[redacted]
14000390 65

LAUNCH REQUIREMENTS- JX27 VEHICLE 1621

ATTACHED IS THE LAUNCH REQUIREMENTS AND LIMITATIONS FOR PAYLOAD JX27 VEHICLE 1621.

[redacted]
PAYLOAD INTEGRATION

DISTRIBUTION

[redacted]

1.0 SCOPE

1.1 GENERAL.

THE FOLLOWING REQUIREMENTS GOVERN THE CONDITIONS UNDER WHICH THE VEHICLE WILL BE LAUNCHED WITH THE A/P PAYLOAD SYSTEM. ANY DEVIATION FROM THE PRESCRIBED LIMITS SHALL BE CAUSE FOR HOLD. ANY STATUS CHANGES MUST BE REPORTED TO PAYLOAD INTREGRATION IMMEDIATELY AFTER OCCURRENCE FOR EVALUATION. ALL DISCREPANCIES AND DEVIATIONS MUST BE CORRECTED PRIOR TO RESUMPTION OF VEHICLE LAUNCH COUNT-DOWN.

1.2 DESIRED OBJECTIVE

ALL CAMERA OPERATIONS AFTER MATING SHALL BE CALLED "ALPHA CHECKS" AND SHALL BE MICROWAVED TO STC. VAFB-AP SHALL BE RESPONSIBLE FOR IMPLEMENTING THIS OBJECTIVE.

2.0 PAYLOAD INTERNAL TEMPERATURE.

65 +/- 10 DEG. F. FROM MATING TO T-4 HOURS.
65 +/- 5 DEG. F. FROM T-4 THRUUGH LAUNCH.

TEMPERATURE OF PAYLOAD SYSTEM SHALL BE MONITORED AND LOGGED EVERY ONE-HALF HOUR FROM MATING TO LAUNCH

3.0 RELATIVE HUMIDITY.

50 PERCENT OR LESS AT ALL TIMES.

4.0 N2 PRESSURE.

THE N2 MUST BE CONNECTED AND FLOWING WHEN THE SYSTEM IS ON THE LAUNCH PAD. MAXIMUM OFF TIME IS ONE-HALF HOUR PER DAY.

5.0 SRV TRANSMISSION FREQUENCY

RECOVERY TLM	228.2 +/- 0.1 MC
RECOVERY BEACON	235.0 +/- 0.1 MC

6.0 POWER.

POWER MUST BE APPLIED TO THE PAYLOAD INTERFACE WHENEVER THE PAYLOAD IS TRANSPORTED.

7.0 THERMAL BLANKET

THERMAL BLANKET MUST REMAIN ON THE PAYLOAD FROM MATING UNTIL LAUNCH.

8.0 PRIMARY TELEMETRY READOUTS.

PAYLOAD CHECKOUT (MUST BE VERIFIED THROUGH VEHICLE TELEMETRY)

8.1 LENS ROTATION, HORIZON IDLER, AND CENTER OF FORMAT INSTRUMENT 1 CHANNEL 09, LINK I. NO BACK UP CHANNEL IS AVAILABLE.

8.2 LENS ROTATION, HORIZON IDLER, AND CENTER OF FORMAT INSTRUMENT 2 CHANNEL 10, LINK I. NO BACK UP CHANNEL IS AVAILABLE.

8.3 RING A COMMUTATOR (.4 X 60) CHANNEL 13, LINK I AND POINTS LISTED BELOW. THE PRIMARY COMMUTATED POINTS MUST BE VERIFIED DURING PAYLOAD CONFIDENCE AFTER MATING AND CHECKOUT TASKS RUNS.

