

System LTN001 GPS SSU  
 Subsystem Receiver Card  
 Part Number 488230-100  
 Design Lead J. Davies

**Potential Failure Mode and Effects Analysis  
(Design FMEA)**

Revision B  
 Prepared By Robert Crow  
 FMEA Date 8/18/92  
 Revision Date \_\_\_\_\_

Item / Function	Potential Failure Mode(s)	Potential Effect(s) of Failure	Severity	Potential Cause(s)/ Mechanism(s) of Failure	Priority	Current Design Controls	Detectability	RPN	Recommended Action(s)	Responsibility & Target Completion Date	Action Results				
											Actions Taken	New Sev	New O cc	New Det	New RPN
Circuit Block 4.1.1	Output loss from pre-amp	Receiver & output data loss; track loss; GPS shut-down	5	C1 short	1	PR-20 & HW-5	2	10	QA Proc 20-6	R. Jones, 11/30/92	Added to control plan	2	1	1	2
			5	C88 short	2		2	20	QA Proc 20-6	R. Jones, 11/30/92	Added to control plan	2	1	1	2
			5	L1 open/short	3		2	30	QA Proc 20-3	R. Jones, 11/30/92	Added to control plan	2	2	1	4
			5	U21 function	4		2	40	Test 147	R. Jones, 11/30/92	Added to control plan	2	3	1	6
							0							0	
Circuit Block 4.1.2	Undetected & insignificant component failure mode	No noticeable system effect	1	C1open/chg val.	2	None	8	16	None						0
			1	C88open/chg val	2		8	16	None						0
							0								0
Circuit Block 4.2.1	Loss of signal from 2nd RF amplifier & 1st down converter	Loss of position, velocity & time output data; track loss; OPS shut-down	4	C2 short	1	PR-20 & HW-5	2	8	QA Proc 20-6	B. Howell 10/15/92	Added to control plan				0
			4	C3 short	1	PR-20 & HW-5	2	8	QA Proc 20-6	B. Howell 10/15/92	Added to control plan	2	1	1	2
			4	C4 open/short	2	PR-20 & HW-5	2	16	QA Proc 20-6	B. Howell 10/15/92	Added to control plan	2	1	1	2
			4	C5 short	2	PR-20 & HW-5	2	16	QA Proc 20-6	B. Howell 10/15/92	Added to control plan	2	1	1	2
			4	C66 open/short	2	PR-20 & HW-5	2	16	QA Proc 20-6	B. Howell 10/15/92	Added to control plan	2	1	1	2
			4	C99 short	3	PR-20 & HW-5	2	24	QA Proc 20-6	B. Howell 10/15/92	Added to control plan	2	2	1	4
			4	FL1 short/open	5	None	2	40	100% Insp.	B. Howell 10/15/92	Added to control plan	2	2	2	8
			4	FL2 short/open	5	None	2	40	100% Insp.	B. Howell 10/15/92	Added to control plan	2	2	2	8
			4	R2open/chg val	2		2	16	None						
4	R18 open/chg val	2		2	16	None							0		