

Cm#: FAST-TEV-071

EMC TESTING ON THE FAST ETU IDPU

H. D. Heetderks  
P. Berg  
28 March, 1994

## INTRODUCTION

The EMC test on the FAST flight payload consisted of a full system test in which all components of the system were operated simultaneously and the output data from each instrument examined to verify that there was no significant raising of the noise floor in any system caused by the operation of any other system. This test was done with the full payload only operating with the payload GSE, and with the full payload operating in the spacecraft with other spacecraft systems including the transmitter and the torque coils operating. No interference was found in either test except for a small effect from the torque coils seen in the E-Field data, and a very large effect from the torque coils on the magnetometer. The latter was of course expected. Since it is not planned to operate the torque coils during science data taking, this is not considered to be a problem.

Since the above described testing was done, the Project has asked UCB to do perform Mil-461 type conducted susceptibility testing on the ETU IDPU to get some indication of the level of margin which we have against electromagnetic interference in the payload system. The tests to be performed are CS01, CS02, and CS06 per the methods of Mil-462, and to the levels specified in the SMEX Project document FAST-012. Testing is to be done on the input power line only of the ETU IDPU assembly. This report gives the results of that testing.

## CS06 TEST PROCEDURE AND RESULTS

Figure 1 shows the set-up used to perform the CS06 test. The ETU IDPU was connected to the GSE system which simulates the spacecraft interface and allowed selected output data to be displayed. The ETU magnetometers were connected to the system, but no ESA's, boom units, or TEAMS were connected. The dummy load module provides a simulated load of 4 Radial Boom Units, and 2 ESA units. The CS06 Test Pulser was put in series with the power line so that it put pulses directly on the +28 volt power input. The GSE scripts TVSFA, TVADC1, and TVSVY0 were run to look for interference in the E-Field system. SHOMON2 was also run to view the full engineering housekeeping, and to verify correct operation of the processor system.

Figure 2 below shows the voltage and current waveforms of the spikes put onto the input power line.

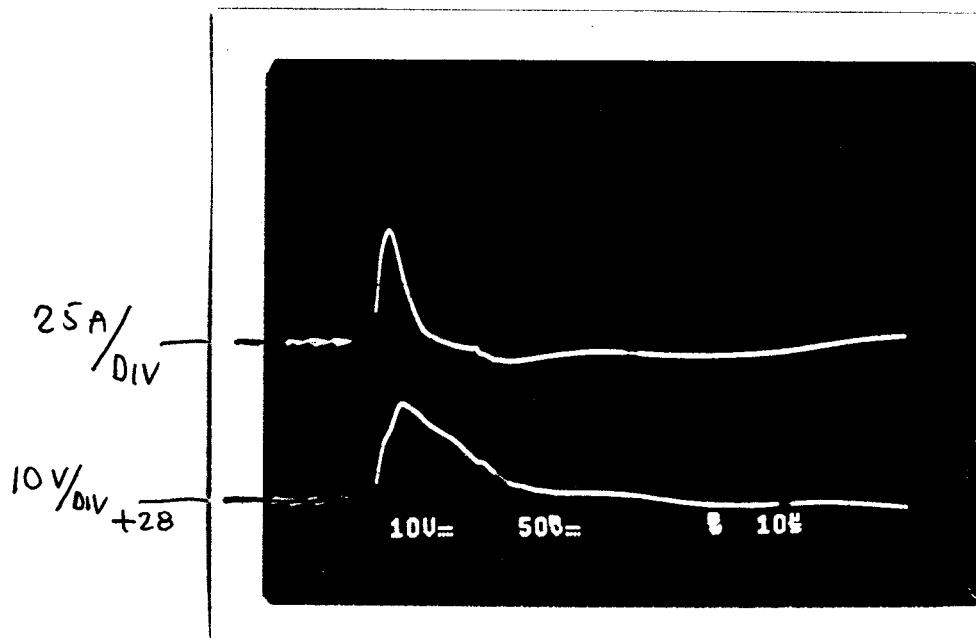


FIGURE 2

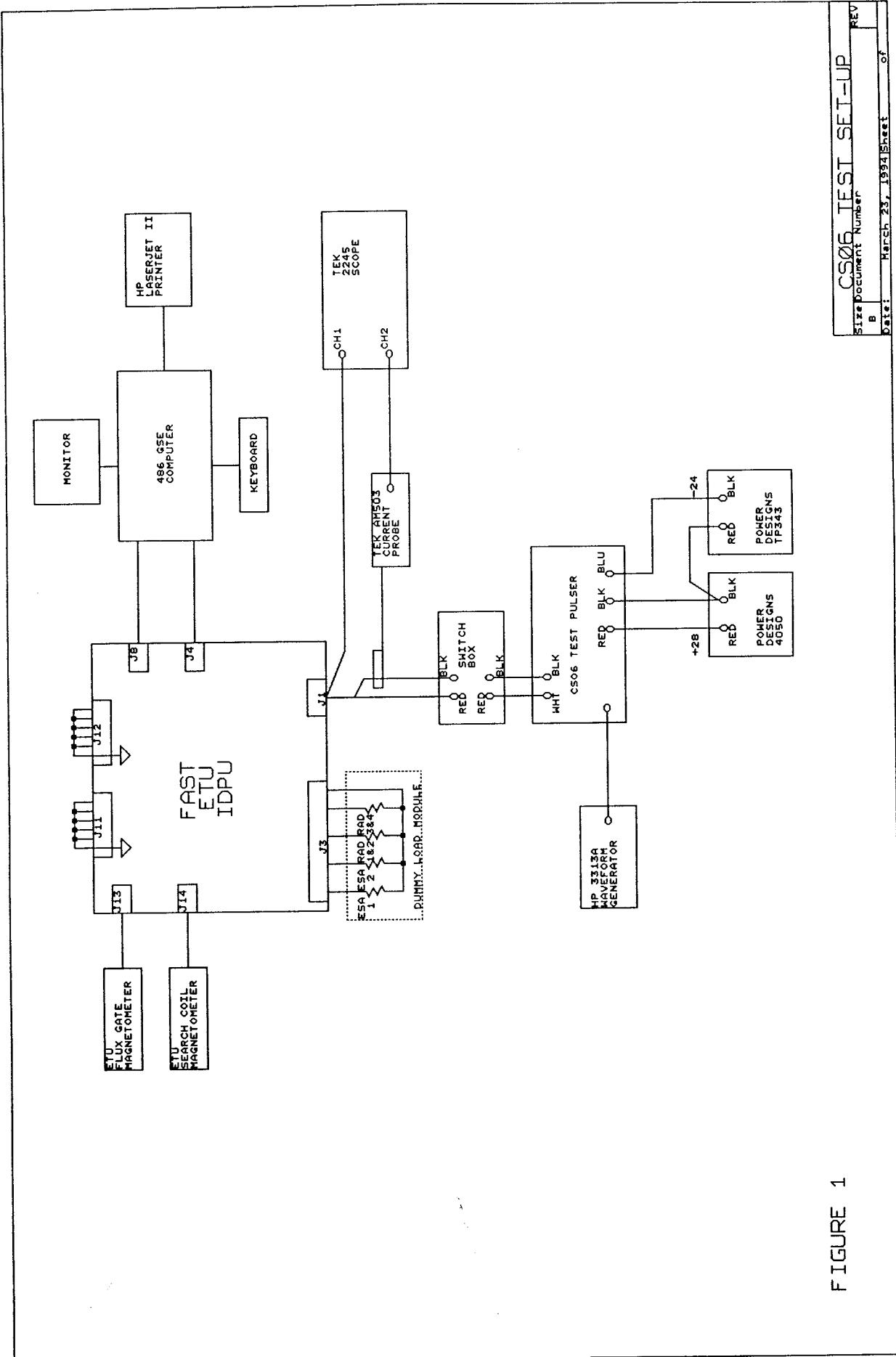


FIGURE 1

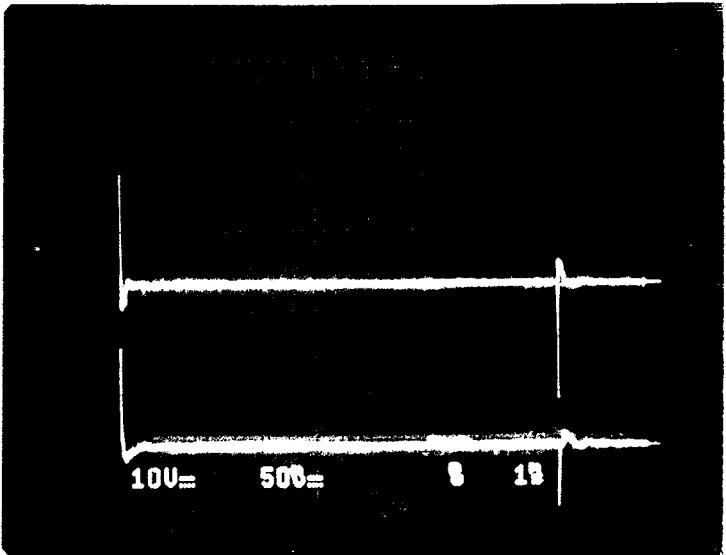


FIGURE 3

Figure 3 shows the same waveforms at a slower time scale so that it can be verified that the pulses are occurring with one positive pulse and one negative pulse 60 times each second. Note that the peak voltage of the pulses is  $\pm$  18 volts from the nominal +28 volt power line, and that a little over 50 Amperes is required to achieve this. Since 50 Amperes is the maximum capability of the pulser we used, we were not able to develop the full 28 volts across the input EMI filters in the IDPU power supply that is called for by Mil-462. We deemed this to be acceptable since there are no known interference sources on the spacecraft which can develop current pulses which approach 50 Amperes.

Figure 4 below shows the voltage on the internal +5 volt supply in the IDPU while the test pulses are present. The interference pulses are about 150 mV in amplitude. This will pose no problem for digital circuitry, but may cause some problems in the analog circuits as will be seen below.

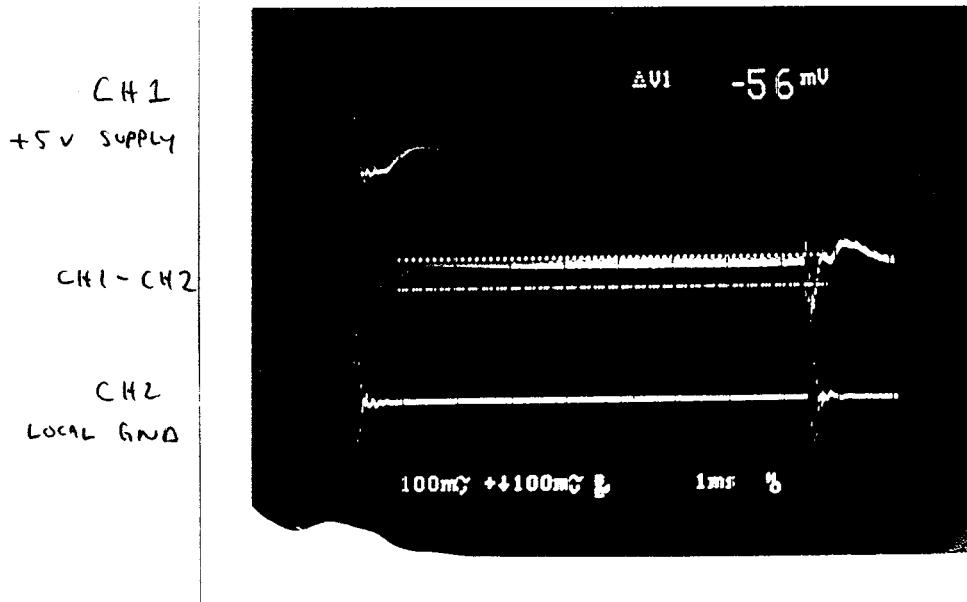


FIGURE 4

CH1  
LOCAL GND

CH2 - CH1

CH2  
+28 VOLTS  
OUTPUT

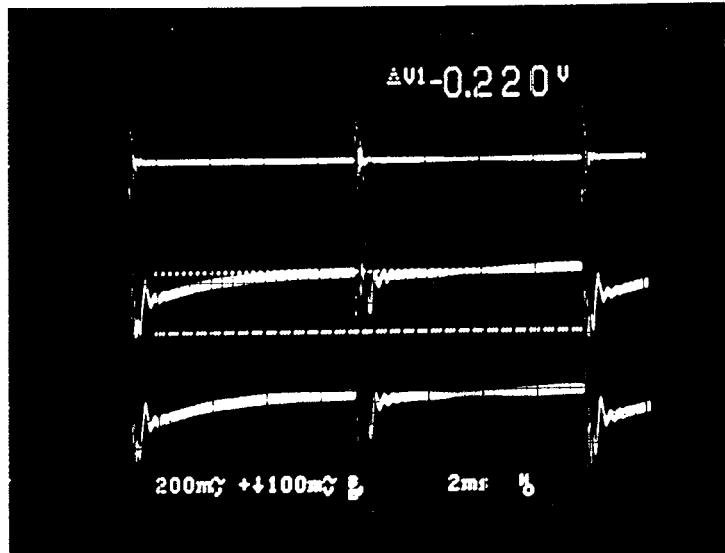


FIGURE 5

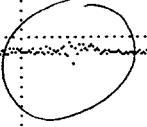
Figure 5 shows the interference which appears on the +28 volt output power from the IDPU to the ESA's and boom units. This voltage, of about 250 mV, is not expected to cause any problem with either the ESA's or the boom units.

Figure 6 is a print out from the GSE while running the TVADC1 script. Note the spurious data point (circled).

Figure 7 shows the output from TSVY0. Note the same level of interference in the 3 ADC channels displayed. That the spurious data points appear to occur more often here is due to the lower sample rate of these channels.

Figure 8 shows the output from TVSFA. The six lines which stand above the noise floor are spurious. On repeated sweeps, this pattern shifts in phase showing that the interference is associated with the time that the pulses occur rather than being due to specific frequency components of the pulses.

-V<sub>1</sub> - V<sub>4</sub>  
 16 k bits/  
 JCC

				<b>-SCOPE PARAMS-</b> ADC1 32511 [ 1, 0 ] -OFF- -OFF- -OFF-  Chan. S/Dv 0 mU/Dv 128.00 Speed PKT(01) Trig -OFF- Step 1	
					
<b>--TEST--</b>	<b>--AP COUNTERS--</b>	<b>--QTY OUTPUTS--</b>	<b>--UC COUNTERS--</b>	<b>--MUE----</b>	
T0 F87F API[014] 0		LFF1P2 A30D	UCL[000] 1750	HWSEC 000048B2	
T1 F87F API[015] 0		V1 0000	UCL[001] 0	UTSEC 308BF8F5	
T2 F87F API[016] 0		V2 0005	UCL[002] 3504	UTUSEC 0000	
T3 F97F API[017] 0		V3 0003	UCL[003] 0	XMITR OK	
T4 F97F API[018] 44604		V4 FFFF	UCL[004] 15872	RECUR TIMEOUT	
T5 F77F API[019] 0		V5 0000	UCL[005] 0	ERRCNT 4303	
T6 F97F API[01A] 0		V6 0004	UCL[006] 0	XMTCTR 298	
T7 F97F API[01B] 0		V7 0009	UCL[007] 8286	RECCTR 108	
T8 F97F API[01C] 0		V8 FFFF		ENABLE 31	
T9 F87F API[01D] 0		V9 0000		TMRATE 22	
T10 F97F API[01E] 0		V10 FFFF		SPSTATE 00	
T11 F87F API[01F] 0		MAG1DC 0003		RPSTATE 3	
T12 F97F API[020] 0		MAG2DC 0001		TEST AA5500	
T13 F97F API[021] 24436		MAG3DC 0003		FDM 91002C	
T14 F97F API[022] 0		MAG1AC 0003		CCSAP 1080	
T15 F97F API[023] 0		MAG2AC 0005			

CMD: 1C000C000000050000003000D9C0  
 UPDRATE: 352 DATE: 03-16-94  
 GMT : 00:30:11

Figure 6

V4		<b>-SCOPE PARAMS-</b> U14 1. 581 U58 6 U910 1. 01 L 1. -581 <b>-OFF-</b> Chan: 2 S/Dv: 128.00 MU/Dv: 8.29 Speed: PKT(01) Trig: -OFF- If > 0 Step: 1	<b>--MON 030---</b> P5S7U 5.092V P5S7I 0.035A M5S7U -4.847V M5S7I 0.050A P12S7U 12.546V P12S7I 0.010A M12S7U -12.605V M12S7I 0.007A P5S8U 5.092V P5S8I 0.0122A M5S8U -5.239V M5S8I 0.0110A P10S8U 10.358V P10S8I 0.033A M10S8U -10.512V M10S8I 0.027A	<b>--MON 046---</b> P5S9U 5.092V P5S9I 0.065A P10S9U 10.359V P10S9I 0.026A M10S9U -10.512V M10S9I 0.026A P5S10U 5.092V P5S10I 0.038A M5S10U -5.263V M5S10I 0.017A P10S10U 10.358V P10S10I 0.037A M10S10U -10.512V M10S10I 0.037A P5S11U 5.092V P5S11I 0.194A	
V5 - V8					
V9 - V10					
1 kbit/sec					
<b>---TEST---</b> T0 0480 T1 0680 T2 0380 T3 0280 T4 0680 T5 0880 T6 0480 T7 0180 T8 0680 T9 0680 T10 0280 T11 0280 T12 0580 T13 0580 T14 0680 T15 D7B8	<b>--AP COUNTERS-</b> APL000] 0 APL001] 0 APL002] 0 APL003] 0 APL004] 0 APL005] 0 APL006] 0 APL007] 0 APL008] 27058 APL009] 26986 APL00A] 0 APL00B] 0 APL00C] 0 APL00D] 0 APL00E] 0 APL00F] 0	<b>--MON 096---</b> P28S23U 27.884V P28S23I 0.036A P28S24U 27.884V P28S24I 0.000A P28S25U 0.000V P28S25I 0.000A P28S26U 0.000V P28S26I 0.000A FLXTMP 97.389C SCLTMP 87.036C SEUSUY 0 SEU12 0 SEU34 0 SEU56 0 SEU78 0 SEUHF 0	<b>--- MUE ---</b> HWSEC 00004867 UTSEC 308BF8F5 UTUSEC 0000 XMITR OK RECUR TIMEOUT ERRCNT 4303 XMTCTR 434 RECCTR 106 ENABLE 31 TMRATE 0 SPSTATE 0 RPSTATE 3 STEST AA5500 FDM 91002C CCSAP 1080		
CMD:IC00C000001D000000000A8CD			UPDATE: 144	DATE: 03-16-94	GMT: 00:28:56