MONITOR FUNCTION	VERIFICATION PRIMARY CH-LK-PT	VOLTS	TOL.	ALTERNATE CH-LK-PT	VOLTS	TOL.
INSTR. 2 DOOR EJECT	13-1-04	1.3	+/-.2	NONE	---	---
FAIRING SEPARATION	13-1-07	1.3	+/-.2	NONE	---	---
SEPARATION MON. SRV 1	13-1-13	0.28	+/-.1	16-1-25	0.28	+/-.1
INSTR. 1 DOOR EJECT	13-1-16	1.3	+/-.2	NONE	---	---
INSTR.1 CYCLE COUNT 1	13-1-22	0.55 STEP	+/-.15	13-1-25	4.05 OR GREATER	4.05 OR GREATER
INSTR.1 CYCLE COUNT 10	13-1-23	0.55 STEP	+/-.15	13-1-25	4.05 OR GREATER	4.05 OR GREATER
INSTR.1 CYCLE COUNT 100	13-1-24	0.55 STEP	+/-.15	13-1-25	4.05 OR GREATER	4.05 OR GREATER
FOOTAGE POT INSTR. 1	13-1-25	4.05 OR GREATER		8-2-56	4.05 OR GREATER	
INSTR.2 CYCLE COUNT 1	13-1-27	0.55 STEP	+/-.15	13-1-31	0.9 OR LESS	0.9 OR LESS
INSTR.2 CYCLE COUNT 10	13-1-28	0.55 STEP	+/-.15	13-1-31	0.9 OR LESS	0.9 OR LESS
INSTR.2 CYCLE COUNT 100	13-1-29	0.55 STEP	+0-.15	13-1-31	0.9 OR LESS	0.9 OR LESS
CALIBRATE PLUS	13-1-30	5.0	--	13-1-19	5.0	---

FOOTAGE POT INSTR. 2	13-1-31	0.9 OR LESS	0.9 OR LESS	8-2-47	0.9 OR LESS	0.9 OR LESS
CONTINUITY LOOP SRV-1	13-1-36	5.38	+/-.2	NONE	---	---
RECOVERY BATTERY SRV-1	13-1-37	0.0	+/-.2	NONE	---	---
INTERNAL PRESSURE-CONIC	13-1-38	5.0	+1-.2	NONE	---	---
RECOVERY BATTERY SRV-2	13-1-41	0.0	+/-.2	NONE	---	---
CONTINUITY LOOP SRV-2	13-1-46	5.38	+/-.2	NONE	---	---
SEPARATION MON. SRV 2	13-1-48	1.3	+/-.1	NONE	---	---
MODE MONITOR REC1/REC2	13-1-50	1.0	+/-.2	NONE	---	---
N2 BOTTLE PRESSURE	13-1-51	3.0 OR GREATER		NONE	---	---
FILM DOOR CLOSURE	13-1-54	4.7	+/-.2	NONE	---	---
CALIBRATE ZERO	13-1-57	0.0	---	13-1-10	0.0	---
SYC. PULSE	13-1-58	5.5	+/-.2	13-1-59	5.5	+/-.2
SYC. PULSE	13-1-58	5.5	+/-.2	13-1-60	5.5	+/-.2

ALL COMMAND SECECTOR POINTS AS LISTED PER LAUNCH REQUIREMENTS LIST IN APPENDIX I.

9.0 HOMING OF CAMERA SCAN ARMS.

9.1 BOTH CAMERA SCAN ARMS MUST BE PROPERLY HOMED PRIOR TO TERMINAL COUNT.

10.0 LAUNCH REQUIREMENTS COMMAND SETTINGS.

10.1 ALL STEPPING SWITCHES MUST BE POSITIONED IN ACCORDANCE WITH THE COMMAND SETTINGS LIST IN APPENDIX I PRIOR TO TERMINAL COUNT.

11.0 FILM CONSUMPTION PRIOR TO LAUNCH.

11.1 MINIMUM FILM CONSUMPTION PRIOR TO LAUNCH SHALL BE 100 CYCLES ON EACH INSTRUMENT.

11.2 SHOULD THE PAYLOAD SYSTEM STAY IN A LOADED CONDITION FOR AN EXTENDED PERICD, THE SYSTEM SHALL BE OPERATED FOR 10 CYCLES EVERY FOUR DAYS.

12.0 RESPONSIBILITY.

12.1 IT SHALL BE THE RESPONSIBILITY OF THE SENIOR A/P PAYLOAD ENGINEER TO ENSURE THE IMPLEMENTATION OF THE RESTRICTIONS AND REQUIREMENTS LISTED HEREIN. IN ADDITION, HE IS CHARGED WITH THE RESPONSIBILITY OF SUPPLYING THE FOLLOWING SYSTEM INFORMATION IMMEDIATELY PRIOR TO LAUNCH TO FLIGHT OPERATIONS AND COMPUTER SERVICES BY TELEPHONE.

