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WHIG CITE 8906
EARPOP
FOR STEWART FROM MARTIN

1. REFERENCE YOUR WHIG 2446 AND MISSION 7158 EXPERIENCE THAT HIGHLIGHTS THE DESIRABILITY OF AN ANALOG RECORDER TO ASSIST IN DE-INTERLEAVING THE DIGITAL PRODUCT OF PROGRAM 770. IN RESPONSE TO OUR RECENT REQUEST THE CONTRACTOR HAS PROPOSED A NARROW BAND ANALOG RECORDER INSTALLATION IN MISSION 7160 PAYLOAD AS FOLLOWS:

- A. A TWO-TRACK LEACH RECORDER WITH A FOUR TO ONE (25 KC TO 100 KC) READ-IN/READ-OUT RATIO, PROVIDING 24 MINUTES READ-IN CAPACITY. PAYLOAD ACCEPT PULSES WOULD BE STRETCHED AND FED TO ONE TRACK; THE THREE-LEVEL RZ DATA WORD WOULD BE FED TO THE SECOND TRACK.
- B. MODIFICATION OF PAYLOAD CIRCUITRY TO EFFECT PULSE STRETCHING.
- C. TWO ADDITIONAL VHF TRANSMITTERS TO HANDLE THE TWO RECORDER TRACKS, AN ADDITIONAL DIPLEXER, AND AN ADDITIONAL ANTENNA.
- D. A NEW VEHICLE "J"-BOX TO CONTROL AND MONITOR THE RECORDER.

2. THE ESTIMATED IMPACT OF THE CHANGE ON THE 7160 LAUNCH DATE IS APPROXIMATELY SIX WEEKS OR LAUNCH BY 1 FEB 1966. INVOLVED IS:

- A. DESIGN, BREADBOARD, FABRICATION AND QUALIFICATION OF THE J-BOX.
- B. DESIGN, INSTALLATION OF PAYLOAD CIRCUITRY.
- C. INSTALLATION DESIGN FOR ALL HARDWARE.
- D. MOCKUP OF VEHICLE INSTALLATION AND WIRING.
- E. PROCUREMENT OF TRANSMITTERS, DIPLEXER, AND ANTENNA WITH A LEAD TIME OF SIX WEEKS.

3. BECAUSE OF THE DIFFERENCE BETWEEN THE LEACH CAPACITY OF 24 MINUTES AND THE PAYLOAD-ON TIME, WHICH CAN BE 60 MINUTES OR MORE BETWEEN SOME READ-OUT PASSES, WE COULD RETRIEVE LEACH RECORDINGS TO CORRELATE WITH ONLY ABOUT 60 PERCENT OF THE TOTAL DIGITAL PAYLOAD OUTPUT. IT IS OUR UNDERSTANDING THAT SUCH CORRELATION MUST AT PRESENT BE DONE MANUALLY BY THE PROCESSOR AND THAT THE CORRELATION EFFORT FOR MISSION 7158 HAS BARELY BEGUN.

4. WE WILL CONTINUE TO SCRUB DOWN THE ENGINEERING, TESTS, AND PROJECTED SCHEDULE IMPACTS ASSOCIATED WITH THE CHANGE. I AM CONVINCED THAT WE SHOULD ADD THE RECORDER ON MISSION 7160 IF IT CAN BE DONE WITHOUT SERIOUS SLIPPAGE OF THIS FLIGHT (SAY-BEYOND 1 FEB) OR IMPACT UPON THE FIRST MULTI-GROUP FLIGHT.

5. REQUEST YOUR COMMENTS.

~~SECRET~~
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