16 March 1994  
CS06 w/ 20V pulses

FIGURE 7

<p>FFT ( SFA1 ) FFTSC 256 dB Peak -103.0 dB Freq 0.0 Hz</p>		<p>--MON 016---</p> <table border="1"> <tbody> <tr><td>P10S3U</td><td>10.359U</td></tr> <tr><td>P10S3I</td><td>0.000A</td></tr> <tr><td>M10S3U</td><td>-10.461U</td></tr> <tr><td>M10S3I</td><td>0.001A</td></tr> <tr><td>P5S4U</td><td>5.092U</td></tr> <tr><td>P5S4I</td><td>0.000A</td></tr> <tr><td>P12S4U</td><td>12.546U</td></tr> <tr><td>P12S4I</td><td>0.000A</td></tr> <tr><td>M12S4U</td><td>-12.685U</td></tr> <tr><td>M12S4I</td><td>0.002A</td></tr> <tr><td>P28S5U</td><td>32.715U</td></tr> <tr><td>P28S5I</td><td>0.017A</td></tr> <tr><td>P28S6U</td><td>27.746U</td></tr> <tr><td>P28S6I</td><td>0.038A</td></tr> <tr><td>P5S7U</td><td>5.092U</td></tr> <tr><td>P5S7I</td><td>0.035A</td></tr> </tbody> </table>	P10S3U	10.359U	P10S3I	0.000A	M10S3U	-10.461U	M10S3I	0.001A	P5S4U	5.092U	P5S4I	0.000A	P12S4U	12.546U	P12S4I	0.000A	M12S4U	-12.685U	M12S4I	0.002A	P28S5U	32.715U	P28S5I	0.017A	P28S6U	27.746U	P28S6I	0.038A	P5S7U	5.092U	P5S7I	0.035A	<p>--MON 030---</p> <table border="1"> <tbody> <tr><td>P5S7U</td><td>5.092U</td></tr> <tr><td>P5S7I</td><td>0.035A</td></tr> <tr><td>M5S7U</td><td>-4.920U</td></tr> <tr><td>M5S7I</td><td>0.050A</td></tr> <tr><td>P12S7U</td><td>12.546U</td></tr> <tr><td>P12S7I</td><td>0.016A</td></tr> <tr><td>M12S7U</td><td>-12.605U</td></tr> <tr><td>M12S7I</td><td>0.007A</td></tr> <tr><td>P5S8U</td><td>5.092U</td></tr> <tr><td>P5S8I</td><td>0.023A</td></tr> <tr><td>M5S8U</td><td>-5.239U</td></tr> <tr><td>M5S8I</td><td>0.014A</td></tr> <tr><td>P10S8U</td><td>10.358U</td></tr> <tr><td>P10S8I</td><td>0.033A</td></tr> <tr><td>M10S8U</td><td>-10.512U</td></tr> <tr><td>M10S8I</td><td>0.027A</td></tr> </tbody> </table>	P5S7U	5.092U	P5S7I	0.035A	M5S7U	-4.920U	M5S7I	0.050A	P12S7U	12.546U	P12S7I	0.016A	M12S7U	-12.605U	M12S7I	0.007A	P5S8U	5.092U	P5S8I	0.023A	M5S8U	-5.239U	M5S8I	0.014A	P10S8U	10.358U	P10S8I	0.033A	M10S8U	-10.512U	M10S8I	0.027A	<p>--MON 046---</p> <table border="1"> <tbody> <tr><td>P5S9U</td><td>5.092U</td></tr> <tr><td>P5S9I</td><td>0.065A</td></tr> <tr><td>P10S9U</td><td>10.359U</td></tr> <tr><td>P10S9I</td><td>0.026A</td></tr> <tr><td>M10S9U</td><td>-10.512U</td></tr> <tr><td>M10S9I</td><td>0.026A</td></tr> <tr><td>P5S10U</td><td>5.092U</td></tr> <tr><td>P5S10I</td><td>0.038A</td></tr> <tr><td>M5S10U</td><td>-5.239U</td></tr> <tr><td>M5S10I</td><td>0.017A</td></tr> <tr><td>P10S10U</td><td>10.358U</td></tr> <tr><td>P10S10I</td><td>0.037A</td></tr> <tr><td>M10S10U</td><td>-10.461U</td></tr> <tr><td>M10S10I</td><td>0.037A</td></tr> <tr><td>P5S11U</td><td>5.092U</td></tr> <tr><td>P5S11I</td><td>0.194A</td></tr> </tbody> </table>	P5S9U	5.092U	P5S9I	0.065A	P10S9U	10.359U	P10S9I	0.026A	M10S9U	-10.512U	M10S9I	0.026A	P5S10U	5.092U	P5S10I	0.038A	M5S10U	-5.239U	M5S10I	0.017A	P10S10U	10.358U	P10S10I	0.037A	M10S10U	-10.461U	M10S10I	0.037A	P5S11U	5.092U	P5S11I	0.194A																													
P10S3U	10.359U																																																																																																																																
P10S3I	0.000A																																																																																																																																
M10S3U	-10.461U																																																																																																																																
M10S3I	0.001A																																																																																																																																
P5S4U	5.092U																																																																																																																																
P5S4I	0.000A																																																																																																																																
P12S4U	12.546U																																																																																																																																
P12S4I	0.000A																																																																																																																																
M12S4U	-12.685U																																																																																																																																
M12S4I	0.002A																																																																																																																																
P28S5U	32.715U																																																																																																																																
P28S5I	0.017A																																																																																																																																
P28S6U	27.746U																																																																																																																																
P28S6I	0.038A																																																																																																																																
P5S7U	5.092U																																																																																																																																
P5S7I	0.035A																																																																																																																																
P5S7U	5.092U																																																																																																																																
P5S7I	0.035A																																																																																																																																
M5S7U	-4.920U																																																																																																																																
M5S7I	0.050A																																																																																																																																
P12S7U	12.546U																																																																																																																																
P12S7I	0.016A																																																																																																																																
M12S7U	-12.605U																																																																																																																																
M12S7I	0.007A																																																																																																																																
P5S8U	5.092U																																																																																																																																
P5S8I	0.023A																																																																																																																																
M5S8U	-5.239U																																																																																																																																
M5S8I	0.014A																																																																																																																																
P10S8U	10.358U																																																																																																																																
P10S8I	0.033A																																																																																																																																
M10S8U	-10.512U																																																																																																																																
M10S8I	0.027A																																																																																																																																
P5S9U	5.092U																																																																																																																																
P5S9I	0.065A																																																																																																																																
P10S9U	10.359U																																																																																																																																
P10S9I	0.026A																																																																																																																																
M10S9U	-10.512U																																																																																																																																
M10S9I	0.026A																																																																																																																																
P5S10U	5.092U																																																																																																																																
P5S10I	0.038A																																																																																																																																
M5S10U	-5.239U																																																																																																																																
M5S10I	0.017A																																																																																																																																
P10S10U	10.358U																																																																																																																																
P10S10I	0.037A																																																																																																																																
M10S10U	-10.461U																																																																																																																																
M10S10I	0.037A																																																																																																																																
P5S11U	5.092U																																																																																																																																
P5S11I	0.194A																																																																																																																																
<p>---TEST---</p> <table border="1"> <tbody> <tr><td>T0</td><td>1F0D</td><td>APL020J</td><td>0</td></tr> <tr><td>T1</td><td>2418</td><td>APL021J</td><td>27152</td></tr> <tr><td>T2</td><td>2210</td><td>APL022J</td><td>0</td></tr> <tr><td>T3</td><td>231B</td><td>APL023J</td><td>0</td></tr> <tr><td>T4</td><td>471B</td><td>APL024J</td><td>0</td></tr> <tr><td>T5</td><td>3F41</td><td>APL025J</td><td>0</td></tr> <tr><td>T6</td><td>5F5A</td><td>APL026J</td><td>0</td></tr> <tr><td>T7</td><td>4148</td><td>APL027J</td><td>0</td></tr> <tr><td>T8</td><td>3A23</td><td>APL028J</td><td>0</td></tr> <tr><td>T9</td><td>A127</td><td>APL029J</td><td>0</td></tr> <tr><td>T10</td><td>1E2A</td><td>APL02AJ</td><td>0</td></tr> <tr><td>T11</td><td>690F</td><td>APL02BJ</td><td>0</td></tr> <tr><td>T12</td><td>8C86</td><td>APL02CJ</td><td>0</td></tr> <tr><td>T13</td><td>747C</td><td>APL02DJ</td><td>0</td></tr> <tr><td>T14</td><td>8C97</td><td>APL02EJ</td><td>0</td></tr> <tr><td>T15</td><td>7477</td><td>APL02FJ</td><td>0</td></tr> </tbody> </table>	T0	1F0D	APL020J	0	T1	2418	APL021J	27152	T2	2210	APL022J	0	T3	231B	APL023J	0	T4	471B	APL024J	0	T5	3F41	APL025J	0	T6	5F5A	APL026J	0	T7	4148	APL027J	0	T8	3A23	APL028J	0	T9	A127	APL029J	0	T10	1E2A	APL02AJ	0	T11	690F	APL02BJ	0	T12	8C86	APL02CJ	0	T13	747C	APL02DJ	0	T14	8C97	APL02EJ	0	T15	7477	APL02FJ	0	<p>--AP COUNTERS-</p> <table border="1"> <tbody> <tr><td>UCL0001</td><td>1786</td></tr> <tr><td>UCL0011</td><td>0</td></tr> <tr><td>UCL0021</td><td>6395</td></tr> <tr><td>UCL0031</td><td>0</td></tr> <tr><td>UCL0041</td><td>15872</td></tr> <tr><td>UCL0051</td><td>0</td></tr> <tr><td>UCL0061</td><td>0</td></tr> <tr><td>UCL0071</td><td>15499</td></tr> </tbody> </table>	UCL0001	1786	UCL0011	0	UCL0021	6395	UCL0031	0	UCL0041	15872	UCL0051	0	UCL0061	0	UCL0071	15499	<p>--UC COUNTERS-</p> <table border="1"> <tbody> <tr><td>UCL0001</td><td>1786</td></tr> <tr><td>UCL0011</td><td>0</td></tr> <tr><td>UCL0021</td><td>6395</td></tr> <tr><td>UCL0031</td><td>0</td></tr> <tr><td>UCL0041</td><td>15872</td></tr> <tr><td>UCL0051</td><td>0</td></tr> <tr><td>UCL0061</td><td>0</td></tr> <tr><td>UCL0071</td><td>15499</td></tr> </tbody> </table>	UCL0001	1786	UCL0011	0	UCL0021	6395	UCL0031	0	UCL0041	15872	UCL0051	0	UCL0061	0	UCL0071	15499	<p>--- MUE ---</p> <table border="1"> <tbody> <tr><td>HWSEC</td><td>000049DB</td></tr> <tr><td>UTSEC</td><td>308BF8F5</td></tr> <tr><td>UTUSEC</td><td>0000</td></tr> <tr><td>XMITR</td><td>OK</td></tr> <tr><td>RECUR</td><td>OK</td></tr> <tr><td>ERRCNT</td><td>0</td></tr> <tr><td>XMTCTR</td><td>232</td></tr> <tr><td>RECCTR</td><td>196</td></tr> <tr><td>ENABLE</td><td>31</td></tr> <tr><td>TMRATE</td><td>2</td></tr> <tr><td>SPSTATE</td><td>0</td></tr> <tr><td>RPSTATE</td><td>0</td></tr> <tr><td>STEST</td><td>AA5500</td></tr> <tr><td>FDM</td><td>91002C</td></tr> <tr><td>CCSAP</td><td>1081</td></tr> </tbody> </table>	HWSEC	000049DB	UTSEC	308BF8F5	UTUSEC	0000	XMITR	OK	RECUR	OK	ERRCNT	0	XMTCTR	232	RECCTR	196	ENABLE	31	TMRATE	2	SPSTATE	0	RPSTATE	0	STEST	AA5500	FDM	91002C	CCSAP	1081
T0	1F0D	APL020J	0																																																																																																																														
T1	2418	APL021J	27152																																																																																																																														
T2	2210	APL022J	0																																																																																																																														
T3	231B	APL023J	0																																																																																																																														
T4	471B	APL024J	0																																																																																																																														
T5	3F41	APL025J	0																																																																																																																														
T6	5F5A	APL026J	0																																																																																																																														
T7	4148	APL027J	0																																																																																																																														
T8	3A23	APL028J	0																																																																																																																														
T9	A127	APL029J	0																																																																																																																														
T10	1E2A	APL02AJ	0																																																																																																																														
T11	690F	APL02BJ	0																																																																																																																														
T12	8C86	APL02CJ	0																																																																																																																														
T13	747C	APL02DJ	0																																																																																																																														
T14	8C97	APL02EJ	0																																																																																																																														
T15	7477	APL02FJ	0																																																																																																																														
UCL0001	1786																																																																																																																																
UCL0011	0																																																																																																																																
UCL0021	6395																																																																																																																																
UCL0031	0																																																																																																																																
UCL0041	15872																																																																																																																																
UCL0051	0																																																																																																																																
UCL0061	0																																																																																																																																
UCL0071	15499																																																																																																																																
UCL0001	1786																																																																																																																																
UCL0011	0																																																																																																																																
UCL0021	6395																																																																																																																																
UCL0031	0																																																																																																																																
UCL0041	15872																																																																																																																																
UCL0051	0																																																																																																																																
UCL0061	0																																																																																																																																
UCL0071	15499																																																																																																																																
HWSEC	000049DB																																																																																																																																
UTSEC	308BF8F5																																																																																																																																
UTUSEC	0000																																																																																																																																
XMITR	OK																																																																																																																																
RECUR	OK																																																																																																																																
ERRCNT	0																																																																																																																																
XMTCTR	232																																																																																																																																
RECCTR	196																																																																																																																																
ENABLE	31																																																																																																																																
TMRATE	2																																																																																																																																
SPSTATE	0																																																																																																																																
RPSTATE	0																																																																																																																																
STEST	AA5500																																																																																																																																
FDM	91002C																																																																																																																																
CCSAP	1081																																																																																																																																
CMD:1C00C000000050000FF000097	UPDATE: 256	DATE: 03-16-94	GMT : 00:35:08																																																																																																																														

CS06 STIMULATION ON

FIGURE 8

## CS01 TEST PROCEDURE AND RESULTS

Figure 9 shows the set-up used to perform the CS01 test. The ETU IDPU was connected to 486 GSE system which simulated the spacecraft interface and allowed selected output data to be displayed. The ETU magnetometers were connected to the system, but no ESA's, boom units, or TEAMS were connected. The dummy load module provided a simulated load of 4 Radial Boom Units and 2 ESA units. The current amplifier driven by a sine wave from the HP 3313A was put in series with the power line so that the waveform specified by CS01 was added to the DC value of the voltage on the +28 volt power input. For frequencies from 30 Hz to 2 kHz, the added signal was an unmodulated sine wave. From 2kHz to 50 kHz, the waveform was a sine wave which was modulated with a 50% duty cycle at 1000 Hz. From 30 Hz to 1500 Hz, the amplitude of the unmodulated sine wave was 2.8 volts rms. From 1500 Hz it was ramped down to 1 volt rms at 50 kHz (per figure 5.2.2.1-1 of FAST-SPEC-001). The input amplitude was also limited by the constraint that the AC component of the input current shall not exceed 6 Amperes peak to peak.

The GSE scripts TVSFA, TVADC1, and TVSVY0 were run to look for interference in the E-Field system. SHOMON2 was also run to view the full engineering housekeeping and to verify correct operation of the processor system, and the value of the voltage which fed thru to the internal +5 volt supply and to the +28 volts supplied by the IDPU to the external instruments.

Table 1 below summarizes the effects on the other supplies and the operation of the instrument and shows the value of the voltage which was attained on the input power line as a function of input frequency.

Table 1 -- Summary of CS01 Test Results

Input Freq	V p-p	AC Current on Input	AC on IDPU Int. 5 v bus	AC on IDPU Supplied +28	Disturbance on:
					SFA    ADC    SVY    MON
15 Hz	9 Vp-p	100 mA p-p	50 mVp-p		X    X    X    N
30 Hz	9 Vp-p	300 mA p-p	110 mVp-p	1.3 Vp-p	VL    N    N    N
60 Hz	9 Vp-p	400 mA p-p	200 mVp-p	1.8 Vp-p	X    X    X    N
100 Hz	9 Vp-p	750 mA p-p	320 mVp-p	2.0 Vp-p	X    L    X    N
200 Hz	9 Vp-p	1.9 A p-p	580 mVp-p	2.0 Vp-p	VL    X    M    N
290 Hz	8 Vp-p	2.5 A p-p	750 mVp-p	2.2 Vp-p	M    M    S    N
500 Hz	8 Vp-p	3.7 A p-p	450 mVp-p	1.8 Vp-p	M    M    S    N
1 kHz	8 Vp-p	4.5 A p-p	210 mVp-p	1.7 Vp-p	M    M    S    N
2 kHz	5 Vp-p	6 A p-p	130 mVp-p	.85 Vp-p	L    M    M    N
2 kHz	5	6 A p-p	200 mVp-p	.85 Vp-p	X    X    X    N
4 kHz	2.5	6 A p-p	200 mVp-p	.42 Vp-p	L    L    M    N
8 kHz	2.5	6 A p-p	300 mVp-p	.29 Vp-p	X    N    L    N
13 kHz		6 A p-p		.58 Vp-p	X    X    X    N
16 kHz	1	6 A p-p	390 mVp-p	.54 Vp-p	L    X    X    N
32 kHz		6 A p-p		.48 Vp-p	X    X    X    N
50 kHz	3	6 A p-p	300 mVp-p	.62 Vp-p	VL    N    N    N
80 kHz		6 A p-p		.75 Vp-p	X    X    X    N
100 kHz	4.5	6 A p-p		.80 Vp-p	N    N    X    N

end: N -- No Effect

M -- Moderate Effect

VL -- Very Low

S -- Severe Effect

L -- Low Effect

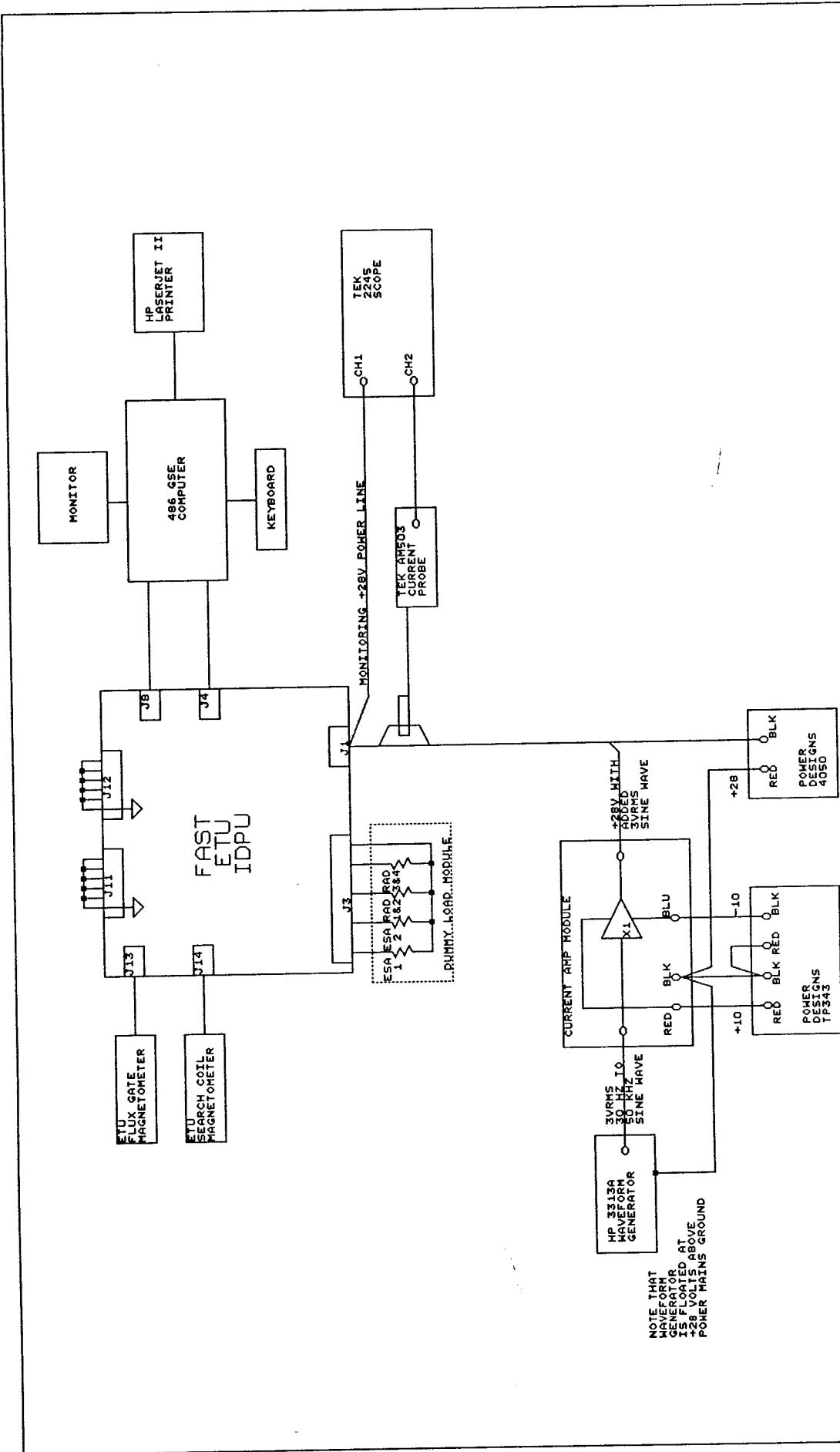


FIGURE 9

Figures 10 thru 39 show data output from the instrument under the various conditions of stimulation and provide the basis for the assessment of the operation shown in the four right columns of Table 1.

The E-Field instrument shows some sensitivity to this test.

Disturbance of the science data starts at around 100 Hz and continues to about 10 kHz with a peak at 290 Hz. Examination of the IDPU internal +5 volt power bus and the +28 volt bus which is supplied to the external instruments shows that the effect on those lines also peaks at 290 Hz. From that we conclude that the primary way in which the conducted interference affects the science data is via less than ideal power line rejection in the analog circuits in the E-Field electronics.

	--MON 016---	--MON 030---	--MON 046---
	P10S3U 4.154U P10S3I 0.001A M10S3U -4.256U M10S3I 0.001A P5S4U 0.000U P5S4I 0.000A P12S4U 5.301U P12S4I 0.000A M12S4U -5.301V M12S4I 0.003A P28S5U 4.831U P28S5I 0.017A P28S6U 0.000U P28S6I 0.000A P5S7U 5.092U P5S7I 0.035A	P5S7U 5.092U P5S7I 0.035A M5S7U -4.847U M5S7I 0.050A P12S7U 12.605U P12S7I 0.010A M12S7U -12.781U M12S7I 0.007A P5S8U 5.092U P5S8I 0.122A M5S8U -5.141U M5S8I 0.110A P10S8U 10.256U P10S8I 0.033A M10S8U -10.358U M10S8I 0.026A	P5S9U 5.092U P5S9I 0.046A P10S9U 10.255U P10S9I -10.461U M10S9U 0.025A M10S9I 0.025A P5S10U 5.116U P5S10I 0.038A M5S10U -5.190U M5S10I 0.016A P10S10U 10.204U P10S10I 0.036A M10S10U -10.410U M10S10I 0.037A P5S11U 0.539U P5S11I 0.000A
FFT ( SFA1 )			
FFTSC 256 dB			
Peak -99.0 dB			
Freq 0.0 Hz			
---TEST---	--AP COUNTERS--		-- MUE ---
T0 0B0B T1 0E0A T2 0F07 T3 1611 T4 4D24 T5 4845 T6 584B T7 484Q T8 343B T9 5F21 T10 171C T11 410D T12 2E20 T13 3128 T14 1F18 T15 3D22	AP[020] 0 AP[021] 14927 AP[022] 0 AP[023] 0 AP[024] 0 AP[025] 0 AP[026] 0 AP[027] 0 AP[028] 0 AP[029] 0 AP[02A] 0 AP[02B] 0 AP[02C] 0 AP[02D] 0 AP[02E] 0 AP[02F] 0		HWSEC 0000064B UTSEC 308AEF06 UTUSEC 0000 XMITR OK RECUR CODE_ERR ERRCNT 358 XMTCTR 232 RECCTR 106 ENABLE 31 TMRATE 32 SPSTATE 00 RPSTATE 00 STEST AA5500 FDM 91002C CCSAP 108
CMD:1C00C000000005000000005A8CD		UPDATE: 288	DATE: 03-15-94 CMT: 00:52:17

30 H3

FIGURE 10

				<b>-SCOPE PARAMS-</b> ADC1 32511 [ 1, 0 ] -OFF- -OFF- -OFF-  Chan.: S/Dv: 128.00 MU/Dv: 8.29 Speed: PKT(01) Trig: -OFF- If > 0 Step 1
---TEST---	--AP COUNTERS--	--QTY OUTPUTS--	--VC COUNTERS--	--- MUE ---
T0 F87F API[014] 0 T1 F87F API[015] 0 T2 F87F API[016] 0 T3 F97F API[017] 0 T4 F77F API[018] 20189 T5 F97F API[019] 0 T6 F87F API[01A] 0 T7 F87F API[01B] 0 T8 F87F API[01C] 0 T9 F87F API[01D] 0 T10 F97F API[01E] 0 T11 F97F API[01F] 0 T12 F87F API[020] 0 T13 F87F API[021] 15251 T14 F87F API[022] 0 T15 F87F API[023] 0		LFF1P2 A50D U1 0000 U2 0007 U3 0003 U4 FFFF U5 0000 U6 0005 U7 0009 U8 FFFF U9 0000 U10 FFFF MAG1DC 0002 MAG2DC 0001 MAG3DC 0003 MAG1AC 0004 MAG2AC 0006	VC[000] 152 VC[001] 0 VC[002] 35441 VC[003] 37030 VC[004] 0 VC[005] 0 VC[006] 0 VC[007] 10128	HWSEC 00006663 UTSEC 308AEF06 UTUSEC 0000 XMITR OK RECUR CODE_ERR ERRCNT 358 XMTCTR 298 RECCTR 108 ENABLE 31 TMRATE 312 SPSTATE 0 RPSTATE 0 STEST AA5500 FDM 91002C CCSAP 1081