12.1.1 FINAL FLIGHT SYSTEM WEIGHTS

12.1.1.1 TOTAL SYSTEM WEIGHT, IN POUNDS. .....

	A SRV S/N 648	B SRV S/N 655
12.1.1.2 RETRO ROCKET WEIGHT, LBS.	.....	.....
12.1.1.3 PARACHUTE WEIGHT, LBS.	.....	.....

12.1.2 AT THE TIME THE FLIGHT FILM IS FIRST SPLICED TO THE SYSTEM, RECORD THE CYCLE COUNTER READINGS, CASSETTE FOOTAGE POT VOLTAGE AND LENGTH OF TAKE-UP CASSETTE LEADER ON EACH INSTRUMENT.

	MASTER	SLAVE
A. CYCLE COUNTERS, CYCLES	.....	.....
B. FOOTAGE POT VOLTAGE, VOLTS	.....	.....
C. S/S TO 'A' SRV LEADER, FT.	.....	.....
D. 'A' T/U LEADER, FT.	.....	.....

12.1.3 IF ANY OFF SPOOLING IS PERFORMED, THE FOLLOWING IS REQUIRED AT THE TIME THE FINAL SPLICE IS MADE BETWEEN THE FLIGHT FILM AND THE TAKE-UP LEADER. RECORD THE CYCLE COUNTER READINGS, CASSETTE FOOTAGE POT VOLTAGES, AND REMAINING LENGTH OF LEADER IN THE TAKE-UP CASSETTES.

	MASTER	SLAVE
A. CYCLE COUNTERS, CYCLES	.....	.....
B. FOOTAGE POT VOLTAGE, VOLTS	.....	.....
C. REMAINING TAKE-UP LEADER, FT.	.....	.....

12.1.4 CYCLE COUNTER AND FILM FOOTAGE POT READINGS FOR EACH INSTRUMENT, AT LAUNCH.

	MASTER	SLAVE
A. CYCLE COUNTERS, CYCLES	.....	.....
B. FOOTAGE POT VOLTAGE, VOLTS	.....	.....

12.1.5 CLOCK ERROR, STATIC RUN, IN MICROSECONDS .....

12.1.6 TOTAL LENGTH OF FLIGHT FILM OFF-SPOOLED FROM EACH SUPPLY SPOOL INCLUDING ALL CONTROL STRIPS AND SAMPLES.

A. MASTER ..... FT.

B. SLAVE ..... FT.

12.1.7 TOTAL LENGTH OF FILM OFF-SPOOLED FROM EACH S/I INSTRUMENT.

A. S/I A STELLAR ..... FT.

A INDEX ..... FT.

B. S/I B STELLAR ..... FT.

B INDEX ..... FT.

APPENDIX I PAYLOAD LAUNCH REQUIREMENT LETTER

LAUNCH REQUIREMENT- COMMAND SETTINGS

THE FOLLOWING COMMAND SETTINGS ARE SPECIFIED FOR THE JX27 PAYLOAD 1621 VEHICLE.

	COMMAND SELECTOR		VERIFICATION					
			PRIMARY			SECONDARY		
NO.	FUNCTION	POSITION	CH-LK-PT	VOLTS	TOL +/- 5 PERCENT	CH-LK-PT	VOLTS	TOL +/- 5 PERCENT
6	V/H RAMP LEVEL	8	13-1-02	2		8-2-24	2	
			13-1-03	4		8-2-26	4	
8	V/H RAMP AMPLITUDE	3	13-1-05	1		8-2-28	1	
			13-1-06	3		8-2-30	3	
9	PROGRAM	4	13-1-08	1		8-2-32	1	
			13-1-09	4		8-2-34	4	
10	V/H RAMP DELAY	6	13-1-11	2		8-2-44	2	
			13-1-12	2		8-2-45	2	
11	INSTRUMENT MODE	1	13-1-14	1		8-2-48	1	
			13-1-15	1		8-2-50	1	
12	INTERMIX POSITION	11	13-1-17	4		8-2-52	4	
			13-1-18	4		8-2-53	4	
15	INTERMIX MODE	4	13-1-20	4		8-2-55	4	

LAUNCH REQUIREMENTS- CAMERA SYSTEM

LOADING MONITORS- THE FOLLOWING REPRESENTATIVES HAVE BEEN DESIGNATED RESPONSIBLE DURING LOADING OF THE FLIGHT SYSTEM

* COUSTOMER- PRIME [redacted]
ALTERNATE

AP- PRIME [redacted]
ALTERNATE

BOSTON PRIME [redacted]
ALTERNATE

* OR DESIGNATED REPRESENTATIVE.

