION TO CANCEL
 - REQUIRES DECISION ON 1 MARCH 1984 TO CONTINUE WITH PHASE II
 - PERIOD OF PERFORMANCE THROUGH 28 FEBRUARY 1984
- NTE ESTIMATE \$2.9M
- LCP-4
 - TO INCLUDE ALL REMAINING SYSTEM ACQUISITION ACTIVITIES THROUGH CN-ORBIT PERFORMANCE DEMONSTRATION
 - PAYLOAD
 - W-BAND INTEGRATION AND TEST
 - SUPPORT OF INTEGRATING CONTRACTOR SYSTEM TEST

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W-BAND ADDITIONS

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- INTEGRATING CONTRACTOR
 - DESIGN AND FABRICATION OF REMAINING STE AND GHE
 - REVISION OF TEST PROCEDURES
 - PERFORMANCE OF ADDED TESTS
 - CONTINUED HOST VEHICLE INTEGRATION ACTIVITIES
 - ADDED MATE ACTIVITIES
 - COMPLETION OF GROUND SEGMENT DEVELOPMENT
 - ADDED ON-ORBIT PERFORMANCE DEMONSTRATION ACTIVITIES
- PAYLOAD DELIVERY DELAYED THREE AND ONE-HALF MONTHS
- IMPLEMENTATION ASSUMES ONE YEAR LAUNCH DELAY TO MARCH '86
- PLANNING PRICE \$2.2M EXCLUDES STORAGE AND RETEST IMPACT CAUSED BY LAUNCH DELAY
- LCP-5
 - PAYLOAD
 - ADDS ONE 70-74 GHz RHCP ANTENNA AND RF-IF DOWNCONVERTER IN LIEU OF AFT POINT-ING 92-96 GHz ELEMENT

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W-BAND ADDITIONS

- ADDS 70-74 GHz STE
- INTEGRATING CONTRACTOR
 - SYSTEM ENGINEERING
 - REVISE REQUIREMENTS DOCUMENTS
 - PERFORM ADDED RELIABILITY FUNCTIONS
 - SS-E
 - REVISE REQUIREMENTS DOCUMENTS
 - PERFORM ADDED REE FUNCTIONS
 - ENGINEERING
 - REVISE TOP ASSEMBLY DRAWING
 - PRODUCT ASSURANCE
 - PERFORM ADDED FLNCTIONS
 - GROUND SEGMENT
 - MODIFY GDPS AS REQUIRED BASED ON SINGLE MODE GENERAL SEARCH
 - GO-AHEAD - PERMITS PRESERVATION OF W-BAND ASSEMBLY 28 FEB '84 COMPLETION
 - PLANNING ROM \$750K
 - INCLUDES ALL EFFORT DURING LCP-2E AND LCP-4 PERIODS.

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W-BAND PROPOSAL SCHEDULE

LCP	NTE ROM	FIFM QUOTE	REMARKS
2E	7/18/83	8/12.83	NTE ROM APPROVAL REQUIRED TO START GROUND SEGMENT
4	N/A	8/26.83	AUTHORIZE NOW, BUT IMPLEMENTA- TION STARTS 3/1/84
5	7/22/83	9/2/83	NTE ROM APPROVAL REQUIRED TO INITIATE ALPHA PROCUREMENT.

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SUMMARY OF W-BAND ROM'S
(\$ IN 000'S)PHASE I (LCP #2E)

<u>ORIG. PROP.</u>	<u>CURRENT NTE ROM</u>	<u>DELTA</u>
\$1,975	\$2,900	\$925

PHASE II (LCP #4)

<u>ORIG. PLNG. ROM</u>	<u>CURRENT PLNG. ROM</u>	<u>DELTA</u>
\$807	\$2,200	\$1393

CHANGES

- INCREASED SUBCONTRACTOR COSTS DUE TO DELAYED START AND CHANGE IN TYPE OF ANTENNAS (700K)
- NOW INCLUDES GDPS (200K)
- ADDED SS/E EFFORT (200K)
- AGE MOVED TO PHASE II (150K)

CHANGES

- NOW INCLUDES GDPS (1,100K)
- ADDED SS/E EFFORT (125K)
- AGE MOVED TO PHASE II (150K)