CMD:1C000C00000005000003000D9C0

UPDATE: 352

DATE: 03-15-94  
GMT : 00:52:40

3017

FIGURE 11

		<b>--SCOPE PARAMS--</b> U14 4 U58 1, 58J U910 1, 8J L 1, -58J <b>-OFF-</b> Chan.: 2 S/Dv: 128.00 MU/Dv: 8.29 Speed: PKT(01) Trig: -OFF- If: 0 Step: 1	<b>--MON 030---</b> P5S7U 5:116U P5S2I 0:035A M5S2U -4:920U M5S7I 0:050A P12S7U 12:781U P12S7I 0:009A M12S7U -12:546U M12S7I 0:007A P5S8U 5:092U P5S8I 0:125A M5S8U -5:214U M5S8I 0:108A P10S8U 10:204U P10S8I 10:033A M10S8U -10:225U M10S8I 0:026A	<b>--MON 046--</b> P5S9U 5:190U P5S9I 0:044A P10S9U 10:153U P10S9I -10:512A M10S9U 0:027A M10S9I 0:038A P5S10U 5:141U P5S10I 0:039A M5S10U -5:190U M5S10I 0:017A P10S10U 10:033A P10S10I 0:033A M10S10U -10:410U M10S10I 0:039A P5S11U 0:039A P5S11I 0:000A	
		<b>--TEST-----</b> T0 0880 APL0001 0 T1 0780 APL0011 0 T2 0480 APL0021 0 T3 0380 APL0031 0 T4 0780 APL0041 0 T5 0780 APL0051 0 T6 0580 APL0061 0 T7 0180 APL0071 0 T8 0680 APL0081 11323 T9 0780 APL0091 11309 T10 0380 APL00A1 0 T11 0680 APL00B1 0 T12 0680 APL00C1 0 T13 0680 APL00D1 0 T14 0980 APL00E1 0 T15 90BF APL00F1 0	<b>--AP COUNTERS--</b> APL0001 0 APL0011 0 APL0021 0 APL0031 0 APL0041 0 APL0051 0 APL0061 0 APL0071 0 APL0081 11323 APL0091 11309 APL00A1 0 APL00B1 0 APL00C1 0 APL00D1 0 APL00E1 0 APL00F1 0	<b>--MON 096---</b> P28S23U 0:000U P28S23I 0:005A P28S24U 7:178U P28S24I 0:005A P28S25U 0:000U P28S25I 0:000A P28S26U 0:000U P28S26I 0:000A FLXTMP 149:0000C SCITMP 149:0000C SEUSUY 0:000U SEU12 0:000U SEU34 0:000U SEU56 0:000U SEU78 0:000U SEUHF 0:000U	<b>--MUE-----</b> HWSEC 000005C7 UTSEC 308AEF06 UTUSEC 0000 XMITR OK RECUR CODE_ERR ERRCNT 258 XMTCTR 298 RECCTR 108 ENABLE 31 TMRATE 0 SPSTATE 0 RPSTATE 0 STEST AA5500 FDM 91002C CCSAP 1085

CMD:1C000C000001D0000000000A8CD

UPDRATE: 160

DATE: 03-15-94  
GMT : 00:50:05

30 Hz

Figure 12

				<b>-SCOPE PARAMS-</b> ADC1 7 [ 1, 0 ] -OFF- -OFF-  Chan. 0 S/Dv 128.00 mU/Dv 8.29 Speed PKT(01) Trig -OFF- If > 0 Step 1
---TEST---	--AP COUNTERS-- T0 F97F APL014J 0 T1 F97F APL015J 0 T2 F97F APL016J 0 T3 F97F APL017J 0 T4 FB7F APL018J 21053 T5 F97F APL019J 0 T6 FA7F APL01AJ 0 T7 F97F APL01BJ 0 T8 F97F APL01CJ 0 T9 FA7F APL01DJ 0 T10 FA7F APL01EJ 0 T11 F72F APL01FJ 0 T12 F97F APL020J 0 T13 FA7F APL021J 15251 T14 FA7F APL022J 0 T15 F87F APL023J 0	--QTY OUTPUTS-- LFF1P2 A50D U1 0000 U2 0007 U3 0003 U4 FFFF U5 0000 U6 0005 U7 0009 U8 FFFF U9 0000 U10 FFFF MAC1DC 0002 MAC2DC 0001 MAC3DC 0003 MAG1AC 0004 MAG2AC 0006	--UC COUNTERS-- UCL0001 153 UCL001J 0 UCL002J 36305 UCL003J 0 UCL004J 37030 UCL005J 0 UCL006J 0 UCL007J 18014	--MUE---- HWSEC 0000008C UTSEC 308AEFB6 UTUSEC 0000 XMITR OK RECUR CODE_ERR ERRCNT 358 XMTCTR 232 RECCTR 106 ENABLE 31 TMRATE 32 SPSTATE 1 RPSTATE 3 STEST AA5500 FDM 91002C CCSAP 1080
CMD: 1C00C000000050000030009C0	UPDRATE: 400	DATE: 03-15-94	GMT : 00:53:22	

100 Hz

FIGURE 13

	--MON 016---	--MON 030---	--MON 046---
	P10S3U 3.949V P10S3I 0.000A M10S3U -4.359V M10S3I 0.009A P5S4U 0.000V P5S4I 0.000A P12S4U 5.183V P12S4I 0.000A M12S4U -5.301V M12S4I 0.000A P28S5U 4.831V P28S5I 0.017A P28S6U 0.000V P28S6I 0.000A P5S7U 5.361V P5S7I 0.039A	P5S7U 5.361V P5S8I 0.039A M5S7U -4.896V M5S7I 0.042A P12S7U 1.3252V P12S7I 0.002A M12S7U -1.2663V M12S7I 0.002A P5S8U 5.165V P5S8I 0.133A M5S8U -5.410V M5S8I 0.127A P10S8U 10.512V P10S8I 0.044A M10S8U -9.845V M10S8I 0.009A	P5S9U 4.945V P5S9I 0.043A P10S9U 10.307V P10S9I -1.028V M10S9U 0.028A M10S9I 0.028A P5S10U 5.386V P5S10I 0.047A M5S10U -4.994V M5S10I 0.013A P10S10U 10.256V P10S10I 0.025A M10S10U -10.153V M10S10I 0.025A P5S11U 5.539V P5S11I 0.000A
FFT ( SFA1 )			
FFTSC 256 dB			
Peak -99.0 dB			
Freq 0.0 Hz			
----TEST----	--AP COUNTERS-		--- MUE ---
T0 4208	API0201 0		HWSSEC 00000730
T1 4439	API0211 16580		UTSEC 308AEF06
T2 2007	API0221 0		UTUSEC 0000
T3 2121	API0231 0		XMITR OK
T4 5D20	API0241 0		RECUR CODE_ERR
T5 5E59	API0251 0		ERRCNT 358
T6 6049	API0261 0		XMTCTR 434
T7 7662	API0271 0		RECCCTR 108
T8 723C	API0281 0		ENABLE 31
T9 6E68	API0291 0		TMRATE 0
T10 7F23	API02A1 0		SPSTATE 0
T11 8529	API02B1 0		RPSTATE 0
T12 850F	API02C1 0		STEST AA5500
T13 9926	API02D1 0		FDM 91002C
T14 8C96	API02E1 0		CCSAP 0
T15 8F7F	API02F1 0		
CMD: 1C000C00000005000000005A8CD		UPDRATE: 208	DATE: 03-15-94
			GMT : 00:56:06

200 Hz

Figure 14

		<b>-SCOPE PARAMS-</b> C14 5 U58 1, 58J U58 9 U910 1, 8J U910 1, -58J <b>-OFF-</b> Chan. 2 S/Dv 128.00 MU/Dv 8.229 Speed PKT(01) Trig -OFF- If > 0 Step 1	<b>--MON 030---</b> P5S7U 4.798U P5S7I 0.039A M5S7U -4.847U M5S7I 0.059A P12S7U 12.899U P12S7I 0.005A M12S7U -12.958U M12S7I 0.002A P5S8U 5.312U P5S8I 0.118U M5S8U -5.306U M5S8I 0.132U P10S8U 9.692U P10S8I 0.044A M10S8U -10.410U M10S8I 0.044A	<b>--MON 046---</b> P5S9U 5.337U P5S9I 0.048A P10S9U 10.051U P10S9I 0.023A M10S9U -9.897U M10S9I 0.034A P5S10U 5.386U P5S10I 0.047A M5S10U -5.337U M5S10I 0.021A P10S10U 10.717U P10S10I 0.031A M10S10U -10.000U M10S10I 0.036A P5S11U 0.039U P5S11I 0.000A
<b>---TEST---</b> T9 0280 T11 0780 T12 FE7F T13 0280 T14 0580 T15 FF7F T16 0180 T17 0380 T18 0380 T19 FF7F T10 0280 T11 0680 T12 0680 T13 0A80 T14 0980 T15 E8BE	<b>--AP COUNTERS-</b> API0001 0 API0011 0 API0021 0 API0031 0 API0041 0 API0051 0 API0061 0 API0071 0 API0081 12747 API0091 12733 API00A1 12734 API00B1 0 API00C1 0 API00D1 0 API00E1 0 API00F1 0	<b>--MON 096---</b> P20S23U 0.000U P20S23I 0.001A P20S24U 7.178U P20S24I 0.000A P20S25U 0.000U P20S25I 0.000A P20S26U 0.000U P20S26I 0.000A FLXTMP 149.000C SCLTMP 149.000C SEUSUV 0 SEU12 0 SEU32 0 SEU34 0 SEU56 0 SEU78 0		<b>MUE</b> HWSEC 000006C3 UTSEC 308AEF06 UTUSEC 0000 XMITR OK RECVR CODE_ERR ERRCNT 359 XMICTR 2322 RECCTR 1066 ENABLE 31 TMRATE 0 SPSTATE 0 RPSTATE 0 STEST AA5500 FDM 91002C CCSAP 1088

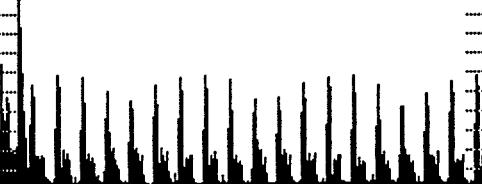
CMD:1C00C000001D000000000A8CD

UPDATE: 144 DATE: 03-15-94

GMT: 00:54:17

200Hz

Figure 15

	--MON 016-- P10S3U 4.154U P10S3I 0.002A M10S3U -4.205U M10S3I 0.000U P5S4U 0.000U P5S4I 0.003A P12S4U 5.301U P12S4I 0.001A M12S4U -5.419U M12S4I 0.011A P20S5U 4.969U P20S5I 0.016A P20S6U 0.000U P20S6I 0.002A P5S7I 4.749U P5S7I 0.051A	--MON 030-- P5S7U 4.749U P5S7I 0.051A M5S7U -5.141U M5S7I 0.046A P12S7U 13.252U P12S7I -12.958U M12S7U 0.010U M12S7I 0.361U P20S8U 5.361U P20S8I -4.749U M5S8U 0.157A P10S8U 10.410U P10S8I 0.012A M10S8U -9.640U M10S8I 0.034A	--MON 046-- P5S9U 5.484U P5S9I 0.042A P10S9U 10.666U P10S9I -10.410U M10S9U 0.019A M10S9I 0.823A P5S10U 4.823A P5S10I 0.048A M5S10U -4.845A M5S10I 0.845A P10S10U 0.930A P10S10I 0.769A M10S10U -10.022A M10S10I 0.539A P5S11U 0.016A
FFT (SFA1) FFTSC 256 dB Peak -127.0 dB Freq 0.0 Hz	--TEST-- T0 8F0C T1 8C86 T2 8409 T3 807A T4 7324 T5 736C T6 6352 T7 665B T8 6635 T9 5A5A T10 5F2E T11 6C5E T12 4D3D T13 5F50 T14 7E39 T15 9383	--AP COUNTERS-- APL020] 0 APL021] 17604 APL022] 0 APL023] 0 APL024] 0 APL025] 0 APL026] 0 APL027] 0 APL028] 0 APL029] 0 APL02A] 0 APL02B] 0 APL02C] 0 APL02D] 0 APL02E] 0 APL02F] 0	--MUE-- HWSEC 00000771 UTSEC 308AEF06 UTUSEC 0000 XMITR OK RECRN CODE_ERR ERRCNT 358 XMTCTR 298 RECCTR 108 ENABLE 31 TMRATE 0 SPSTATE 0 RPSTATE 0 STEST AA5500 FDM 91002C CCSAP 1080
CMD: 1C00C00000005000000005A8CD		UPDATE: 224	DATE: 03-15-94 GMT : 00:57:11

290 lb  
(Higher Feedthrough)

Figure 16

				<b>-SCOPE PARAMS-</b> ADC1 32511 [ 1, 0 ] -OFF- -OFF- -OFF-  Chan. S/Dv 128.00 mV/Dv 8.29 Speed PKT(01) Trig -OFF- If > 0 Step 1		
				<b>--TEST----</b> T0 ED7F AP[014] 0 T1 EE7F AP[015] 0 T2 EF7F AP[016] 0 T3 EF7F AP[017] 0 T4 EF7F AP[018] 25471 T5 EE7F AP[019] 0 T6 EF2F AP[01A] 0 T7 F17F AP[01B] 0 T8 F22F AP[01C] 0 T9 F27F AP[01D] 0 T10 F27F AP[01E] 0 T11 F37F AP[01F] 0 T12 F57F AP[020] 0 T13 F67F AP[021] 18870 T14 F67F AP[022] 0 T15 F77F AP[023] 0		
<b>--AP COUNTERS-</b>		<b>-QTY OUTPUTS-</b>		<b>--UC COUNTERS-</b>		
LFF1P2	9214	VCI[000]	191	<b>-- MUE ---</b>		
U1	0000	VCI[001]	0	HWSEC	000007C7	
U2	0009	VCI[002]	44342	UTSEC	308AEFB6	
U3	0005	VCI[003]	0	UTUSEC	00000	
U4	001C	VCI[004]	38742	XMITR	OK	
U5	0000	VCI[005]	0	RECOR	CODE_ERR	
U6	0008	VCI[006]	0	ERRCNT	358	
U7	000A	VCI[007]	44572	XMTCTR	30	
U8	FFF8			RECCTR	104	
U9	0000			ENABLE	31	
U10	004B			TMRATE	2	
MAG1DC	0002			SPSTATE	1	
MAG2DC	0001			RPSTATE	1	
MAG3DC	0003			STEST	AA5500	
MAG1AC	0002			FDM	91002C	
MAG2AC	0005			CCSAP	1086	
CMD: 1C000C00000005000003000D9C0						
UPDRATE: 352			DATE: 03-15-94 GMT : 00:58:36			

290 HB

Figure 17

		<b>-SCOPE PARAMS-</b> U14 1. 581 2 U58 1. -3 U910 1. 01 5 L OFF 1. -581  <b>Chan.</b> 2 <b>S/Dv</b> 128.00 <b>MU/Dv</b> 8.29 <b>Speed</b> PXT(01) <b>Trig</b> -OFF- <b>If &gt;</b> 0 <b>Step</b> 1	<b>--MON 030---</b> P5S7U 5.435U P5S7I 0.027A M5S7U -5.190U M5S7I 0.0505A P12S7U 12.899U P12S7I 0.015A M12S7U -13.076U M12S7I 0.008A P5S8U 5.263U P5S8I 0.098A M5S8U -5.092U M5S8I 0.075A P10S8U 10.204U P10S8I 0.043A M10S8U -10.974U M10S8I 0.012A	<b>--MON 046---</b> P5S9U 4.774U P5S9I 0.051A P10S9U 9.846U P10S9I 0.043A M10S9U -9.436U M10S9I 0.042A P5S10U 5.484U P5S10I 0.031A M5S10U -5.459U M5S10I 0.011A P10S10U 10.768U P10S10I 0.026A M10S10U -10.666U M10S10I 0.036A P5S11U 0.539U P5S11I 0.000A
<b>--TEST--</b> T0 0180 T1 0580 T2 FF7F T3 0280 T4 0A80 T5 0780 T6 0A80 T7 0180 T8 0980 T9 0880 T10 FF7F T11 0380 T12 0B80 T13 0880 T14 EB7F T15 4EBE	<b>--AP COUNTERS--</b> API[000] 0 API[001] 0 API[002] 0 API[003] 0 API[004] 0 API[005] 0 API[006] 0 API[007] 0 API[008] 13067 API[009] 13053 API[00A] 13048 API[00B] 0 API[00C] 0 API[00D] 0 API[00E] 0 API[00F] 0	<b>--MON 096--</b> P28S23U 0.000U P28S23I 0.000A P28S24U 7.316U P28S24I 0.000A P28S25U 0.000U P28S25I 0.000A P28S26U 0.000U P28S26I 0.000A FLXTMP 149.000C SCLTMP 149.000C SEUSUVY 0 SEU12 0 SEU34 0 SEU56 0 SEU78 0 SEUHF 0	<b>--MUE--</b> HWSEC 00007E9 UTSEC 308AEF06 UTUSEC 0000 XMITR OK RECUR_CODE_ERR ERRCNT 358 XMTCTR 232 RECCTR 106 ENABLE 31 TMRATE 0 SPSTATE 0 RPSTATE 0 STEST AA5500 FDM 91002C CCSAP 1080	

CMD:1C000C000001D00000000008CD

UPDRATE: 144

DATE: 03-15-94

GMT: 00:59:11

J90/H3

FIGURE 18

<p>FFT (SFA1) FFTSC 256 dB Peak -104.0 dB Freq 0.0 Hz</p>	--MON 016---	--MON 030---	--MON 046---
	P10S3U 4.102U P10S3I 0.000A M10S3U -4.308U M10S3I 0.006A P5S4U 0.000U P5S4I 0.002A P12S4U 0.366U P12S4I 0.000A M12S4U -5.478U M12S4I 0.000A P28S5U 4.831U P28S5I 0.019A P28S6U 0.000U P28S6I 0.001A P5S7U 4.945U P5S7I 0.024A	P5S7U 4.945U P5S7I 0.024A M5S7U -5.199U M5S7I 0.055A P12S7U 12.840U P12S7I 0.011A M12S7U -1.323U M12S7I 0.007A P5S8U 0.214U P5S8I 0.116A M5S8U -5.043U M5S8I 0.090A P10S8U 10.563U P10S8I 0.038A M10S8U -10.153U M10S8I 0.047A	P5S9U 5.043U P5S9I 0.041A P10S9U 9.948U P10S9I 0.036A M10S9U -1.000U M10S9I 0.035A P5S10U 4.934U P5S10I 0.031A M5S10U -4.798U M5S10I 0.018A P10S10U 10.102U P10S10I 0.023A M10S10U -10.153U M10S10I 0.041A P5S11U 0.539U P5S11I 0.014A
---TEST---	--AP COUNTERS-- T0 800B T1 9E95 T2 781B T3 7469 T4 992EE T5 9690 T6 8F5B T7 88887 T8 8863E T9 7E7D T10 7925 T11 7668F T12 76721 T13 75C50 T14 86668 T15 9A8C AP[020] 0 AP[021] 18935 AP[022] 0 AP[023] 0 AP[024] 0 AP[025] 0 AP[026] 0 AP[027] 0 AP[028] 0 AP[029] 0 AP[02A] 0 AP[02B] 0 AP[02C] 0 AP[02D] 0 AP[02E] 0 AP[02F] 0		--- MUE --- HWSEC 00000884 UTSEC 308AEF06 UTUSEC 0000 XMITR OK RECUR_CODE_ERR ERRCNT 358 XMTCTR 434 RECCTR 108 ENABLE 31 TMRATE 2 SPSTATE 0 RPSTATE 0 STEST AA5500 FDM 91002C CCSAP 1080

CMD:1C000C00000009000000C00D8C0

UPDRATE: 224

DATE: 03-15-94

GMT : 01:01:46

502K3

Figure 19

		<b>--SCOPE PARAMS--</b> V14 4 L 1, 581 U58 0 U910 1, -1 E 1, -581 <b>-OFF-</b> Chan. 2 S/Dv 128.00 MU/Dv 8.29 Speed PKT(01) Trig -OFF- If > 0 Step 1	<b>--MON 030---</b> P5S7U 4.823U P5S7I 0.031A M5S7U -5.288U M5S7I 0.050A P12S7U 1.2.732U P12S7I 0.067U M12S7U -1.3.252U M12S7I 0.066U P5S8U 5.239U P5S8I -4.112U M5S8I 0.094A P10S8U 10.153U P10S8I 0.036A M10S8U -10.410U M10S8I 0.035A	<b>--MON 046---</b> P5S9U 5.018U P5S9I 0.048A P10S9U 10.102U P10S9I -9.021A M10S9U -9.046U M10S9I 0.021A P5S10U 5.018U P5S10I 0.043A M5S10U -5.043A M5S10I 0.018A P10S10U 9.948U P10S10I 0.037A M10S10U -10.512U M10S10I 0.043A P5S11U 0.539U P5S11I 0.000A
<b>--TEST-----</b> T0 0680 API0001 0 T1 0780 API0011 0 T2 0680 API0021 0 T3 0280 API0031 0 T4 E57F API0041 0 T5 FF7F API0051 0 T6 EC7F API0061 0 T7 0180 API0071 0 T8 0A80 API0081 14635 T9 F97F API0091 146221 T10 0B80 API00A1 146221 T11 0380 API00B1 0 T12 1B80 API00C1 0 T13 0E80 API00D1 0 T14 0A80 API00E1 0 T15 28BE API00F1 0		<b>--AP COUNTERS--</b> P28S23U 0.000U P28S23I 0.000A P28S24U 7.316U P28S24I 0.002A P28S25U 0.000U P28S25I 0.000A P28S26U 0.000U P28S26I 0.000A FIXTMP 149.000C SCITMP 149.000C SEUSUY 0 SEU12 0 SEU34 0 SEU56 0 SEU78 0 SEUHF 0	<b>--MON 096---</b> P28S23U 0.000U P28S23I 0.000A P28S24U 7.316U P28S24I 0.002A P28S25U 0.000U P28S25I 0.000A P28S26U 0.000U P28S26I 0.000A FIXTMP 149.000C SCITMP 149.000C SEUSUY 0 SEU12 0 SEU34 0 SEU56 0 SEU78 0 SEUHF 0	<b>--MUE----</b> HWSEC 000004C UTSEC 308AEF06 UTUSEC 0000 XMITR OK RECUR CODE_ERR ERRCNT 358 XMTCTR 434 RECCTR 108 ENABLE 31 TMRATE 0 SPSTATE 0 RPSTATE 0 STEST AA5500 FDM 91002C CCSAP 1085

CMD:1C00C000001D000000000A8CD

UPDRATE: 144

DATE: 03-15-94

GMT : 01:00:49

500 Hz

Figure 20

				-SCOPE PARAMS- ADC1 32511 1, 01 -OFF- -OFF- -OFF-  Chan.: 0 S/Dv: 128.00 Mv/Dv: 8.29 Speed: PKT<01> Trig: -OFF- If > 0 Step: 1
<b>--- TEST ---</b> T0 FE7F API0141 0 T1 FE7F API0151 0 T2 FE7F API0161 0 T3 FE7F API0171 0 T4 FF7F API0181 33644 T5 FE7F API0191 0 T6 FE7F API01A1 0 T7 FE7F API01B1 0 T8 FD7F API01C1 0 T9 FD7F API01D1 0 T10 FD7F API01E1 0 T11 FD7F API01F1 0 T12 FC7F API0201 18870 T13 FD7F API0211 0 T14 FB7F API0221 0 T15 FC7F API0231 0	<b>--AP COUNTERS--</b> LFF1P2 A11D U1 0000 U2 0023 U3 0018 U4 0019 U5 0000 U6 000C U7 000D U8 0026 U9 0000 U10 003A MAG1DC 0002 MAG2DC 0000 MAG3DC 0003 MAG1AC 001D MAG2AC 001F	<b>-QTY OUTPUTS-</b>  <b>--UC COUNTERS--</b> UCI0001 209 UCI0011 0 UCI0021 52515 UCI0031 0 UCI0041 44469 UCI0051 0 UCI0061 0 UCI0071 49066	<b>--- MUE ---</b> HWSSEC 00000867 HTSEC 308AEFF06 UTSEC 0000 UTUSEC 0000 XMITR OK RECUR CODE ERR ERRCNT 358 XMTCTR 162 RECCTR 108 ENABLE 31 TMRATE 0 SPSTATE 0 RPSTATE 0 STEST AA5500 FDM 91002C CCSAP 1081	DATE: 03-15-94 CMD: 1C00C000000050000030009C0 UPDRATE: 368 GMT : 01:01:17