THE FOLLOWING SETTINGS/REQUIREMENTS ARE SPECIFIED FOR THE JX27 PAYLOAD 1621 VEHICLE.

PANORAMIC LENS SETTINGS-

	INSTRUMENT 1 (MASTER)	INSTRUMENT 2 (SLAVE)
SLIT DIMENSIONS	0.250	0.175
FILTER TYPE	W-25	W-21

NOTE- SLIT DIMENSIONS MUST BE MEASURED PRIOR TO INSTALLATION.

HORIZON OPTICS SETTINGS -

	INSTRUMENT 1 (MASTER)	INSTRUMENT 2 (SLAVE)
SUPPLY HORIZONS-		
APERTURE	F/6.8	F/8.0
FILTER	W-25	W-25
LENS SERIAL NO.	184G8	180G10
TAKE-UP HORIZONS-		
APERTURE	F/8.0	F/6.8
FILTER	W-25	W-25
LENS SERIAL NO.	177G9	182G9

STELLAR INDEX OPTICS SETTINGS-

	STELLAR INDEX A	STELLAR INDEX B
STELLAR LENS-		
APERTURE	F/1.8	F/1.8
SPEED	2.0	2.0
FILTER	NONE	NONE

INDEX LENS-

APERTURE	F/4.5	F/4.5
SPEED	1/500	1/500
FILTER	W-21	W-21

FILM NOMENCLATURE-

PANORAMIC INSTRUMENTS

	INSTRUMENT 1 (MASTER)	INSTRUMENT 2 (SLAVE)
PRIMARY		
TYPE	7J-4-16000	7J-4-16000
EMUL. DATA	226-55-9-5	226-55-9-5
WT. AND SPOOL NO.	88.2-79.2-5S-27T	87.8-78.3-5S-61B
LG. BETWEEN SPLICES	1164-304C-3031-2733-3032-3000C	1996-3041-3027-3041-3035-1860C
BOX NO.	38	38
SECONDARY		
TYPE	7J-4-16000	7J-4-16000
EMUL. DATA	226-55-9-5	226-55-9-5
WT. AND SPOOL NO.	88.6-78.8-5S-83B	88.4-78.8-5S-124T
LG. BETWEEN SPLICES	449-3075-3133-3173-3035-3135C	2900-3025-2989-3036-3037-1013C
BOX NO.	41	41

STELLAR INDEX-

	STELLAR INDEX A		STELLAR INDEX B	
	STELLAR	INDEX	STELLAR	INDEX
PRIMARY-				
TYPE	3J-34-75	7J-33-135	3J-34-75	7J-33-135
(A) EMUL. DATA	124-35-10-5	106-14-8-5	124-35-10-5	106-14-8-5

SECONDARY

	TYPE	3J-34-75	7J-33-135	3J-34-75	7J-33-135
(A)	EMUL. DATA	124-35-10-5	106-14-8-5	124-35-10-5	106-14-8-5

PANORAMIC OFFSPOOLING REQUIREMENTS-

	MASTER	SLAVE
ORIGINAL LENGTH-FT.	16000	16000
LENGTH OF OFF SPOOL-FT.	NONE	NONE
LENGTH TO LOAC-FT.	16000	16000

STELLAR INDEX FILM OFFSPOOLING REQUIREMENTS

	STELLAR INDEX A		STELLAR INDEX B	
	STELLAR	INDEX	STELLAR	INDEX
ORIGINAL LENGTH-FT.	75	135	75	135
LENGTH TO OFF SPOOL-FT.	29 +1 -0	43 +1 -0	29 +1 -0	43 +1 -0
[redacted]	46	92	46	92
[redacted] PAIRED STELLAR INDEX TO PANORAMIC		1 TO 7		

STELLAR BAFFLE TYPE-

STELLAR A	STELLAR B
11.0	5.0

LAUNCH WINDOW 2100-2200Z

APPROVED BY

[redacted]

OPERATIONS AND ANALYSIS [redacted] DATE 12-1-65

PROGRAM INTERGRATION [redacted] DATE 12-1-65

RESIDENT OFFICER [redacted] DATE 12-1-65

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