500 Hz

Figure 21

	--MON 016-- P10S3U 4.205V P10S3I 0.000A M10S3U -4.256V M10S3I 0.000A P5S4U 0.000V P5S4I 0.000A P12S4U 5.360V P12S4I 0.000A M12S4U -5.360V M12S4I 0.004A P28S5U 2.831V P28S5I 0.017A P28S6U 0.000V P28S6I 0.002A P5S7U 5.165V P5S7I 0.041A	--MON 030-- P5S7U 5.165V P5S7I 0.041A M5S7U -5.190V M5S7I 0.052A P12S7U 12.781V P12S7I 0.010A M12S7U -12.899V M12S7I 0.006A P5S8U 5.018V P5S8I 0.008A M5S8U -5.027V M5S8I 0.014V P10S8U 10.236V P10S8I 0.026A M10S8U -10.204V M10S8I 0.033A	--MON 046-- P5S9U 5.141V P5S9I 0.045A P10S9U 10.051V P10S9I 0.030A M10S9U -10.153V M10S9I 0.026A P5S10U 5.016V P5S10I 0.035A M5S10U -5.016V M5S10I 0.017A P10S10U 10.226V P10S10I 0.039A M10S10U -10.032A M10S10I 0.039A P5S11U 0.010A
FFT ( SFA1 ) FFTSC 256 dB Peak -102.0 dB Freq 0.0 Hz	--TEST-- T0 8429 T1 6C71 T2 992F T3 9E93 T4 7321 T5 7D6C T6 855C T7 807D T8 8340 T9 6D6F T10 9A2C T11 9C93 T12 7124 T13 8A6E T14 8F95 T15 8379	--AP COUNTERS-- AP10201 0 AP10211 19747 AP10221 0 AP10231 0 AP10241 0 AP10251 0 AP10261 0 AP10271 0 AP10281 0 AP10291 0 AP102A1 0 AP102B1 0 AP102C1 0 AP102D1 0 AP102E1 0 AP102F1 0	---- MUE ---- HWSEC 00000110 UTSEC 308AEF06 UTUSEC 0000 XMITR OK RECUR_CODE_EIR ERRCNT 358 XMTCTR 30 RECCTR 104 ENABLE 31 TMRATE 0 SPSTATE 0 RPSTATE 0 STEST AA5500 FDM 91002C CCSAP 1088

CMD:1C00C000000009000000C00D8C0

UPDRATE: 144

DATE: 03-15-94  
GMT : 01:04:05

1 kHz

Figure 22

		<b>--SCOPE PARAMS--</b> U14 20 U58 1, 58J U910 1, 0J U910 1, 12 <b>-OFF-</b> Chan: 2 S/Dv 128.00 MU/Dv 0.229 Speed PKT(0.1) Trig -OFF- If > 0 Step 1	<b>--MON 030---</b> P5S7U 4.994U P5S7I 0.033A M5S7U -5.165U M5S7I 0.052A P12S7U 12.663U P12S7I 0.009A M12S7U -12.840U M12S7I 0.024A P5S8U 5.214U P5S8I 0.012A M5S8U -5.165U M5S8I 0.024A P10S8U 10.162U P10S8I 0.032A M10S8U -10.032U M10S8I 0.036A <b>--MON 046---</b> P5S9U 5.092U P5S9I 0.044A P10S9U 10.307U P10S9I 0.028A M10S9U -10.153U M10S9I 0.022A P5S10U 5.165U P5S10I 0.041A M5S10U -5.239U M5S10I 0.014A P10S10U 10.062U P10S10I 0.037A M10S10U -10.041U M10S10I 0.036A P5S11U 6.039U P5S11I 0.039A P5S11I 0.000A
<b>--TEST----</b> T0 E97F T1 FF7F T2 DB7F T3 Q280 T4 2580 T5 1380 T6 2780 T7 Q180 T8 E57F T9 FE7F T10 D87F T11 Q280 T12 2780 T13 1490 T14 2C80 T15 C6BD	<b>--AP COUNTERS--</b> APL0001 0 APL0011 0 APL0021 0 APL0031 0 APL0041 0 APL0051 0 APL0061 0 APL0071 0 APL0081 15221 APL0091 15207 APL00A1 15209 APL00B1 0 APL00C1 0 APL00D1 0 APL00E1 0 APL00F1 0	<b>--MON 096---</b> P28S23U 0.000U P28S23I 0.001A P28S24U 0.316U P28S24I 0.001A P28S25U 0.000U P28S25I 0.000A P28S26U 0.000U P28S26I 0.000A FLXTMP 149.0000C SCLTMP 149.0000C SEUSUY 0 SEU12 0 SEU34 0 SEU56 0 SEU78 0 SEUHF 0	<b>--MUE----</b> HWSEC 00000970 UTSEC 308AEF06 UTUSEC 0000 XMITR OK RECUR CODE EPR ERRCNT 532 XMICTR 434 RECCTR 108 ENABLE 31 TMRATE 0 SPSTATE 0 RPSTATE 0 STEST AA5500 FDM 91002C CCSAP 1080
			DATE: 03-15-94 UPDATE: 160 GMT : 01:05:41

1KHz

Figure 23

				-SCOPE PARAMS- MAG1DC 2 MAG1I 581 MAG2DC 0 MAG2I 0 MAG3DC 2 MAG3I -581 -OFF-
				Chan. : 2 S/Dv : 8192.00 MU/Dv : 6.25 Speed : PKT(64) Trig : OFF If > 0 Step : 1
--MON 016 --- P10S3U 4.205U P10S3I 0.004A M10S3U -4.205U M10S3I 0.004A P5S4U 0.000U P5S4I 0.000A P12S4U 5.360U P12S4I 0.000A M12S4U -5.360U M12S4I 0.004A P28S5U 4.831U P28S5I 0.017A P28S6U 0.000U P28S6I 0.001A P5S7U 4.994U P5S7I 0.039A	--MON 104 --- FLXTMP 149.000C SCLTMP 149.000C SEUSUY 0 SEU12 0 SEU34 0 SEU56 0 SEU78 0 SEUHF 0 HSBMSYN 0 HSBMRM0 0 HSBMRM1 0 DSPBOOT 0.745U LUMON 0.529U IP12P 0.549U IPSN 0.549U	--AP COUNTERS-- API[000] 0 API[001] 0 API[002] 0 API[003] 0 API[004] 0 API[005] 0 API[006] 0 API[007] 0 API[008] 16460 API[009] 16447 API[00A] 16450	--DECODE-(H)-- SELECT 0408 START 0000 END 0200 DELTA 0001 VALUE 0000 TESTAP 0408 TESTOF 0000 PACKET 0000	--UC COUNTERS-- UCI[000] 249 UCI[001] 0 UCI[002] 60737 UCI[003] 0 UCI[004] 49355 UCI[005] 0 UCI[006] 0 UCI[007] 24922

UPDATE: 416 DATE: 03-15-94  
GMT : 01:06:59

1 KHz

Figure 27

<p>-SCOPE PARAMS-</p> <p>ADC1 32511 [ 1, 0 ]</p> <p>-OFF-</p> <p>-OFF-</p> <p>-OFF-</p> <p>Chan.: S/Dv : 128.00 MU/Dv : 8.29 Speed: Pkt(01) Trig If: -OFF- Step : 1</p>			
--TEST--	--AP COUNTERS--	--QTY OUTPUTS--	--UC COUNTERS--
T0 F97F T1 FB7F T2 FD7F T3 FF7F T4 FF7F T5 Q180 T6 FF7F T7 FF7F T8 FF7F T9 FD7F T10 FF7F T11 FD7F T12 FF7F T13 FD7F T14 FB7F T15 F17F	AP[014] 0 AP[015] 0 AP[016] 0 AP[017] 0 AP[018] 33870 AP[019] 0 AP[01A] 0 AP[01B] 0 AP[01C] 0 AP[01D] 0 AP[01E] 0 AP[01F] 0 AP[020] 0 AP[021] 19978 AP[022] 0 AP[023] 0	LFF1P2 U1 U2 U3 U4 U5 U6 U7 U8 U9 U10 MAG1DC MAG2DC MAG3DC MAG1AC MAG2AC	A11D 0000 UCL[000] 231 UCL[001] 0 UCL[002] 53849 UCL[003] 0 UCL[004] 44469 UCL[005] 0 UCL[006] 0 UCL[007] 17112 0019 0000 000C 000D 0026 003A 0002 0000 0003 001D 001F
<p>--- MUE ---</p> <p>HWSEC 00000923 UTSEC 308AEF06 UTUSEC 0000 XMITR OK RECUR CODE_ERR ERRCNT 358 XMTCTR 312 RECCTR 110 ENABLE 31 TMRATE 2 SPSTATE 1 RPSTATE 3 STEST AA5500 FDM 91002C CCSAP 1088</p>			
CMD:1C000C0000000500000300D9C0		UPDRATE: 528	DATE: 03-15-94 GMT : 01:04:24

1 kHz

FIGURE 25

		<b>--SCOPE PARAMS--</b> U14 -10 [ 1, 58 ] U58 -5 [ 1, 0 ] U910 -6 [ 1, -58 ] <b>-OFF-</b>  Chan. 2 S/Dv 128.00 N/Dv 0.29 Speed PKT(0) Trig -OFF- If 0 Step 1	<b>--MON 030---</b> P5S7U 5.092U P5S7I 0.036A M5S7U -4.945U M5S7I 0.050A P12S7U 12.663U P12S7I 0.011A M12S7U -12.781U M12S7I 0.006A P5S8U 5.141U P5S8I 0.125A M5S8U -5.190U M5S8I 0.114A P10S8U 10.204U P10S8I 0.034A M10S8U -10.410U M10S8I 0.026A	<b>--MON 046---</b> P5S9U 5.141U P5S9I 0.046A P10S9U 10.205U P10S9I -10.410U M10S9U 5.116A M10S9I 0.026A P5S10U 5.116U P5S10I -5.035A M5S10U -5.165U M5S10I 0.016A P10S10U 10.204U P10S10I 0.036A M10S10U -10.410U M10S10I 0.037A P5S11U 0.539U P5S11I 0.002A
<b>--TEST-----</b> T0 0900 T1 0C80 T2 0E80 T3 0200 T4 0D80 T5 0E80 T6 1100 T7 0000 T8 1000 T9 0D80 T10 0E80 T11 0280 T12 1380 T13 0E80 T14 1380 T15 81BD	<b>--AP COUNTERS--</b> API0001 0 API0011 0 API0021 0 API0031 0 API0041 0 API0051 0 API0061 0 API0071 0 API0081 19018 API0091 19004 API00A1 19008 API00B1 0 API00C1 0 API00D1 0 API00E1 0 API00F1 0	<b>--MON 096---</b> P28S23U 0.000U P28S23I 0.000A P28S24U 7.316U P28S24I 0.002A P28S25U 0.000U P28S25I 0.003A P28S26U 0.000U P28S26I 0.000A FLXTMP 149.000C SCLTMP 149.000C SEUSUV 0 SEU12 0 SEU34 0 SEU56 0 SEU78 0 SEUHF 0	<b>--MUE----</b> HWSEC 000000A5E UTSEC 308AEF06 UTUSEC 0000 XMITR OK RECUR CODE_EHR ERRCNT 358 XMTCTR 298 RECCTR 108 ENABLE 31 TMRATE 31 SPSTATE 0 RPSTATE 0 STEST AA5500 FDM 91002C CCSAP 1088	
			UPDRATE: 144 DATE: 03-15-94	GMT: 01:09:39

2 HKLH3

FIGURE 26

				<p>-SCOPE PARAMS-</p> <p>ADCI 32511 [ 1, 0 ]</p> <p>-OFF-</p> <p>-OFF-</p> <p>Chan. 0 S/Dv 128.00 MU/Dv 8.29 Speed PKT(01) Trig -OFF- If 0 Step 1</p>																																																																																
				<p>--- TEST ---</p> <table> <tbody> <tr><td>T0</td><td>F77F</td><td>API[014]</td><td>0</td><td></td></tr> <tr><td>T1</td><td>F97F</td><td>API[015]</td><td>0</td><td></td></tr> <tr><td>T2</td><td>F77F</td><td>API[016]</td><td>0</td><td></td></tr> <tr><td>T3</td><td>F97F</td><td>API[017]</td><td>0</td><td></td></tr> <tr><td>T4</td><td>F87F</td><td>API[018]</td><td>53399</td><td></td></tr> <tr><td>T5</td><td>F97F</td><td>API[019]</td><td>0</td><td></td></tr> <tr><td>T6</td><td>F87F</td><td>API[01A]</td><td>0</td><td></td></tr> <tr><td>T7</td><td>F77F</td><td>API[01B]</td><td>0</td><td></td></tr> <tr><td>T8</td><td>F97F</td><td>API[01C]</td><td>0</td><td></td></tr> <tr><td>T9</td><td>F87F</td><td>API[01D]</td><td>0</td><td></td></tr> <tr><td>T10</td><td>FA7F</td><td>API[01E]</td><td>0</td><td></td></tr> <tr><td>T11</td><td>FA7F</td><td>API[01F]</td><td>0</td><td></td></tr> <tr><td>T12</td><td>FB7F</td><td>API[020]</td><td>0</td><td></td></tr> <tr><td>T13</td><td>F97F</td><td>API[021]</td><td>19978</td><td></td></tr> <tr><td>T14</td><td>FA7F</td><td>API[022]</td><td>0</td><td></td></tr> <tr><td>T15</td><td>F77F</td><td>API[023]</td><td>0</td><td></td></tr> </tbody> </table>	T0	F77F	API[014]	0		T1	F97F	API[015]	0		T2	F77F	API[016]	0		T3	F97F	API[017]	0		T4	F87F	API[018]	53399		T5	F97F	API[019]	0		T6	F87F	API[01A]	0		T7	F77F	API[01B]	0		T8	F97F	API[01C]	0		T9	F87F	API[01D]	0		T10	FA7F	API[01E]	0		T11	FA7F	API[01F]	0		T12	FB7F	API[020]	0		T13	F97F	API[021]	19978		T14	FA7F	API[022]	0		T15	F77F	API[023]	0	
T0	F77F	API[014]	0																																																																																	
T1	F97F	API[015]	0																																																																																	
T2	F77F	API[016]	0																																																																																	
T3	F97F	API[017]	0																																																																																	
T4	F87F	API[018]	53399																																																																																	
T5	F97F	API[019]	0																																																																																	
T6	F87F	API[01A]	0																																																																																	
T7	F77F	API[01B]	0																																																																																	
T8	F97F	API[01C]	0																																																																																	
T9	F87F	API[01D]	0																																																																																	
T10	FA7F	API[01E]	0																																																																																	
T11	FA7F	API[01F]	0																																																																																	
T12	FB7F	API[020]	0																																																																																	
T13	F97F	API[021]	19978																																																																																	
T14	FA7F	API[022]	0																																																																																	
T15	F77F	API[023]	0																																																																																	
--AP COUNTERS--	--QTY OUTPUTS--	--UC COUNTERS--	-- MUE ---																																																																																	
	LFF1P2 9F08 U1 0000 U2 0010 U3 000F U4 0006 U5 0000 U6 000D U7 0010 U8 FFFF U9 0000 U10 0011 MAG1DC 0002 MAG2DC 0001 MAG3DC 0002 MAG1AC 0003 MAG2AC 0009	VC[000] 277 VC[001] 0 VC[002] 7842 VC[003] 0 VC[004] 59624 VC[005] 0 VC[006] 0 VC[007] 27107	HWSEC 00000AAB UTSEC 308AEF06 UTUSEC 0000 XMITR OK RECUR CODE_ERR ERRCNT 358 XMTCTR 434 RECCTR 108 ENABLE 31 TMRATE 25 SPSTATE 00 RPSTATE 00 TEST AA5500 FDM 91002C CCSAP 0																																																																																	

UPDRATE: 544 DATE: 03-15-94  
GMT : 01:10:56

2 kHz

Figure 27

	--MON 016---	--MON 030---	--MON 046---
	P10S3U 4.154U P10S3I 0.003A M10S3U -4.205U M10S3I 0.000A P5S4U 0.000U P5S4I 0.000A P12S4U 5.242U P12S4I 0.001A M12S4U -5.301U M12S4I 0.004A P28S5U 4.831U P28S5I 0.017A P28S6U 0.000U P28S6I 0.001A P5S7U 5.092U P5S7I 0.035A	P5S7U 5.092U P5S7I 0.035A M5S7U -4.945U M5S7I 0.055U P12S7U 1.20.605U P12S7I 0.010A M12S7U -1.20.722U M12S7I 0.007A P5S8U 0.000U P5S8I 0.000A M5S8U -0.116U M5S8I 0.012A P10S8U 0.000U P10S8I 0.000A M10S8U -10.358U M10S8I 0.039A P10S9U 0.000U P10S9I 0.000A M10S9U -10.359U M10S9I 0.036A P5S10U 0.000U P5S10I 0.000A M5S10U -0.165U M5S10I 0.016A P10S10U 10.256U P10S10I 0.038A M10S10U -10.359U M10S10I 0.036A P5S11U 0.000U P5S11I 0.000A	P5S9U 5.165U P5S9I 0.046A P10S9U 10.256U P10S9I 0.026A M10S9U -10.359U M10S9I 0.026A P5S10U 0.014A P5S10I 0.003A M5S10U -0.165U M5S10I 0.016A P10S10U 10.256U P10S10I 0.038A M10S10U -10.359U M10S10I 0.036A P5S11U 0.000U P5S11I 0.000A
FFT ( SFA1 )			
FFTSC 256 dB			
Peak -102.0 dB			
Freq 0.0 Hz			
---TEST---	--AP COUNTERS--		--- MUE ---
T0 550A	API0020I 0		HWSSEC 00000AF5
T1 6B57	API0021I 20308		UTSEC 308AEF06
T2 7B07	API0022I 0		UTUSEC 0000
T3 7670	API0023I 0		XMITR OK
T4 4E17	API0024I 0		RECOR CODE ECR
T5 4A49	API0025I 0		ERRCNT 358
T6 615A	API0026I 0		XMTCTR 30
T7 735C	API0027I 0		RECCTR 104
T8 7640	API0028I 0		ENABLE 31
T9 887E	API0029I 0		TMRATE 2
T10 842B	API002AII 0		SPSTATE 0
T11 9983	API002BI 0		RPSTATE 0
T12 818E	API002CI 0		STEST AA5500
T13 786B	API002DI 0		FDM 91002C
T14 8283	API002EI 0		CCSAP 1080
T15 8573	API002FI 0		

CMD:1C000C000000050000000005A8CD

UPDRATE: 272

DATE: 03-15-94  
GMT : 01:12:10

2 kbt3

F-16 ORC 28

		--MON 016---	--MON 030---	--MON 046---	
P10S3U	4.154U	P5S7U	5.043U	P5S9U	5.092U
P10S3I	0.001A	P5S7I	0.035A	P5S9I	0.045A
M10S3U	-4.205U	M5S7U	-4.896U	P10S9U	10.025U
M10S3I	0.000A	M5S7I	0.051A	P10S9I	-10.359U
P5S4U	0.000U	P12S7U	12.663U	M10S10U	0.025A
P5S4I	0.000A	P12S7I	-12.722U	P5S10U	0.116U
P12S4U	5.301U	M12S7U	-12.722U	P5S10I	-0.038A
P12S4I	0.000A	M12S7I	0.09922A	M5S10U	-0.147U
M12S4U	-5.301U	P5S68U	0.09922A	M5S10I	0.057A
M12S4I	0.000A	P5S68I	-0.12222A	P10S10U	10.153U
P28S5U	4.0.831U	M5S68U	-0.12222A	P10S10I	10.035U
P28S5I	0.0.817U	M5S68I	0.12222A	M10S10U	-10.037A
P28S6U	0.0.000U	P10S8U	10.024U	M10S10I	0.037A
P28S6I	0.0.001A	P10S8I	10.032A	P5S11U	0.539U
P5S7U	5.0.043U	M10S8U	-10.026A	P5S11I	0.000A
P5S7I	0.0.035A	M10S8I	0.026A		
<b>FFT &lt; SFA1 &gt;</b> <b>FFTSC 256 dB</b> <b>Peak -100.0 dB</b> <b>Freq 0.0 Hz</b>					
<b>TEST</b> T0 7515 T1 6764 T2 530C T3 4741 T4 4E24 T5 473F T6 5B4D T7 5B44 T8 323F T9 6325 T10 7725 T11 7823 T12 7F21 T13 7E78 T14 7F23 T15 7D77	<b>AP COUNTERS</b> APL0201 21507 APL0211 00000 APL0221 00000 APL0231 00000 APL0241 00000 APL0251 00000 APL0261 00000 APL0271 00000 APL0281 00000 APL0291 00000 APL02A1 00000 APL02B1 00000 APL02C1 00000 APL02D1 00000 APL02E1 00000 APL02F1 00000			<b>MUE</b> HWSEC 000000B61 UTSEC 308AEF06 UTUSEC 00000 XMITR 0OK RECUR 0 CODE ERN ERRCNT 358 XMTCTR 434 RECCTR 108 ENABLE 31 TMRATE 2 SPSTATE 1 RPSTATE 1 STEST AA5500 FDM 91002C CCSAP 1080	
CMD:1C00C00000005000000005A8CD		UPDRATE: 256	DATE: 03-15-94	GMT : 01:13:58	

4k1b

Figure 29

				-SCOPE PARAMS- ADC1 32511 [ 1, 0 ] -OFF- -OFF- Chan. S/Dv 128.00 mV/Dv 8.29 Speed PKT(01) Trig -OFF- If > 0 Step 1																																																																																																														
				--- TEST --- <table border="1"> <tr><td>T0</td><td>F97F</td><td>--AP COUNTERS--</td><td>--QTY OUTPUTS--</td><td>--VC COUNTERS--</td></tr> <tr><td>T1</td><td>FA7F</td><td>APL014J</td><td>0</td><td>UCL[000] 299</td></tr> <tr><td>T2</td><td>F97F</td><td>APL015J</td><td>0</td><td>UCL[001] 0</td></tr> <tr><td>T3</td><td>F97F</td><td>APL016J</td><td>0</td><td>UCL[002] 9883</td></tr> <tr><td>T4</td><td>F87F</td><td>APL017J</td><td>0</td><td>UCL[003] 0</td></tr> <tr><td>T5</td><td>F77F</td><td>APL018J</td><td>53706</td><td>UCL[004] 59624</td></tr> <tr><td>T6</td><td>F57F</td><td>APL019J</td><td>0</td><td>UCL[005] 0</td></tr> <tr><td>T7</td><td>F87F</td><td>APL01A0J</td><td>0</td><td>UCL[006] 0</td></tr> <tr><td>T8</td><td>F87F</td><td>APL01B0J</td><td>0</td><td>UCL[007] 9327</td></tr> <tr><td>T9</td><td>FA7F</td><td>APL01C0J</td><td>0</td><td></td></tr> <tr><td>T10</td><td>FA7F</td><td>APL01D0J</td><td>0</td><td></td></tr> <tr><td>T11</td><td>F97F</td><td>APL01E0J</td><td>0</td><td></td></tr> <tr><td>T12</td><td>F77F</td><td>APL01F0J</td><td>0</td><td></td></tr> <tr><td>T13</td><td>F77F</td><td>APL0200J</td><td>0</td><td></td></tr> <tr><td>T14</td><td>F77F</td><td>APL0210J</td><td>21712</td><td></td></tr> <tr><td>T15</td><td>F97F</td><td>APL0220J</td><td>0</td><td></td></tr> </table> --- MUE --- <table border="1"> <tr><td>HWSEC</td><td>00000B7B</td></tr> <tr><td>UTSEC</td><td>308AEF06</td></tr> <tr><td>UTUSEC</td><td>0000</td></tr> <tr><td>XMITR</td><td>OK</td></tr> <tr><td>RECUR</td><td>CODE_ERR</td></tr> <tr><td>ERRCNT</td><td>358</td></tr> <tr><td>XMTCTR</td><td>434</td></tr> <tr><td>RECCTR</td><td>108</td></tr> <tr><td>ENABLE</td><td>31</td></tr> <tr><td>TMRATE</td><td>2</td></tr> <tr><td>SPSTATE</td><td>1</td></tr> <tr><td>NPSTATE</td><td>3</td></tr> <tr><td>STEST</td><td>AA5500</td></tr> <tr><td>FDM</td><td>91002C</td></tr> <tr><td>CCSAP</td><td>1083</td></tr> </table>	T0	F97F	--AP COUNTERS--	--QTY OUTPUTS--	--VC COUNTERS--	T1	FA7F	APL014J	0	UCL[000] 299	T2	F97F	APL015J	0	UCL[001] 0	T3	F97F	APL016J	0	UCL[002] 9883	T4	F87F	APL017J	0	UCL[003] 0	T5	F77F	APL018J	53706	UCL[004] 59624	T6	F57F	APL019J	0	UCL[005] 0	T7	F87F	APL01A0J	0	UCL[006] 0	T8	F87F	APL01B0J	0	UCL[007] 9327	T9	FA7F	APL01C0J	0		T10	FA7F	APL01D0J	0		T11	F97F	APL01E0J	0		T12	F77F	APL01F0J	0		T13	F77F	APL0200J	0		T14	F77F	APL0210J	21712		T15	F97F	APL0220J	0		HWSEC	00000B7B	UTSEC	308AEF06	UTUSEC	0000	XMITR	OK	RECUR	CODE_ERR	ERRCNT	358	XMTCTR	434	RECCTR	108	ENABLE	31	TMRATE	2	SPSTATE	1	NPSTATE	3	STEST	AA5500	FDM	91002C	CCSAP	1083
T0	F97F	--AP COUNTERS--	--QTY OUTPUTS--	--VC COUNTERS--																																																																																																														
T1	FA7F	APL014J	0	UCL[000] 299																																																																																																														
T2	F97F	APL015J	0	UCL[001] 0																																																																																																														
T3	F97F	APL016J	0	UCL[002] 9883																																																																																																														
T4	F87F	APL017J	0	UCL[003] 0																																																																																																														
T5	F77F	APL018J	53706	UCL[004] 59624																																																																																																														
T6	F57F	APL019J	0	UCL[005] 0																																																																																																														
T7	F87F	APL01A0J	0	UCL[006] 0																																																																																																														
T8	F87F	APL01B0J	0	UCL[007] 9327																																																																																																														
T9	FA7F	APL01C0J	0																																																																																																															
T10	FA7F	APL01D0J	0																																																																																																															
T11	F97F	APL01E0J	0																																																																																																															
T12	F77F	APL01F0J	0																																																																																																															
T13	F77F	APL0200J	0																																																																																																															
T14	F77F	APL0210J	21712																																																																																																															
T15	F97F	APL0220J	0																																																																																																															
HWSEC	00000B7B																																																																																																																	
UTSEC	308AEF06																																																																																																																	
UTUSEC	0000																																																																																																																	
XMITR	OK																																																																																																																	
RECUR	CODE_ERR																																																																																																																	
ERRCNT	358																																																																																																																	
XMTCTR	434																																																																																																																	
RECCTR	108																																																																																																																	
ENABLE	31																																																																																																																	
TMRATE	2																																																																																																																	
SPSTATE	1																																																																																																																	
NPSTATE	3																																																																																																																	
STEST	AA5500																																																																																																																	
FDM	91002C																																																																																																																	
CCSAP	1083																																																																																																																	
CMD: 1C000C000000050000003000D9C0				DATE: 03-15-94 UPDRATE: 368 GMT : 01:14:24																																																																																																														

4/2/93

Figure 30

		<b>--SCOPE PARAMS--</b> U14 1, 581 4 U58 1, 6 6 U910 1, 01 4 L 1, -581 -OFF-  Chan. S/Dv 128.00 2 MV/Dv 8.29 8 Speed PKT<01> Trig -OFF- If > 0 Step 1	<b>--MON 030---</b> P5S7U 5.043U P5S7I 0.036A M5S7U -4.896U M5S7I 0.050A P12S7U 12.663U P12S7I 0.011A M12S7U -12.722U M12S7I 0.066A P5S8U 5.092U P5S8I 0.118A M5S8U -5.165U M5S8I 0.110A P10S8U 10.204U P10S8I 0.035A M10S8U -10.410U M10S8I 0.027A	<b>--MON 046---</b> P5S9U 5.092U P5S9I 0.045A P10S9U 10.153U P10S9I -10.626A M10S9U -10.410A M10S9I 0.025A P5S10U 5.141U P5S10I 0.038A M5S10U -5.214U M5S10I 0.016A P10S10U 10.256U P10S10I 0.035A M10S10U -10.461U M10S10I 0.036A P5S11U 0.539U P5S11I 0.000A
<b>--TEST----</b> T0 0680 APL0001 0 T1 0680 APL0011 0 T2 0680 APL0021 0 T3 0380 APL0031 0 T4 0480 APL0041 0 T5 0680 APL0051 0 T6 0280 APL0061 0 T7 0180 APL0071 0 T8 0680 APL0081 20030 T9 0580 APL0091 20017 T10 0580 APL00A1 20020 T11 0380 APL00B1 0 T12 0580 APL00C1 0 T13 0780 APL00D1 0 T14 0680 APL00E1 0 T15 34BD APL00F1 0	<b>--AP COUNTERS-</b> 	<b>--MON 096---</b> P28S223U 0.000U P28S223I 0.001A P28S224U 7.454U P28S224I 0.002A P28S225U 0.000U P28S225I 0.000A P28S226U 0.000U P28S226I 0.000A FLXTMP 149.000C SCLTMP 149.000C SEUSUV 0 SEU12 0 SEU34 0 SEU56 0 SEU78 0 SEUHF 0		<b>-- MUE ---</b> HWSEC 000000BA0 UTSEC 308AEFB6 UTUSEC 0000 XMIIR OK RECUR CODE ERR ERRCNT 358 XMTCTR 96 RECCTR 106 ENABLE 31 TMRATE 0 SPSTATE 0 RPSTATE 0 STEST AA5500 FDM 91002C CCSAP 1086

CMD:1C000C000001D0000000000A8CD

UPDRATE: 288

DATE: 03-15-94  
GMT : 01:15:00

4h63

FIGURE 31

		<p><b>-SCOPE PARAMS-</b></p> <table border="0"> <tr><td>U14</td><td>5</td></tr> <tr><td>[</td><td>1.</td></tr> <tr><td>U58</td><td>581</td></tr> <tr><td>[</td><td>6</td></tr> <tr><td>U910</td><td>01</td></tr> <tr><td>[</td><td>10</td></tr> <tr><td>-OFF-</td><td>-581</td></tr> <tr><td>Chan.</td><td>2</td></tr> <tr><td>S/Dv.</td><td>128.00</td></tr> <tr><td>MU/Dv</td><td>8.29</td></tr> <tr><td>Speed</td><td>PKT(01)</td></tr> <tr><td>Trig</td><td>-OFF-</td></tr> <tr><td>If &gt;</td><td>0</td></tr> <tr><td>Step</td><td>1</td></tr> </table>	U14	5	[	1.	U58	581	[	6	U910	01	[	10	-OFF-	-581	Chan.	2	S/Dv.	128.00	MU/Dv	8.29	Speed	PKT(01)	Trig	-OFF-	If >	0	Step	1	<p><b>--MON 030---</b></p> <table border="0"> <tr><td>P5S7U</td><td>5.043V</td></tr> <tr><td>P5S7I</td><td>0.036A</td></tr> <tr><td>M5S7U</td><td>-4.896V</td></tr> <tr><td>M5S7I</td><td>0.050A</td></tr> <tr><td>P12S7U</td><td>12.663U</td></tr> <tr><td>P12S7I</td><td>0.010A</td></tr> <tr><td>M12S7U</td><td>-12.722U</td></tr> <tr><td>M12S7I</td><td>0.006A</td></tr> <tr><td>P5S8U</td><td>0.092A</td></tr> <tr><td>P5S8I</td><td>0.122A</td></tr> <tr><td>M5S8U</td><td>-5.165V</td></tr> <tr><td>M5S8I</td><td>0.115V</td></tr> <tr><td>P10S8U</td><td>10.256U</td></tr> <tr><td>P10S8I</td><td>0.033A</td></tr> <tr><td>M10S8U</td><td>-10.461V</td></tr> <tr><td>M10S8I</td><td>0.026A</td></tr> </table>	P5S7U	5.043V	P5S7I	0.036A	M5S7U	-4.896V	M5S7I	0.050A	P12S7U	12.663U	P12S7I	0.010A	M12S7U	-12.722U	M12S7I	0.006A	P5S8U	0.092A	P5S8I	0.122A	M5S8U	-5.165V	M5S8I	0.115V	P10S8U	10.256U	P10S8I	0.033A	M10S8U	-10.461V	M10S8I	0.026A	<p><b>--MON 046---</b></p> <table border="0"> <tr><td>P5S9U</td><td>5.116V</td></tr> <tr><td>P5S9I</td><td>0.045A</td></tr> <tr><td>P10S9U</td><td>10.205U</td></tr> <tr><td>P10S9I</td><td>0.027A</td></tr> <tr><td>M10S9U</td><td>-10.259V</td></tr> <tr><td>M10S9I</td><td>0.026A</td></tr> <tr><td>P5S10U</td><td>5.116V</td></tr> <tr><td>P5S10I</td><td>0.038A</td></tr> <tr><td>M5S10U</td><td>-5.190V</td></tr> <tr><td>M5S10I</td><td>0.016A</td></tr> <tr><td>P10S10U</td><td>10.204U</td></tr> <tr><td>P10S10I</td><td>0.037A</td></tr> <tr><td>M10S10U</td><td>-10.410V</td></tr> <tr><td>M10S10I</td><td>0.037A</td></tr> <tr><td>P5S11U</td><td>0.539V</td></tr> <tr><td>P5S11I</td><td>0.000A</td></tr> </table>	P5S9U	5.116V	P5S9I	0.045A	P10S9U	10.205U	P10S9I	0.027A	M10S9U	-10.259V	M10S9I	0.026A	P5S10U	5.116V	P5S10I	0.038A	M5S10U	-5.190V	M5S10I	0.016A	P10S10U	10.204U	P10S10I	0.037A	M10S10U	-10.410V	M10S10I	0.037A	P5S11U	0.539V	P5S11I	0.000A																															
U14	5																																																																																																																														
[	1.																																																																																																																														
U58	581																																																																																																																														
[	6																																																																																																																														
U910	01																																																																																																																														
[	10																																																																																																																														
-OFF-	-581																																																																																																																														
Chan.	2																																																																																																																														
S/Dv.	128.00																																																																																																																														
MU/Dv	8.29																																																																																																																														
Speed	PKT(01)																																																																																																																														
Trig	-OFF-																																																																																																																														
If >	0																																																																																																																														
Step	1																																																																																																																														
P5S7U	5.043V																																																																																																																														
P5S7I	0.036A																																																																																																																														
M5S7U	-4.896V																																																																																																																														
M5S7I	0.050A																																																																																																																														
P12S7U	12.663U																																																																																																																														
P12S7I	0.010A																																																																																																																														
M12S7U	-12.722U																																																																																																																														
M12S7I	0.006A																																																																																																																														
P5S8U	0.092A																																																																																																																														
P5S8I	0.122A																																																																																																																														
M5S8U	-5.165V																																																																																																																														
M5S8I	0.115V																																																																																																																														
P10S8U	10.256U																																																																																																																														
P10S8I	0.033A																																																																																																																														
M10S8U	-10.461V																																																																																																																														
M10S8I	0.026A																																																																																																																														
P5S9U	5.116V																																																																																																																														
P5S9I	0.045A																																																																																																																														
P10S9U	10.205U																																																																																																																														
P10S9I	0.027A																																																																																																																														
M10S9U	-10.259V																																																																																																																														
M10S9I	0.026A																																																																																																																														
P5S10U	5.116V																																																																																																																														
P5S10I	0.038A																																																																																																																														
M5S10U	-5.190V																																																																																																																														
M5S10I	0.016A																																																																																																																														
P10S10U	10.204U																																																																																																																														
P10S10I	0.037A																																																																																																																														
M10S10U	-10.410V																																																																																																																														
M10S10I	0.037A																																																																																																																														
P5S11U	0.539V																																																																																																																														
P5S11I	0.000A																																																																																																																														
<p><b>--TEST----</b></p> <table border="0"> <tr><td>T0</td><td>0380</td></tr> <tr><td>T1</td><td>0580</td></tr> <tr><td>T2</td><td>0380</td></tr> <tr><td>T3</td><td>0380</td></tr> <tr><td>T4</td><td>0680</td></tr> <tr><td>T5</td><td>0780</td></tr> <tr><td>T6</td><td>0780</td></tr> <tr><td>T7</td><td>0180</td></tr> <tr><td>T8</td><td>0580</td></tr> <tr><td>T9</td><td>0780</td></tr> <tr><td>T10</td><td>0380</td></tr> <tr><td>T11</td><td>0380</td></tr> <tr><td>T12</td><td>0680</td></tr> <tr><td>T13</td><td>0880</td></tr> <tr><td>T14</td><td>0980</td></tr> <tr><td>T15</td><td>27BD</td></tr> </table>	T0	0380	T1	0580	T2	0380	T3	0380	T4	0680	T5	0780	T6	0780	T7	0180	T8	0580	T9	0780	T10	0380	T11	0380	T12	0680	T13	0880	T14	0980	T15	27BD	<p><b>--AP COUNTERS-</b></p> <table border="0"> <tr><td>APL0001</td><td>0</td></tr> <tr><td>APL0011</td><td>0</td></tr> <tr><td>APL0021</td><td>0</td></tr> <tr><td>APL0031</td><td>0</td></tr> <tr><td>APL0041</td><td>0</td></tr> <tr><td>APL0051</td><td>0</td></tr> <tr><td>APL0061</td><td>0</td></tr> <tr><td>APL0071</td><td>0</td></tr> <tr><td>APL0081</td><td>210003</td></tr> <tr><td>APL0091</td><td>209988</td></tr> <tr><td>APL00A1</td><td>209992</td></tr> <tr><td>APL00B1</td><td>0</td></tr> <tr><td>APL00C1</td><td>0</td></tr> <tr><td>APL00D1</td><td>0</td></tr> <tr><td>APL00E1</td><td>0</td></tr> <tr><td>APL00F1</td><td>0</td></tr> </table>	APL0001	0	APL0011	0	APL0021	0	APL0031	0	APL0041	0	APL0051	0	APL0061	0	APL0071	0	APL0081	210003	APL0091	209988	APL00A1	209992	APL00B1	0	APL00C1	0	APL00D1	0	APL00E1	0	APL00F1	0	<p><b>--MON 096---</b></p> <table border="0"> <tr><td>P28S23U</td><td>0.000V</td></tr> <tr><td>P28S2231</td><td>0.001A</td></tr> <tr><td>P28S224U</td><td>7.454V</td></tr> <tr><td>P28S241</td><td>0.002A</td></tr> <tr><td>P28S250</td><td>0.000V</td></tr> <tr><td>P28S251</td><td>0.025A</td></tr> <tr><td>P28S260</td><td>0.000V</td></tr> <tr><td>P28S261</td><td>0.000A</td></tr> <tr><td>FLXTMP</td><td>149.000C</td></tr> <tr><td>SCLTMP</td><td>149.000C</td></tr> <tr><td>SEU5UY</td><td>0</td></tr> <tr><td>SEU12</td><td>0</td></tr> <tr><td>SEU34</td><td>0</td></tr> <tr><td>SEU56</td><td>0</td></tr> <tr><td>SEU78</td><td>0</td></tr> <tr><td>SEUHF</td><td>0</td></tr> </table>	P28S23U	0.000V	P28S2231	0.001A	P28S224U	7.454V	P28S241	0.002A	P28S250	0.000V	P28S251	0.025A	P28S260	0.000V	P28S261	0.000A	FLXTMP	149.000C	SCLTMP	149.000C	SEU5UY	0	SEU12	0	SEU34	0	SEU56	0	SEU78	0	SEUHF	0	<p><b>--MUE----</b></p> <table border="0"> <tr><td>HWSEC</td><td>00000BDC</td></tr> <tr><td>UTSEC</td><td>368AEF06</td></tr> <tr><td>XMITR</td><td>000</td></tr> <tr><td>RECUR</td><td>CODE_ERR</td></tr> <tr><td>ERRCNT</td><td>358</td></tr> <tr><td>XMTCTR</td><td>434</td></tr> <tr><td>RECCCTR</td><td>108</td></tr> <tr><td>ENABLE</td><td>31</td></tr> <tr><td>TMRATE</td><td>0</td></tr> <tr><td>SPSTATE</td><td>0</td></tr> <tr><td>RPSTATE</td><td>0</td></tr> <tr><td>STEST</td><td>AA55000</td></tr> <tr><td>FDM</td><td>91002C</td></tr> <tr><td>CCSAP</td><td>1083</td></tr> </table>	HWSEC	00000BDC	UTSEC	368AEF06	XMITR	000	RECUR	CODE_ERR	ERRCNT	358	XMTCTR	434	RECCCTR	108	ENABLE	31	TMRATE	0	SPSTATE	0	RPSTATE	0	STEST	AA55000	FDM	91002C	CCSAP	1083
T0	0380																																																																																																																														
T1	0580																																																																																																																														
T2	0380																																																																																																																														
T3	0380																																																																																																																														
T4	0680																																																																																																																														
T5	0780																																																																																																																														
T6	0780																																																																																																																														
T7	0180																																																																																																																														
T8	0580																																																																																																																														
T9	0780																																																																																																																														
T10	0380																																																																																																																														
T11	0380																																																																																																																														
T12	0680																																																																																																																														
T13	0880																																																																																																																														
T14	0980																																																																																																																														
T15	27BD																																																																																																																														
APL0001	0																																																																																																																														
APL0011	0																																																																																																																														
APL0021	0																																																																																																																														
APL0031	0																																																																																																																														
APL0041	0																																																																																																																														
APL0051	0																																																																																																																														
APL0061	0																																																																																																																														
APL0071	0																																																																																																																														
APL0081	210003																																																																																																																														
APL0091	209988																																																																																																																														
APL00A1	209992																																																																																																																														
APL00B1	0																																																																																																																														
APL00C1	0																																																																																																																														
APL00D1	0																																																																																																																														
APL00E1	0																																																																																																																														
APL00F1	0																																																																																																																														
P28S23U	0.000V																																																																																																																														
P28S2231	0.001A																																																																																																																														
P28S224U	7.454V																																																																																																																														
P28S241	0.002A																																																																																																																														
P28S250	0.000V																																																																																																																														
P28S251	0.025A																																																																																																																														
P28S260	0.000V																																																																																																																														
P28S261	0.000A																																																																																																																														
FLXTMP	149.000C																																																																																																																														
SCLTMP	149.000C																																																																																																																														
SEU5UY	0																																																																																																																														
SEU12	0																																																																																																																														
SEU34	0																																																																																																																														
SEU56	0																																																																																																																														
SEU78	0																																																																																																																														
SEUHF	0																																																																																																																														
HWSEC	00000BDC																																																																																																																														
UTSEC	368AEF06																																																																																																																														
XMITR	000																																																																																																																														
RECUR	CODE_ERR																																																																																																																														
ERRCNT	358																																																																																																																														
XMTCTR	434																																																																																																																														
RECCCTR	108																																																																																																																														
ENABLE	31																																																																																																																														
TMRATE	0																																																																																																																														
SPSTATE	0																																																																																																																														
RPSTATE	0																																																																																																																														
STEST	AA55000																																																																																																																														
FDM	91002C																																																																																																																														
CCSAP	1083																																																																																																																														

8 k 143

Figure 32

				-SCOPE PARAMS- ADC1 32511 L 1, 0 -OFF- -OFF-	
				Chan. S/Dv 0 mU/Dv 128.00 Speed 8.29 Trig PKT(01) If > -OFF- Step 1	
---TEST---	--AP COUNTERS-- T0 F97F APL[014] 0 T1 F97F APL[015] 0 T2 F77F APL[016] 0 T3 F77F APL[017] 0 T4 F97F APL[018] 59552 T5 FA7F APL[019] 0 T6 F97F APL[01A] 0 T7 F87F APL[01B] 0 T8 FB7F APL[01C] 0 T9 FA7F APL[01D] 0 T10 F97F APL[01E] 0 T11 F97F APL[01F] 0 T12 F97F APL[020] 0 T13 F87F APL[021] 21712 T14 F77F APL[022] 0 T15 F97F APL[023] 0	--QTY OUTPUTS-- LFF1P2 A30D U1 0000 U2 0007 U3 0004 U4 FFFE U5 0000 U6 0004 U7 0009 U8 FFFF U9 0000 U10 FFFF MAC1DC 0003 MAC2DC 0001 MAC3DC 0003 MAG1AC FFFF MAG2AC 0003	--UC COUNTERS-- UCL[000] 310 UCL[001] 0 UCL[002] 15729 UCL[003] 0 UCL[004] 63474 UCL[005] 0 UCL[006] 0 UCL[007] 13807	--- MUE ---- HHSEC 0000BF3 UTSEC 308AEFG6 UTUSEC 0000 XMITR OK RECUR_CODE_ERR ERRCNT 356 XMTCTR 434 RECCTR 108 ENABLE 31 TMRATE 2 SPSTATE 1 RPSTATE 3 STEST AA5500 FDM 910024 CCSAP 1084	CMD:1C00C00000050000030009C0
				UPDRATE: 352	DATE: 03-15-94 GMT : 01:16:24

6k b

Figure 33

	--MON 016 --- P10S3U 4.154U P10S3I 0.001A M10S3U -4.256U M10S3I 0.001A P5S4U 0.000A P5S4I 0.000A P12S4U 5.301U P12S4I 0.000A M12S4U -5.301U M12S4I 0.004A P28S5U 4.831U P28S5I 0.017A P28S6U 0.000U P28S6I 0.001A P5S7U 5.092U P5S7I 0.036A	--MON 030 --- P5S7U 5.092U P5S7I 0.036A M5S7U -4.096U M5S7I 0.050A P12S7U 12.653U P12S7I 0.009A M12S7U -12.722U M12S7I 0.007A P5S8U 5.092U P5S8I 0.012A M5S8U -5.141U M5S8I 0.012A P10S8U 10.256U P10S8I 0.034A M10S8U -10.461U M10S8I 0.026A	--MON 046 --- P5S9U 5.116U P5S9I 0.045A P10S9U 10.026A P10S9I 0.026A M10S9U -10.416U M10S9I 0.026A P5S10U 5.116U P5S10I 0.038A M5S10U -5.165U M5S10I 0.017A P10S10U 10.204U P10S10I 0.037A M10S10U -10.359U M10S10I 0.037A P5S11U 0.539U P5S11I 0.002A
FFT ( SFA1 ) FFTSC 256 dB Peak -101.0 dB Freq 0.0 Hz			
---TEST----- T0 3A19 APL020I 0 T1 4236 APL021I 22118 T2 4D15 APL022I 0 T3 4E42 APL023I 0 T4 341B APL024I 0 T5 322B3 APL025I 0 T6 605B APL026I 0 T7 4246 APL027I 0 T8 3E53F APL028I 0 T9 0932D APL029I 0 T10 09326 APL02AII 0 T11 5B38 APL02BII 0 T12 8D96 APL02CII 0 T13 4772 APL02DII 0 T14 8F9A APL02EII 0 T15 7677 APL02FII 0	--AP COUNTERS-- APL020I 0 APL021I 22118 APL022I 0 APL023I 0 APL024I 0 APL025I 0 APL026I 0 APL027I 0 APL028I 0 APL029I 0 APL02AII 0 APL02BII 0 APL02CII 0 APL02DII 0 APL02EII 0 APL02FII 0		--- MUE ----- HWSEC 000000C36 UTSEC 308AEF06 UTUSEC 0000 XMITR OK RECUR_CODE_ERR ERRCNT 358 XMTCTR 298 RECCTR 108 ENABLE 31 TMRATE 0 SPSTATE 0 RPSTATE 1 STEST AA5500 FDM 91002C CCSAP 1088

CMD:1C000C000000900000C000D8C0

UPDRATE: 256

DATE: 03-15-94  
GMT : 01:17:30

16 kHz

Figure 34

	--MON 016-- P10S3U 4.154U P10S3I 0.001A M10S3U -4.256U M10S3I 0.000A P5S4U 0.000U P5S4I 0.000A P12S4U 5.301U P12S4I 0.000A M12S4U -5.301U M12S4I 0.003A P28S5U 4.833U P28S5I 0.017A P28S6U 0.000U P28S6I 0.001A P5S7U 5.043U P5S7I 0.036A	--MON 030-- P5S7U 5.043U P5S7I 0.036A M5S7U -4.920U M5S7I 0.050A P12S7U 12.605U P12S7I -12.722U M12S7U 5.092U M12S7I 5.092U P5S8U 5.092U P5S8I 5.092U M5S8U -5.125U M5S8I -5.214U P10S8U 1.060A P10S8I 1.060A M10S8U -1.041U M10S8I 0.034A P10S9U 1.060A P10S9I 0.026A	--MON 046-- P5S9U 5.092U P5S9I 0.045A P10S9U 1.060A P10S9I -1.041U M10S9U 5.025A M10S9I 5.116U P5S10U 5.038A P5S10I 5.038A M5S10U -5.214U P10S10U 1.060A P10S10I 1.060A M10S10U -1.041U M10S10I 0.036A P5S11U 0.036A P5S11I 0.002A
FFT ( SFA1 ) FFTSC 256 dB Peak -98.0 dB Freq 0.0 Hz	---TEST---- T0 3209 T1 2F2F T2 3D97 T3 4E36 T4 6225 T5 4C4E T6 594B T7 5A48 T8 343E T9 5C22 T10 1C21 T11 3E1C T12 4218 T13 4133 T14 461D T15 4B3F	--AP COUNTERS-- APL0201 0 APL0211 23290 APL0221 0 APL0231 0 APL0241 0 APL0251 0 APL0261 0 APL0271 0 APL0281 0 APL0291 0 APL02A1 0 APL02B1 0 APL02C1 0 APL02D1 0 APL02E1 0 APL02F1 0	--- MUE --- HWSEC 00000C9B UTSEC 308AEF06 UTUSEC 0000 XMTRB OK RECUR_CODE_ERR ERRCNT 338 XMITCTR 434 RECCTR 108 ENABLE 31 TMRATE 22 SFSTATE 1 RFSTATE 1 STEST AA55500 FDM 91002C CCSAP 1082

CMD:1C000C00000005000000005ABCDEF

UPDRATE: 176

DATE: 03-15-94  
GMT : 01:19:12

S k B

Figure 35

		<b>-SCOPE PARAMS-</b> U14 1. 581 U58 1. 8 U910 1. 6 U910 1. -581 <b>-OFF-</b> Chan: S/Dv 128.00 MU/Dv 0.029 Speed PKT(61) Trig -OFF- If > 0 Step 1	<b>--MON 030---</b> P5S7U 5.092U P5S7I 0.035A M5S7U -4.872U M5S7I 0.052A P12S7U 1.20.663U P12S7I -1.20.663U P5S8U 0.092U P5S8I 0.125U M10S8U -0.050A M10S8I 0.125U P10S8U 10.204U P10S8I 10.032A M10S8I -10.410U M10S8I 0.539A <b>--MON 046---</b> P5S9U 5.116U P5S9I 0.045A P10S9U 10.256U P10S9I 0.026A M10S9U -10.410U M10S9I 0.025A P5S10U 5.116U P5S10I -5.038U M5S10U 0.017U M5S10I 10.204U P10S10U 10.036A P10S10I 0.036A M10S10U -10.410U M10S10I 0.539A P5S11U 0.000A P5S11I 0.000A	
		<b>--TEST-----</b> T0 0480 APL0001 0 T1 0680 APL0011 0 T2 0380 APL0021 0 T3 0380 APL0031 0 T4 0580 APL0041 0 T5 0780 APL0051 0 T6 0480 APL0061 0 T7 0180 APL0071 0 T8 0680 APL0081 213326 T9 0780 APL0091 213324 T10 0380 APL00A1 21326 T11 0380 APL00B1 0 T12 0480 APL00C1 0 T13 0780 APL00D1 0 T14 0880 APL00E1 0 T15 F2BC APL00F1 0	<b>--AP COUNTERS--</b> P28S23U 0.000U P28S23I 0.001A P28S24U 7.454U P28S24I 0.002A P28S25U 0.000U P28S25I 0.000A P28S26U 0.000U P28S26I 0.000A FLXTMP 149.000C SCLTMP 149.000C SEUSUY 0 SEU12 0 SEU34 0 SEU56 0 SEU78 0 SEUHF 0	<b>--MUE-----</b> HWSEC 00000CCE UTSEC 308AEF06 UTUSEC 0000 XMITR 0X RECUR_CODE_ERR ERRCNT 356 XMTCIR 434 RECCIR 108 ENABLE 31 TMRATE 0 SPSTATE 00 RPSTATE 00 STEST AA5500 FDM 91002C CCSAP 1086

CMD:1C000C000001D0000000000A8CD

UPDRATE: 160

DATE: 03-15-94  
GMT : 01:20:03

50 kHz

Figure 36

				<b>-SCOPE PARAMS-</b> ADC1 32511 [ 1, 0 ] -OFF- -OFF- -OFF-  Chan. S/Dv 0 MU/Dv 128.00 Speed PKT(01) Trig -OFF- If > 0 Step 1		
---TEST---	--AP COUNTERS--	--QTY OUTPUTS--	--UC COUNTERS--	--MUE---		
T0 F77F T1 FA7F T2 F97F T3 F87F T4 F87F T5 F97F T6 F77F T7 F77F T8 F97F T9 F97F T10 FA7F T11 FA7F T12 F87F T13 F87F T14 F87F T15 F97F	API[014] API[015] API[016] API[017] API[018] API[019] API[01A] API[01B] API[01C] API[01D] API[01E] API[01F] API[020] API[021] API[022] API[023]	0 0 0 0 62462 0 0 0 0 0 0 0 0 23514 0	LFF1P2 U1 U2 U3 U4 U5 U6 U7 U8 U9 U10 MAC1DC MAC2DC MAC3DC MAC1AC MAC2AC	A30E 0000 0006 0002 0004 0000 0003 0008 FFFF 0000 0006 0003 0003 0003 0004	VCL[0001] 334 VCL[001] 0 VCL[002] 20441 VCL[003] 0 VCL[004] 64386 VCL[005] 0 VCL[006] 0 VCL[007] 64831	HWSEC 00000CF8 UTSEC 308AEF06 UTUSEC 0000 XMITR OK RECUR CODE_ERR ERRCNT 358 XMTCTR 434 RECCTR 108 ENABLE 31 TMRATE 32 SPSTATE 0 RPSTATE 0 STEST AA5500 FDM 91002C CCSAP 1085

CMD:1C00C000000500000300D9C0

UPDATE: 352

DATE: 03-15-94  
GMT: 01:20:44

50kH

Figure 37

		<p>--MON 016--</p> <table border="1"> <tbody> <tr><td>P10S3U</td><td>4.154U</td></tr> <tr><td>P10S3I</td><td>0.001A</td></tr> <tr><td>M10S3U</td><td>-4.205U</td></tr> <tr><td>M10S3I</td><td>0.001A</td></tr> <tr><td>P5S4U</td><td>0.000U</td></tr> <tr><td>P5S4I</td><td>0.000A</td></tr> <tr><td>P12S4U</td><td>5.242U</td></tr> <tr><td>P12S4I</td><td>0.001A</td></tr> <tr><td>M12S4U</td><td>-5.242U</td></tr> <tr><td>M12S4I</td><td>0.003A</td></tr> <tr><td>P28S5U</td><td>4.831U</td></tr> <tr><td>P28S5I</td><td>0.016A</td></tr> <tr><td>P28S6U</td><td>0.000U</td></tr> <tr><td>P28S6I</td><td>0.001A</td></tr> <tr><td>P5S7U</td><td>5.092U</td></tr> <tr><td>P5S7I</td><td>0.035A</td></tr> </tbody> </table>	P10S3U	4.154U	P10S3I	0.001A	M10S3U	-4.205U	M10S3I	0.001A	P5S4U	0.000U	P5S4I	0.000A	P12S4U	5.242U	P12S4I	0.001A	M12S4U	-5.242U	M12S4I	0.003A	P28S5U	4.831U	P28S5I	0.016A	P28S6U	0.000U	P28S6I	0.001A	P5S7U	5.092U	P5S7I	0.035A	<p>--MON 030--</p> <table border="1"> <tbody> <tr><td>P5S7U</td><td>5.092U</td></tr> <tr><td>P5S7I</td><td>0.035A</td></tr> <tr><td>M5S7U</td><td>-4.920U</td></tr> <tr><td>M5S7I</td><td>0.050A</td></tr> <tr><td>P12S7U</td><td>12.605U</td></tr> <tr><td>P12S7I</td><td>0.010A</td></tr> <tr><td>M12S7U</td><td>-12.722U</td></tr> <tr><td>M12S7I</td><td>0.007A</td></tr> <tr><td>P5S8U</td><td>5.141U</td></tr> <tr><td>P5S8I</td><td>0.120A</td></tr> <tr><td>M5S8U</td><td>-5.141U</td></tr> <tr><td>M5S8I</td><td>0.110A</td></tr> <tr><td>P10S8U</td><td>10.204U</td></tr> <tr><td>P10S8I</td><td>0.035A</td></tr> <tr><td>M10S8U</td><td>-10.410U</td></tr> <tr><td>M10S8I</td><td>0.027A</td></tr> </tbody> </table>	P5S7U	5.092U	P5S7I	0.035A	M5S7U	-4.920U	M5S7I	0.050A	P12S7U	12.605U	P12S7I	0.010A	M12S7U	-12.722U	M12S7I	0.007A	P5S8U	5.141U	P5S8I	0.120A	M5S8U	-5.141U	M5S8I	0.110A	P10S8U	10.204U	P10S8I	0.035A	M10S8U	-10.410U	M10S8I	0.027A	<p>--MON 046--</p> <table border="1"> <tbody> <tr><td>P5S9U</td><td>5.141U</td></tr> <tr><td>P5S9I</td><td>0.044A</td></tr> <tr><td>P10S9U</td><td>10.256U</td></tr> <tr><td>P10S9I</td><td>0.025A</td></tr> <tr><td>M10S9U</td><td>-10.410U</td></tr> <tr><td>M10S9I</td><td>0.025A</td></tr> <tr><td>P5S10U</td><td>5.165U</td></tr> <tr><td>P5S10I</td><td>0.038A</td></tr> <tr><td>M5S10U</td><td>-5.214U</td></tr> <tr><td>M5S10I</td><td>0.017A</td></tr> <tr><td>P10S10U</td><td>10.204U</td></tr> <tr><td>P10S10I</td><td>0.036A</td></tr> <tr><td>M10S10U</td><td>-10.461U</td></tr> <tr><td>M10S10I</td><td>0.036A</td></tr> <tr><td>P5S11U</td><td>5.539U</td></tr> <tr><td>P5S11I</td><td>0.000A</td></tr> </tbody> </table>	P5S9U	5.141U	P5S9I	0.044A	P10S9U	10.256U	P10S9I	0.025A	M10S9U	-10.410U	M10S9I	0.025A	P5S10U	5.165U	P5S10I	0.038A	M5S10U	-5.214U	M5S10I	0.017A	P10S10U	10.204U	P10S10I	0.036A	M10S10U	-10.461U	M10S10I	0.036A	P5S11U	5.539U	P5S11I	0.000A
P10S3U	4.154U																																																																																																			
P10S3I	0.001A																																																																																																			
M10S3U	-4.205U																																																																																																			
M10S3I	0.001A																																																																																																			
P5S4U	0.000U																																																																																																			
P5S4I	0.000A																																																																																																			
P12S4U	5.242U																																																																																																			
P12S4I	0.001A																																																																																																			
M12S4U	-5.242U																																																																																																			
M12S4I	0.003A																																																																																																			
P28S5U	4.831U																																																																																																			
P28S5I	0.016A																																																																																																			
P28S6U	0.000U																																																																																																			
P28S6I	0.001A																																																																																																			
P5S7U	5.092U																																																																																																			
P5S7I	0.035A																																																																																																			
P5S7U	5.092U																																																																																																			
P5S7I	0.035A																																																																																																			
M5S7U	-4.920U																																																																																																			
M5S7I	0.050A																																																																																																			
P12S7U	12.605U																																																																																																			
P12S7I	0.010A																																																																																																			
M12S7U	-12.722U																																																																																																			
M12S7I	0.007A																																																																																																			
P5S8U	5.141U																																																																																																			
P5S8I	0.120A																																																																																																			
M5S8U	-5.141U																																																																																																			
M5S8I	0.110A																																																																																																			
P10S8U	10.204U																																																																																																			
P10S8I	0.035A																																																																																																			
M10S8U	-10.410U																																																																																																			
M10S8I	0.027A																																																																																																			
P5S9U	5.141U																																																																																																			
P5S9I	0.044A																																																																																																			
P10S9U	10.256U																																																																																																			
P10S9I	0.025A																																																																																																			
M10S9U	-10.410U																																																																																																			
M10S9I	0.025A																																																																																																			
P5S10U	5.165U																																																																																																			
P5S10I	0.038A																																																																																																			
M5S10U	-5.214U																																																																																																			
M5S10I	0.017A																																																																																																			
P10S10U	10.204U																																																																																																			
P10S10I	0.036A																																																																																																			
M10S10U	-10.461U																																																																																																			
M10S10I	0.036A																																																																																																			
P5S11U	5.539U																																																																																																			
P5S11I	0.000A																																																																																																			
<p>FFT ( SFA1 ) FFTSC 256 dB Peak -101.0 dB Freq 0.0 Hz</p>	<p>---TEST---</p> <table border="1"> <tbody> <tr><td>T0</td><td>4D0A</td></tr> <tr><td>T1</td><td>4640</td></tr> <tr><td>T2</td><td>2B0B</td></tr> <tr><td>T3</td><td>251C</td></tr> <tr><td>T4</td><td>5818</td></tr> <tr><td>T5</td><td>5051</td></tr> <tr><td>T6</td><td>5D5A</td></tr> <tr><td>T7</td><td>5A4A</td></tr> <tr><td>T8</td><td>33040</td></tr> <tr><td>T9</td><td>831B</td></tr> <tr><td>T10</td><td>3A230</td></tr> <tr><td>T11</td><td>6540</td></tr> <tr><td>T12</td><td>8D96</td></tr> <tr><td>T13</td><td>5377</td></tr> <tr><td>T14</td><td>8F9A</td></tr> <tr><td>T15</td><td>6978</td></tr> </tbody> </table>	T0	4D0A	T1	4640	T2	2B0B	T3	251C	T4	5818	T5	5051	T6	5D5A	T7	5A4A	T8	33040	T9	831B	T10	3A230	T11	6540	T12	8D96	T13	5377	T14	8F9A	T15	6978	<p>--AP COUNTERS--</p> <table border="1"> <tbody> <tr><td>API[020]</td><td>0</td></tr> <tr><td>API[021]</td><td>23856</td></tr> <tr><td>API[022]</td><td>0</td></tr> <tr><td>API[023]</td><td>0</td></tr> <tr><td>API[024]</td><td>0</td></tr> <tr><td>API[025]</td><td>0</td></tr> <tr><td>API[026]</td><td>0</td></tr> <tr><td>API[027]</td><td>0</td></tr> <tr><td>API[028]</td><td>0</td></tr> <tr><td>API[029]</td><td>0</td></tr> <tr><td>API[02A]</td><td>0</td></tr> <tr><td>API[02B]</td><td>0</td></tr> <tr><td>API[02C]</td><td>0</td></tr> <tr><td>API[02D]</td><td>0</td></tr> <tr><td>API[02E]</td><td>0</td></tr> <tr><td>API[02F]</td><td>0</td></tr> </tbody> </table>	API[020]	0	API[021]	23856	API[022]	0	API[023]	0	API[024]	0	API[025]	0	API[026]	0	API[027]	0	API[028]	0	API[029]	0	API[02A]	0	API[02B]	0	API[02C]	0	API[02D]	0	API[02E]	0	API[02F]	0	<p>---MUE---</p> <table border="1"> <tbody> <tr><td>HWSEC</td><td>00000DD0</td></tr> <tr><td>UTSEC</td><td>308AEF06</td></tr> <tr><td>UTUSEC</td><td>0000</td></tr> <tr><td>XMITR</td><td>OK</td></tr> <tr><td>RECUR</td><td>CODE_EPR</td></tr> <tr><td>ERRCNT</td><td>358</td></tr> <tr><td>XMTCTR</td><td>434</td></tr> <tr><td>RECCIR</td><td>108</td></tr> <tr><td>ENABLE</td><td>31</td></tr> <tr><td>TMRATE</td><td>0</td></tr> <tr><td>SPSTATE</td><td>00</td></tr> <tr><td>RPSTATE</td><td>00</td></tr> <tr><td>STEST</td><td>AA5500</td></tr> <tr><td>FDM</td><td>91002C</td></tr> <tr><td>CCSAP</td><td>1083</td></tr> </tbody> </table>	HWSEC	00000DD0	UTSEC	308AEF06	UTUSEC	0000	XMITR	OK	RECUR	CODE_EPR	ERRCNT	358	XMTCTR	434	RECCIR	108	ENABLE	31	TMRATE	0	SPSTATE	00	RPSTATE	00	STEST	AA5500	FDM	91002C	CCSAP	1083	<p>DATE: 03-15-94 UPDRATE: 176 GMT : 01:24:21</p>		
T0	4D0A																																																																																																			
T1	4640																																																																																																			
T2	2B0B																																																																																																			
T3	251C																																																																																																			
T4	5818																																																																																																			
T5	5051																																																																																																			
T6	5D5A																																																																																																			
T7	5A4A																																																																																																			
T8	33040																																																																																																			
T9	831B																																																																																																			
T10	3A230																																																																																																			
T11	6540																																																																																																			
T12	8D96																																																																																																			
T13	5377																																																																																																			
T14	8F9A																																																																																																			
T15	6978																																																																																																			
API[020]	0																																																																																																			
API[021]	23856																																																																																																			
API[022]	0																																																																																																			
API[023]	0																																																																																																			
API[024]	0																																																																																																			
API[025]	0																																																																																																			
API[026]	0																																																																																																			
API[027]	0																																																																																																			
API[028]	0																																																																																																			
API[029]	0																																																																																																			
API[02A]	0																																																																																																			
API[02B]	0																																																																																																			
API[02C]	0																																																																																																			
API[02D]	0																																																																																																			
API[02E]	0																																																																																																			
API[02F]	0																																																																																																			
HWSEC	00000DD0																																																																																																			
UTSEC	308AEF06																																																																																																			
UTUSEC	0000																																																																																																			
XMITR	OK																																																																																																			
RECUR	CODE_EPR																																																																																																			
ERRCNT	358																																																																																																			
XMTCTR	434																																																																																																			
RECCIR	108																																																																																																			
ENABLE	31																																																																																																			
TMRATE	0																																																																																																			
SPSTATE	00																																																																																																			
RPSTATE	00																																																																																																			
STEST	AA5500																																																																																																			
FDM	91002C																																																																																																			
CCSAP	1083																																																																																																			

100 kHz

Figure 38

-SCOPE PARAMS-  
 ADC1 32511  
 1, 01  
 -OFF-  
 -OFF-  
 -OFF-  
 Chan. S/Dv 128.00  
 MU/Dv 8.29  
 Speed PKT(01)  
 Trig -OFF-  
 If > 0  
 Step 1

---TEST---		--AP COUNTERS--		-QTY OUTPUTS-		--UC COUNTERS--		---MUE---	
T9	F77F	API014	0	LFF1P2	A30E	VCL0001	334	HWSEC	00000D5E
T1	FA7F	API015	0		U1	0000	0	UTSEC	308AEF06
T2	FB7F	API016	0		U2	0006	0	UTUSEC	0000
T3	F87F	API017	0		U3	0002	0	XMITR	OK
T4	F97F	API018	63056		U4	0004	0	RECUR	CODE_ERR
T5	F77F	API019	0		U5	0000	0	ERRCNT	358
T6	F77F	API01A	0		U6	0003	0	XMTCTR	232
T7	F87F	API01B	0		U7	0008	0	RECCTR	106
T8	F97F	API01C	0		U8	FFFF	0	ENABLE	31
T9	FA7F	API01D	0		U9	0000	0	TMRATE	0
T10	FA7F	API01E	0		V10	0006	0	SPSTATE	0
T11	FB7F	API01F	0		MAG1DC	0003	0	RPSTATE	0
T12	F67F	API020	23514		MAG2DC	0001	0	STEST	AA5500
T13	F97F	API021	0		MAG3DC	0003	0	FDM	910022
T14	F97F	API022	0		MAG1AC	0003	0	CCSAP	1062
T15	FB7F	API023	0		MAG2AC	0004	0		

CMD: 1C000C000000050000003000D9C8

UPDRATE: 368 DATE: 03-15-94

GMT : 01:22:27

100 kHz

Figure 39

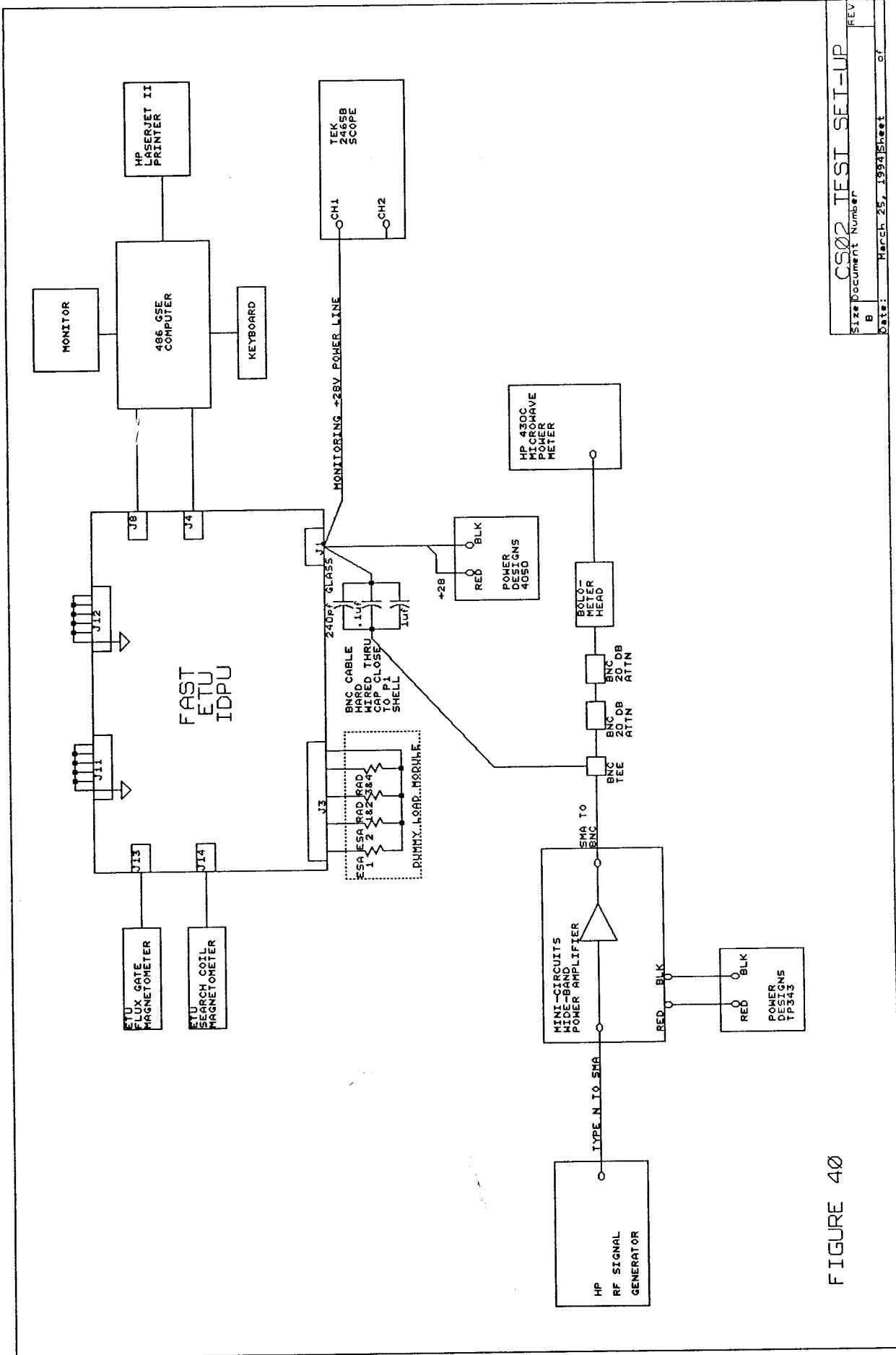
## CS02 TEST PROCEDURE AND RESULTS

Figure 40 shows the set-up used to perform the CS02 test for the frequency range from 500 kHz to 400 mHz. For the frequency range from 50 to 500 kHz, the HP 3313A wave form generator was used in place of the RF signal generator and power amplifier.

The test procedure consisted in running the GSE scripts TSVFA, TVADC1, TSVVY0, and SHOMON2 to look for interference in the E-Field and processor systems, while sweeping thru the 50 kHz to 400 mHz frequency range. The test requirement is that the signal amplitude be maintained at 1 volt rms across the input power line of the test sample, limited by what the signal generator can deliver across the test load, subject to the requirement that the generator be capable of putting 7.07 volts rms across a 50 ohm load. Due to a mis-reading of the requirement, the test was run at a level of 7 volts rms instead of 1 volt rms. The results of this testing are shown in Figures 41 thru 70.

The CS02 testing gave little if any interference in the ADC, SVY, or the monitor functions, but it did have an effect in the SFA channels (which are the most sensitive in the instrument). For this reason, only the SFA data are included in the figures. Significant interference occurred at some 12 rather sharp peaks in frequency starting at 6.38 mHz and going up to 180.93 mHz. The strongest of these were odd multiples of the 10.7 mHz IF frequency used in the SFA. In between these peaks the interference was less than at the peak on either side. Two points were run at the correct value of 1 volt rms instead of 7.07 volts rms. The result of this was to reduce the level of the interference in the SFA by the same amount, i.e. 17 dB, or about 4 divisions on the SFA plots given.

Given this reduction from the plots given, and the narrow width in frequency where the interference occurred, we conclude that the disturbance is of a relatively low level and if it were to occur in flight would have a tolerable impact on the science data.



<p>FFT ( SFA1 ) FFTSC 256 dB Peak -102.0 dB Freq 0.0 Hz</p>		--MON 016---	--MON 030---	--MON 046---																																																																													
P10S3U	10.4100	P5S7U	5.0920	P5S9U	5.0920																																																																												
P10S3I	0.0020	P5S7I	0.0360	P5S9I	0.0660																																																																												
M10S3U	-10.5640	M5S7U	-4.8230	P10S9U	10.3560																																																																												
M10S3I	0.0020	M5S7I	0.0530	P10S9I	0.0260																																																																												
P5S4U	5.1160	P12S7U	12.4280	M10S9I	-10.5640																																																																												
P5S4I	0.0000	P12S7I	0.0110	P5S10U	5.1160																																																																												
P12S4U	12.4280	M12S7U	-12.4870	P5S10I	0.0400																																																																												
P12S4I	0.0010	M12S7I	0.0970	M5S10U	-5.2630																																																																												
M12S4U	-12.4870	P5S8U	5.0920	M5S10I	0.6160																																																																												
M12S4I	0.0040	P5S8I	0.1270	P10S10U	10.3560																																																																												
P20S5U	32.5970	M5S8U	-5.2390	P10S10I	0.0330																																																																												
P20S5I	0.0220	M5S8I	0.1190	M10S10U	-10.5640																																																																												
P20S6U	27.8840	P10S8U	10.4100	M10S10I	0.0330																																																																												
P20S6I	0.0390	P10S8I	0.0330	P5S11U	5.0920																																																																												
P5S7U	5.0920	M10S8U	-10.5640	P5S11I	0.1980																																																																												
P5S7I	0.0380	M10S8I	0.0280																																																																														
<p>---TEST---</p> <table> <tr><td>T0</td><td>1711</td><td>---AP COUNTERS---</td></tr> <tr><td>T1</td><td>130F</td><td>API0201 0</td></tr> <tr><td>T2</td><td>0F12</td><td>API0211 35189</td></tr> <tr><td>T3</td><td>1410</td><td>API0221 0</td></tr> <tr><td>T4</td><td>411C</td><td>API0231 0</td></tr> <tr><td>T5</td><td>3D3D</td><td>API0241 0</td></tr> <tr><td>T6</td><td>605B</td><td>API0251 0</td></tr> <tr><td>T7</td><td>3C44</td><td>API0261 0</td></tr> <tr><td>T8</td><td>3A43</td><td>API0271 0</td></tr> <tr><td>T9</td><td>A024</td><td>API0281 0</td></tr> <tr><td>T10</td><td>1C26</td><td>API0291 0</td></tr> <tr><td>T11</td><td>6711</td><td>API02A1 0</td></tr> <tr><td>T12</td><td>8B83</td><td>API02B1 0</td></tr> <tr><td>T13</td><td>647B</td><td>API02C1 0</td></tr> <tr><td>T14</td><td>8D97</td><td>API02D1 0</td></tr> <tr><td>T15</td><td>6778</td><td>API02E1 0</td></tr> </table>		T0	1711	---AP COUNTERS---	T1	130F	API0201 0	T2	0F12	API0211 35189	T3	1410	API0221 0	T4	411C	API0231 0	T5	3D3D	API0241 0	T6	605B	API0251 0	T7	3C44	API0261 0	T8	3A43	API0271 0	T9	A024	API0281 0	T10	1C26	API0291 0	T11	6711	API02A1 0	T12	8B83	API02B1 0	T13	647B	API02C1 0	T14	8D97	API02D1 0	T15	6778	API02E1 0	<p>--- MUE ---</p> <table> <tr><td>HWSEC</td><td>00000676</td></tr> <tr><td>UTSEC</td><td>30847</td></tr> <tr><td>UTUSEC</td><td>0</td></tr> <tr><td>XMITR</td><td>0</td></tr> <tr><td>RECUR</td><td>0</td></tr> <tr><td>ERRCNT</td><td>0</td></tr> <tr><td>XMTCTR</td><td>0</td></tr> <tr><td>RECCTR</td><td>0</td></tr> <tr><td>ENABLE</td><td>0</td></tr> <tr><td>TMRATE</td><td>0</td></tr> <tr><td>SPSTATE</td><td>0</td></tr> <tr><td>RPSTATE</td><td>0</td></tr> <tr><td>STEST</td><td>AA55</td></tr> <tr><td>FDM</td><td>9100</td></tr> <tr><td>CCSAP</td><td>1000</td></tr> </table>		HWSEC	00000676	UTSEC	30847	UTUSEC	0	XMITR	0	RECUR	0	ERRCNT	0	XMTCTR	0	RECCTR	0	ENABLE	0	TMRATE	0	SPSTATE	0	RPSTATE	0	STEST	AA55	FDM	9100	CCSAP	1000
T0	1711	---AP COUNTERS---																																																																															
T1	130F	API0201 0																																																																															
T2	0F12	API0211 35189																																																																															
T3	1410	API0221 0																																																																															
T4	411C	API0231 0																																																																															
T5	3D3D	API0241 0																																																																															
T6	605B	API0251 0																																																																															
T7	3C44	API0261 0																																																																															
T8	3A43	API0271 0																																																																															
T9	A024	API0281 0																																																																															
T10	1C26	API0291 0																																																																															
T11	6711	API02A1 0																																																																															
T12	8B83	API02B1 0																																																																															
T13	647B	API02C1 0																																																																															
T14	8D97	API02D1 0																																																																															
T15	6778	API02E1 0																																																																															
HWSEC	00000676																																																																																
UTSEC	30847																																																																																
UTUSEC	0																																																																																
XMITR	0																																																																																
RECUR	0																																																																																
ERRCNT	0																																																																																
XMTCTR	0																																																																																
RECCTR	0																																																																																
ENABLE	0																																																																																
TMRATE	0																																																																																
SPSTATE	0																																																																																
RPSTATE	0																																																																																
STEST	AA55																																																																																
FDM	9100																																																																																
CCSAP	1000																																																																																
CMD:1C00C00000000050000FF000097		UPDRATE: 160 DATE: 03-18-94		GMT : 00:42:																																																																													

CSO 2

SO (W)3

MAR 18 1994

Figure 41

	--MON 016---	--MON 030---	--MON 046---
	P10S3U 10.410U P10S3I 0.002A M10S3U -10.564U M10S3I 0.002A P5S4U 5.116U P5S4I 0.000A P12S4U 12.428U P12S4I 0.001A M12S4U -12.487U M12S4I 0.005A P28S5U 32.577U P28S5I 0.022A P28S6U 27.684U P28S6I 0.039A P5S7U 5.116U P5S7I 0.038A	P5S7U 5.116U P5S7I 0.038A M5S7U -4.798U M5S7I 0.053A P12S7U 12.369U P12S7I 0.010A M12S7U -12.487U M12S7I 0.007A P5S8U 5.092U P5S8I 0.123A M5S8U -5.263U M5S8I 0.128A P10S10U 10.358U P10S10I 0.023A M10S10U -10.564U M10S10I 0.038A P10S11U 5.092U P10S11I 0.198A	P5S9U 5.092U P5S9I 0.066A P10S9U 10.359U P10S9I 0.028A M10S9U -10.564U M10S9I 0.027A P5S10U 5.116U P5S10I 0.020A M5S10U -5.263U M5S10I 0.018A P10S10U 10.358U P10S10I 0.023A M10S10U -10.564U M10S10I 0.038A P5S11U 5.092U P5S11I 0.198A
FFT ( SFA1 )			
FFTSC 256 dB			
Peak -102.0 dB			
Freq 0.0 Hz			
---TEST---	--AP COUNTERS--		--- MUE ---
T0 120F	APLQ201 0		HWSEC 00005000E
T1 0D05	APLQ211 34677		UTSEC 308E
T2 110F	APLQ221 0		UTUSEC 0
T3 1A0D	APLQ231 0		XMITR
T4 3D1A	APLQ241 0		RECUR
T5 3B3B	APLQ251 0		ERRCNT
T6 5F5A	APLQ261 0		XMTCTR
T7 3F47	APLQ271 0		RECGTR
T8 3843	APLQ281 0		ENABLE
T9 A024	APLQ291 0		TMRATE
T10 1B29	APLQ2A1 0		SPSTATE
T11 6B0E	APLQ2B1 0		RPSTATE
T12 8B84	APLQ2C1 0		STEST AA55C
T13 707B	APLQ2D1 0		FDM 91002C
T14 8D97	APLQ2E1 0		CCSAP 1001
T15 6676	APLQ2F1 0		

CMD:1C00C000000050000FF000097

UPDRATE: 272

DATE: 03-18-94  
GMT : 00:41:11

C502

100 kHz

MAR 18 1994

Figure 42

	--MON 016---	--MON 030---	--MON 046---
	P10S3U 10.410U P10S3I 0.002A M10S3U -10.564U M10S3I 0.002A P5S4U 5.116U P5S4I 0.001A P12S4U 12.428U P12S4I 0.001A M12S4U -12.487U M12S4I 0.004A P28S5U 32.577U P28S5I 0.022A P28S6U 27.884U P28S6I 0.039A P5S7U 5.092U P5S7I 0.038A	P5S7U 5.092U P5S7I 0.038A M5S7U -4.798U M5S7I 0.053A P12S7U 12.428U P12S7I 0.010A M12S7U -12.487U M12S7I 0.007A P5S8U 5.092U P5S8I 0.027A M5S8U -5.127U M5S8I 0.023A P10S8U 10.358U P10S8I 0.035A M10S8U -10.563U M10S8I 0.028A	P5S9U 5.092U P5S9I 0.066A P10S9U 10.359U P10S9I 0.028A M10S9U -10.564U M10S9I 0.027A P5S10U 5.116U P5S10I 0.040A M5S10U -5.263U M5S10I 0.018A P10S10U 10.358U P10S10I 0.038A M10S10U -10.564U M10S10I 0.038A P5S11U 5.092U P5S11I 0.198A
FFT ( SFA1 )			
FFTSC 256 dB			
Peak -101.0 dB			
Freq 0.0 Hz			
---TEST-----	--AP COUNTERS--		--- MUE ---
T0 180E	APl020J 0		HWSEC 000062F3
T1 1109	APl021J 33909		UTSEC 308E7
T2 0F0F	APl022J 0		UTUSEC 00
T3 110E	APl023J 0		XMITR 0
T4 3C19	APl024J 0		RECUR 0
T5 3E3B	APl025J 0		ERRCNT 0
T6 605B	APl026J 0		XMICTR 40
T7 3946	APl027J 0		RECCTR 1
T8 3643	APl028J 0		ENABLE 0
T9 A127	APl029J 0		TMRATE 0
T10 1D27	APl02AJ 0		SPSTATE 0
T11 758C	APl02BJ 0		RPSTATE 0
T12 8E8A	APl02CJ 0		STEST AA5503
T13 6E7C	APl02DJ 0		FDM 91002C
T14 8D97	APl02EJ 0		CCSAP 1080
T15 6F75	APl02FJ 0		

CMD:1C000C000000050000FF000097

UPDRATE: 256

DATE: 03-18-94  
GMT: 00:40:00

CSO2

300 kHz

MAR 18 1994

Figure 43

<p>FFT (SFA1) FFTSC 256 dB Peak -101.0 dB Freq 0.0 Hz</p>		--MON 016-- P10S3U 10.410U P10S3I 0.002A M10S3U -10.564U M10S3I 0.002A P5S4U 5.116U P5S4I 0.000A P12S4U 12.428U P12S4I -12.001A M12S4U -12.487U M12S4I 0.005A P28S5U 32.577U P28S5I 0.022A P28S6U 27.884U P28S6I 0.039A P5S7U 5.092U P5S7I 0.038A	--MON 030-- P5S7U 5.092U P5S7I 0.038A M5S7U -4.798U M5S7I 0.053A P12S7U 12.428U P12S7I 0.010A M12S7U -12.487U M12S7I 0.007A P5S8U 5.092U P5S8I 0.127A M5S8U -5.239U M5S8I 0.118A P10S8U 10.358U P10S8I 0.035A M10S8U -10.563U M10S8I 0.028A	
--TEST-- T0 130D T1 1212 T2 140C T3 1E0D T4 461C T5 423E T6 5F5B T7 3C47 T8 3A42 T9 A129 T10 1B2C T11 7212 T12 8B82 T13 6E7B T14 8D97 T15 6B78	--AP COUNTERS-- API0201 0 API0211 33325 API0221 0 API0231 0 API0241 0 API0251 0 API0261 0 API0271 0 API0281 0 API0291 0 API02A1 0 API02B1 0 API02C1 0 API02D1 0 API02E1 0 API02F1 0			--MUE-- HHSEC 000069PC UTSEC 308E7DG3 UTUSEC 00003 XMITR OK RECUR OK ERRCNT 0 XMTCTR 434 RECCTR 163 ENABLE 31 TMRATE 0.2 SPSTATE 0 RPSTATE 0 STEST AA5500 FDM 91002C CCSAP 1083

CMD:1C00C000000050000FF000009?

UPDRATE: 160

DATE: 03-18-94  
GMT : 00:39:05

C502  
500KHz

MAR 18 1994

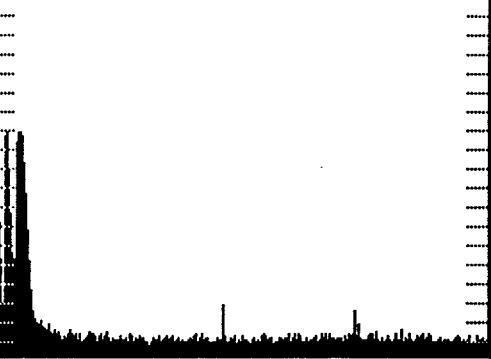
Figure 47

	--MON 016-- P10S3U 10.4100 P10S3I 0.002A M10S3U -10.564V M10S3I 0.002A P5S4U 5.116U P5S4I 0.000A P12S4U 12.428U P12S4I 0.001A M12S4U -12.487U M12S4I 0.004A P20S5U 32.577U P20S5I 0.022A P20S6U 28.022U P20S6I 0.039A P5S7U 5.092U P5S7I 0.039A	--MON 030-- P5S7U 5.092U P5S7I 0.039A M5S7U -4.823U M5S7I 0.053A P12S7U 12.428U P12S7I -12.487U M12S7U 5.092U M12S7I 0.039A P5S8U 5.122U P5S8I 0.023A M5S8U 0.018A M5S8I 0.035A P10S8U 10.358U P10S8I 0.038A M10S8U -10.563U M10S8I 0.028A	--MON 046-- P5S9U 5.092U P5S9I 0.066A P10S9U 10.359U P10S9I -10.564U M10S9U 5.027A M10S9I 0.027A P5S10U 5.116U P5S10I 0.046A M5S10U -5.263U M5S10I 0.018A P10S10U 10.358U P10S10I 0.038A M10S10U -10.564U M10S10I 0.038A P5S11U 5.092U P5S11I 0.198A
FFT ( SFA1 ) FFTSC 256 dB Peak -103.0 dB Freq 0.0 Hz	--TEST---- T0 110A T1 0F0C T2 0F0B T3 1514 T4 411B T5 3F3B T6 5E5A T7 3F47 T8 3542 T9 A021 T10 1F2C T11 610D T12 6D57 T13 6D7C T14 8C97 T15 6F74	--AP COUNTERS-- AP1020 30869 AP1021 0 AP1022 0 AP1023 0 AP1024 0 AP1025 0 AP1026 0 AP1027 0 AP1028 0 AP1029 0 AP102A 0 AP102B 0 AP102C 0 AP102D 0 AP102E 0 AP102F 0	-- MUE ---- HWSEC 000068D2 UTSEC 308E7D03 UTUSEC 0000 XMIIR 0X RECUR TIMEOUT ERRCNT 52 XMTCTR 434 RECCTR 108 ENABLE 31 TMRATE 2 SPSTATE 0 RPSTATE 0 STEST AA5500 FDM 91002C CCSAP 1084
CMD:1C00C00000050000FF000097		UPDATE: 256	DATE: 03-18-94 GMT : 00:35:11

1 mHz  
CS02

MAR 18 1994

Figure 45

	--MON 016-- P10S3U 10.410U P10S3I 0.001A M10S3U -10.564U M10S3I 0.001A P5S4U 5.1410U P5S4I 0.000A P12S4U 12.487U P12S4I 0.000A M12S4U -12.487U M12S4I 0.000A P28S5U 32.715U P28S5I 0.017A P28S6U 28.160U P28S6I 0.038A P5S7U 5.1410U P5S7I 0.038A	--MON 030-- P5S7U 5.1410U P5S7I 0.038A M5S7U -4.847U M5S7I 0.053A P12S7U 12.487U P12S7I 0.010A M12S7U -12.487U M12S7I 0.007A P5S8U 5.1410U P5S8I 0.125A M5S8U -5.125A M5S8I 0.235A P10S8U 10.358U P10S8I 0.035A M10S8U -10.563U M10S8I 0.028A	--MON 046-- P5S9U 5.1410U P5S9I 0.058A P10S9U 10.359U P10S9I -10.564U M10S9U -10.564U M10S9I 0.041U P5S10U 5.1410U P5S10I 0.040A M5S10U -5.125U M5S10I 0.025A P10S10U 10.358U P10S10I 0.038A M10S10U -10.564U M10S10I 0.038A P5S11U 5.116U P5S11I 0.202A
FFT ( SFA1 ) FFTSC 256 dB Peak -103.0 dB Freq 0.0 Hz	--TEST-- T0 1711 T1 1415 T2 130F T3 2B15 T4 421F T5 413C T6 5E5A T7 8A45 T8 3743 T9 6C23 T10 2128 T11 521B T12 9096 T13 412C T14 8D98 T15 4F75	--AP COUNTERS-- APL0201 0 APL0211 47905 APL0221 0 APL0231 0 APL0241 0 APL0251 0 APL0261 0 APL0271 0 APL0281 0 APL0291 0 APL02A1 0 APL02B1 0 APL02C1 0 APL02D1 0 APL02E1 0 APL02F1 0	-- MUE -- HWSEC 00004BF9 UTSEC 308E7D03 UTUSEC 0000 XMTCTR OK RECUR OK ERRCNT 0 XMTCTR 232 RECCTR 106 ENABLE 31 TMRATE 2 SPSTATE 0 RPSTATE 0 STEST AA5500 FDM 91002C CCSAP 1081

UPDRATE: 272 DATE: 03-17-94

GMT : 22:32:07

MAR 18 1994

{ m+3 }

(502)

Figure 46

	--MON 016---	--MON 030---	--MON 046---
	P10S3U 10.410U P10S3I 0.001A M10S3U -10.564U M10S3I 0.001A P5S4U 5.141U P5S4I 0.000A P12S4U 12.487U P12S4I 0.000A M12S4U -12.487U M12S4I 0.002A P28S5U 32.715U P28S5I 0.017A P28S6U 28.160U P28S6I 0.038A P5S7U 5.141U P5S7I 0.038A	P5S7U 5.141U P5S7I 0.038A M5S7U -4.847U M5S7I 0.052A P12S7U 12.428U P12S7I 0.010A M12S7U -12.487U M12S7I 0.007A P5S8U 5.141U P5S8I 0.125A M5S8U -5.239U M5S8I 0.116A P10S9U 10.410U P10S9I 0.035A M10S9U -10.563U M10S9I 0.027A P5S10U 5.141U P5S10I 0.040A M5S10U -5.263U M5S10I 0.017A P10S10U 10.358U P10S10I 0.038A M10S10U -10.564U M10S10I 0.038A P5S11U 5.116U P5S11I 0.200A	P5S9U 5.141U P5S9I 0.058A P10S9U 10.359U P10S9I 0.027A M10S9U -10.564U M10S9I 0.027A P5S10U 5.141U P5S10I 0.040A M5S10U -5.263U M5S10I 0.017A P10S10U 10.358U P10S10I 0.038A M10S10U -10.564U M10S10I 0.038A P5S11U 5.116U P5S11I 0.200A
FFT ( SFa1 ) FFISc 256 dB Peak -103.0 dB Freq 0.0 Hz			
--TEST----	--AP COUNTERS-- T0 281C T1 5B22 T2 291A T3 5B19 T4 3618 T5 5B2D T6 5C5D T7 8A47 T8 3842 T9 6824 T10 2F2F T11 5B27 T12 9094 T13 5C7D T14 8E98 T15 5C76 AP[020] 0 AP[021] 44833 AP[022] 0 AP[023] 0 AP[024] 0 AP[025] 0 AP[026] 0 AP[027] 0 AP[028] 0 AP[029] 0 AP[02A] 0 AP[02B] 0 AP[02C] 0 AP[02D] 0 AP[02E] 0 AP[02F] 0		-- MUE ---- HWSEC 00004AE8 UTSEC 308E7D03 UTUSEC 0000 XMITR OK RECUR OK ERRCNT 0 XMTCTR 30 RECCTR 104 ENABLE 31 TMRATE 28 SPSTATE 00 RPSTATE 00 STEST AA5500 FDM 91002C CCSAP 1080

UPDATE: 256 DATE: 03-17-94  
GMT: 22:27:35

MAR 6 1994  
6.316 MHz

C902

	--MON 016---	--MON 030---	--MON 046---
	P10S3U 10.410V P10S3I 0.001A M10S3U -10.564V M10S3I 0.000A P5S4U 5.141V P5S4I 0.000A P12S4U 12.487V P12S4I 0.000A M12S4U -12.487V M12S4I 0.002A P28S5U 32.715V P28S5I 0.017A P28S6U 28.160V P28S6I 0.038A P5S7U 5.141V P5S7I 0.038A	P5S7U 5.141V P5S7I 0.038A M5S7U -4.847V M5S7I 0.052A P12S7U 12.428V P12S7I 0.010A M12S7U -12.487V M12S7I 0.007A P5S8U 5.141V P5S8I 0.125A M5S8U -5.233V M5S8I 0.116A P10S8U 10.410V P10S8I 0.035A M10S8U -10.563V M10S8I 0.028A	P5S9U 5.141V P5S9I 0.058A P10S9U 10.359V P10S9I -10.564V M10S9U -10.564V M10S9I 0.027A P5S10U 5.141V P5S10I 0.040A M5S10U -5.263V M5S10I 0.018A P10S10U 10.358V P10S10I 0.038A M10S10U -10.564V M10S10I 0.038A P5S11U 5.116V P5S11I 0.200A
FFT ( SFA1 )			
FFTSC 256 dB			
Peak -102.0 dB			
Freq 0.0 Hz			
---TEST-----	--AP COUNTERS--		--- MUE ---
T0 3A54	AP[020] 0		HWSEC 000049A5
T1 5A36	AP[021] 41113		UTSEC 308E7D03
T2 3B55	AP[022] 0		UTUSEC 0000
T3 5A36	AP[023] 0		XMITR OK
T4 3955	AP[024] 0		RECUR OK
T5 5A37	AP[025] 0		ERRCNT 0
T6 6065	AP[026] 0		XMTCTR 434
T7 9147	AP[027] 0		RECCTR 108
T8 3955	AP[028] 0		ENABLE 31
T9 8536	AP[029] 0		TMRATE 2
T10 3D55	AP[02A] 0		SPSTATE 3
T11 673C	AP[02B] 0		RPSTATE 3
T12 9395	AP[02C] 0		STEST AA5500
T13 597B	AP[02D] 0		FDM 91002C
T14 9398	AP[02E] 0		CCSAP 1082
T15 5979	AP[02F] 0		

UPDRATE: 272 DATE: 93-17-94  
GMT: 22:22:12

MAR 18 1994

CS02  
8.01 MHz

Figure 48

	--MON 016---	--MON 030---	--MON 046---
	P10S3U 10.410U P10S3I 0.001A M10S3U -10.564U M10S3I 0.000A P5S4U 5.141U P5S4I 0.000A P12S4U 12.487U P12S4I 0.000A M12S4U -12.487U M12S4I 0.002A P20S5U 32.715U P20S5I 0.017A P20S6U 28.160U P20S6I 0.038A P5S7U 5.141U P5S7I 0.038A	P5S7U 5.141U P5S7I 0.038A M5S7U -4.847U M5S7I 0.052A P12S7U 12.428U P12S7I 0.010A M12S7U -12.487U M12S7I 0.007A P5S8U 5.141U P5S8I 0.125A M5S8U -5.239U M5S8I 0.116A P10S8U 10.410U P10S8I 0.035A M10S8U -10.563U M10S8I 0.028A	P5S9U 5.141U P5S9I 0.058A P10S9U 10.410U P10S9I 0.028A M10S9U -10.564U M10S9I 0.027A P5S10U 5.141U P5S10I 0.040A M5S10U -5.263U M5S10I 0.018A P10S10U 10.410U P10S10I 0.038A M10S10U -10.564U M10S10I 0.038A P5S11U 5.116U P5S11I 0.202A
FFT ( SFA1 ) FFTSC 256 dB Peak -149.0 dB Freq 0.0 Hz			
---TEST---	--AP COUNTERS-- T0 2D48 AP[020] 0 T1 3F20 AP[021] 38049 T2 2B48 AP[022] 0 T3 4123 AP[023] 0 T4 3548 AP[024] 0 T5 432A AP[025] 0 T6 656B AP[026] 0 T7 6E4A AP[027] 0 T8 3D4D AP[028] 0 T9 722E AP[029] 0 T10 474D AP[02A] 0 T11 4B33 AP[02B] 0 T12 3B4D AP[02C] 0 T13 4422 AP[02D] 0 T14 3248 AP[02E] 0 T15 482D AP[02F] 0		---MUE--- HWSEC 000048A4 UTSEC 308E7D03 UTUSEC 0000 XMIIR 0OK RECUR 0K ERRCNT 0 XMTCTR 434 RECCTR 108 ENABLE 31 TMRATE 2 SPSTATE 3 RPSTATE 3 STEST AA5500 FDM 91002C CCSAP 1080

UPDATE: 48 DATE: 03-17-94  
GMT : 22:17:54

MAR 18 1994

10.7 mHz

CSO<sup>2</sup>

FIGURE 49

	<pre>--MON 016 -- P10S3U 10.410U P10S3I 0.001A M10S3U -10.666U M10S3I 0.0000 P5S4U 5.141U P5S4I 0.0000 P12S4U 12.487U P12S4I 0.0000 M12S4U -12.487U M12S4I 0.002A P28S5U 32.715U P28S5I 0.017A P28S6U 28.160U P28S6I 0.038A P5S7U 5.141U P5S7I 0.038A</pre>	<pre>--MON 030 -- P5S7U 5.141U P5S7I 0.038A M5S7U -4.847U M5S7I 0.051A P12S7U 12.487U P12S7I 0.007A M12S7U -12.487U M12S7I 0.127A P5S8U 5.141U P5S8I 0.127A M5S8U -5.239U M5S8I 0.118A P10S8U 10.410U P10S8I 0.035A M10S8U -10.563U M10S8I 0.028A</pre>	<pre>--MON 046 -- P5S9U 5.141U P5S9I 0.059A P10S9U 10.359U P10S9I -10.026A M10S9U -10.026A M10S9I 0.026A P5S10U 5.165U P5S10I 0.040A M5S10U -5.263U M5S10I 0.018A P10S10U 10.410U P10S10I 0.038A M10S10U -10.564U M10S10I 0.039A P5S11U 5.116U P5S11I 0.202A</pre>
<pre>FFT ( SFA1 ) FFTSC 256 dB Peak -92.0 dB Freq 0.0 Hz</pre>	<pre>--TEST-- T0 1822 T1 1B11 T2 1823 T3 2B16 T4 2F27 T5 3536 T6 7F82 T7 9F64 T8 5160 T9 A63A T10 6051 T11 A460 T12 919C T13 A481 T14 929D T15 A584</pre>	<pre>--AP COUNTERS- API020] 0 API021] 32945 API022] 0 API023] 0 API024] 0 API025] 0 API026] 0 API027] 0 API028] 0 API029] 0 API02A] 0 API02B] 0 API02C] 0 API02D] 0 API02E] 0 API02F] 0</pre>	<pre>-- MUE -- HWSEC 0000468F UTSEC 308E7D03 UTUSEC 0000 XMITR OK RECUR OK ERRCNT 0 XMTCTR 96 RECCTR 106 ENABLE 3 TMRATE 22 SPSTATE 0 RPSTATE 0 STEST AA5500 FDM 91002C CCSAP 1085</pre>

UPDATE: 48 DATE: 03-17-94

48 DATE: 03-17-94

CSO 2  
26.39 min<sup>-1</sup> MAR 18 1994

Figure 50

	--MON 016---	--MON 030---	--MON 046---
	P10S3U 10.461V P10S3I 0.005A M10S3U -10.666V M10S3I 0.000A P5S4U 5.165V P5S4I 0.000A P12S4U 12.487V P12S4I 0.000A M12S4U -12.546V M12S4I 0.003A P20S5U 32.715V P20S5I 0.017A P20S6U 28.160U P20S6I 0.039A P5S7I 0.033A	P5S7U 5.141V P5S7I 0.033A M5S7U -4.872U M5S7I 0.050U P12S7U 12.487U P12S7I 0.010A M12S7U -12.546U M12S7I 0.007A P5S8U 5.141U P5S8I 0.125A M5S8U -5.288U M5S8I 0.125A P10S8U 10.461U P10S8I 0.035A M10S8U -10.666U M10S8I 0.028A	P5S9U 5.141V P5S9I 0.064A P10S9U 10.461U P10S9I 0.034A M10S9U -10.666U M10S9I 0.027A P5S10U 5.165V P5S10I 0.038A M5S10U -5.312U M5S10I 0.019A P10S10U 10.461U P10S10I 0.038A M10S10U -10.666U M10S10I 0.039A P5S11U 5.116U P5S11I 0.200A
FFT ( SFA1 ) FFTSC 256 dB Peak -101.0 dB Freq 0.0 Hz			
---TEST---	--AP COUNTERS-- T0 6E86 AP[020] 0 T1 8567 AP[021] 31502 T2 6E86 AP[022] 0 T3 8567 AP[023] 0 T4 6E86 AP[024] 0 T5 8567 AP[025] 0 T6 6E95 AP[026] 0 T7 9268 AP[027] 0 T8 7087 AP[028] 0 T9 8569 AP[029] 0 T10 6F85 AP[02A] 0 T11 8566 AP[02B] 0 T12 6F86 AP[02C] 0 T13 8569 AP[02D] 0 T14 7885 AP[02E] 0 T15 8570 AP[02F] 0		--- MUE --- HWSEC 00004601 UTSEC 308E7D03 UTUSEC 0000 XMITR OK RECUR 0K ERRCNT 0 XMTCTR 232 RECCTR 106 ENABLE 31 TMRATE 2 SPSTATE 0 RPSTATE 3 STEST AA5500 FDM 91002C CCSAP 1081

UPDATE: 176

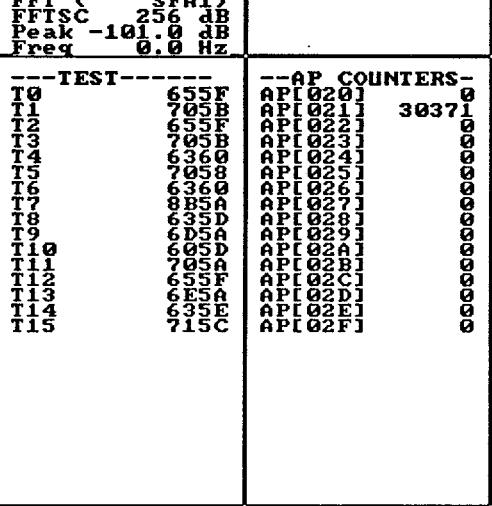
DATE: 03-17-94

GMT: 22:06:40

MAR 18 1994

31,8854 M<sup>13</sup>  
CGO 2

Figure 51

	--MON 016-- P10S3U 10.461U P10S3I 0.005A M10S3U -10.666U M10S3I 0.0000 P5S4U 5.165U P5S4I 0.0000A P12S4U 12.546U P12S4I 0.0000A M12S4U -12.546U M12S4I 0.003A P28S5U 32.715U P28S5I 0.019A P28S6U 28.160U P28S6I 0.039A P5S7U 5.141U P5S7I 0.033A	--MON 030-- P5S7U 5.141U P5S7I 0.033A M5S7U -4.847U M5S7I 0.0259A P12S7U 12.546U P12S7I 0.007A M12S7U -12.546U M12S7I 0.141A P5S8U 5.125A P5S8I 0.125A M5S8U -5.288U M5S8I 0.125A P10S8U 10.461U P10S8I 0.035A M10S8U -10.666U M10S8I 0.028A	--MON 046-- P5S9U 5.141U P5S9I 0.064A P10S9U 10.461U P10S9I 0.034A M10S9U -10.666U M10S9I 0.027A P5S10U 5.141U P5S10I 0.039A M5S10U -5.312U M5S10I 0.019A P10S10U 10.461U P10S10I 0.038A M10S10U -10.666U M10S10I 0.039A P5S11U 5.116U P5S11I 0.200A
FFT (SFA1) FFTSC 256 dB Peak -101.0 dB Freq 0.0 Hz	--TEST-- T9 655F API[020] 0 T1 705B API[021] 30371 T2 655F API[022] 0 T3 705B API[023] 0 T4 6360 API[024] 0 T5 7058 API[025] 0 T6 6360 API[026] 0 T7 8B5A API[027] 0 T8 639D API[028] 0 T9 6D5A API[029] 0 T10 605D API[02A] 0 T11 705A API[02B] 0 T12 655F API[02C] 0 T13 6E5A API[02D] 0 T14 635E API[02E] 0 T15 715C API[02F] 0	--AP COUNTERS-- API[020] 0 API[021] 30371 API[022] 0 API[023] 0 API[024] 0 API[025] 0 API[026] 0 API[027] 0 API[028] 0 API[029] 0 API[02A] 0 API[02B] 0 API[02C] 0 API[02D] 0 API[02E] 0 API[02F] 0	--MUE-- HWSEC 0000457F UTSEC 308E7D03 UTUSEC 0000 XMITR OK RECUR 0K ERRCNT 0 XMTCTR 96 RECCTR 106 ENABLE 31 TMRATE 2 SPSTATE 0 RPSTATE 0 STEST AA5500 FDM 91002C CCSAP 1085

UPDATE: 32

DATE: 03-17-94  
GMT: 22:04:30

MAR 18 1994

31.946 MHz  
CSO 2

Figure 52

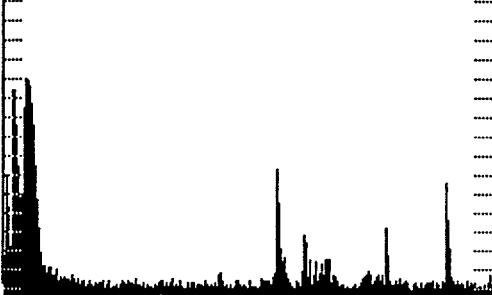
	--MON 016---	--MON 030---	--MON 046---
	P10S3U 10.461U P10S3I 0.002A M10S3U -10.666U M10S3I 0.000A P5S4U 5.141U P5S4I 0.000A P12S4U 12.487U P12S4I 0.000A M12S4U -12.546U M12S4I 0.003A P28S5U 32.715U P28S5I 0.019A P28S6U 28.160U P28S6I 0.039A P5S7U 5.141U P5S7I 0.038A	P5S7U 5.141U P5S7I 0.038A M5S7U -4.847U M5S7I 0.052A P12S7U 12.487U P12S7I -12.487U M12S7U 0.007A M12S7I 0.116A P5S8U 5.127A M5S8I -5.288U M5S8I 0.120A P10S8U 10.461U P10S8I 0.036A M10S8U -10.666U M10S8I 0.028A	P5S9U 5.116U P5S9I 0.068A P10S9U 10.461U P10S9I 0.029A M10S9U -10.666U M10S9I 0.025A P5S10U 5.141U P5S10I 0.040A M5S10U -5.288U M5S10I 0.018A P10S10U 10.461U P10S10I 0.039A M10S10U -10.666U M10S10I 0.039A P5S11U 5.116U P5S11I 0.200A
FFT ( SFA1 ) FFTSC 256 dB Peak -155.0 dB Freq 0.0 Hz			
--TEST-----	--AP COUNTERS--		-- MUE -----
T0 2B45 T1 3D2D T2 3F45 T3 3E2D T4 3E45 T5 3E2C T6 6364 T7 694C T8 3647 T9 3D27 T10 414A T11 3D30 T12 2D44 T13 3C2B T14 2E44 T15 3C2B	AP[020] 0 AP[021] 28721 AP[022] 0 AP[023] 0 AP[024] 0 AP[025] 0 AP[026] 0 AP[027] 0 AP[028] 0 AP[029] 0 AP[02A] 0 AP[02B] 0 AP[02C] 0 AP[02D] 0 AP[02E] 0 AP[02F] 0		HWSEC 000044F9 UTSEC 308E7D03 UTUSEC 0000 XMITR OK RECUR OK ERRCNT 0 XMTCTR 232 RECCTR 106 ENABLE 31 TMRATE 2 SPSTATE 1 RPSTHIE 3 STEST AA5500 FDM 91002C CCSAP 1081

UPDRATE: 272

DATE: 93-17-94  
GMT: 22:02:16

C507  
42.704 m  
MAP 1994

FIGURE 53

	--MON 016-- P10S3U 10.461U P10S3I 0.001A M10S3U -10.666U M10S3I 0.000A P5S4U 5.165U P5S4I 0.000A P12S4U 12.487U P12S4I 0.002A M12S4U -12.546U M12S4I 0.003A P28S5U 32.715U P28S5I 0.022A P28S6U 28.160U P28S6I 0.041A P5S7U 5.141U P5S7I 0.035A	--MON 030-- P5S7U 5.141U P5S7I 0.035A M5S7U -4.847U M5S7I 0.050A P12S7U 12.487U P12S7I 0.011A M12S7U -12.487U M12S7I 0.007A P5S8U 5.141U P5S8I 0.127A M5S8U -5.288U M5S8I 0.116A P10S8U 10.461U P10S8I 0.036A M10S8U -10.666U M10S8I 0.028A	--MON 046-- P5S9U 5.116U P5S9I 0.067A P10S9U 10.461U P10S9I -10.666U M10S9U -10.666U M10S9I 0.029A P5S10U 5.141U P5S10I 0.040A M5S10U -5.288U M5S10I 0.017A P10S10U 10.461U P10S10I 0.039A M10S10U -10.666U M10S10I 0.039A P5S11U 5.116U P5S11I 0.200A
FFT ( SFA1 ) FFTSC 256 dB Peak -102.0 dB Freq 0.0 Hz	--TEST-- T0 160E T1 170D T2 130E T3 2C17 T4 3F21 T5 3B39 T6 5C59 T7 7244 T8 3B44 T9 8C25 T10 1F28 T11 5114 T12 8D91 T13 6C76 T14 8B90 T15 8275	--AP COUNTERS-- AP10201 0 AP10211 27089 AP10221 0 AP10231 0 AP10241 0 AP10251 0 AP10261 0 AP10271 0 AP10281 0 AP10291 0 AP102A1 0 AP102B1 0 AP102C1 0 AP102D1 0 AP102E1 0 AP102F1 0	-- MUE -- HWSEC 00004467 UTSEC 308E7D03 UTUSEC 0000 XMITR OK RECUR OK ERRCNT 0 XMTCTR 96 RECCTR 106 ENABLE 31 TMRATE 2 SPSTATE 0 RFSTATE 0 STEST AA5500 FDM 91002C CCSAP 1083

CMD:1C00C000000050000FF000097

UPDRATE: 160

DATE: 03-17-94

GMT : 21:59:50

MAR 18 1994  
45.4984  
44.27  
C902

Figure 57

	--MON 016-- P10S3U 10.461V P10S3I 0.001A M10S3U -10.666V M10S3I 0.000A P5S4U 5.141V P5S4I 0.000A P12S4U 12.487V P12S4I 0.001A M12S4U -12.546V M12S4I 0.003A P20S5U 32.715V P20S5I 0.025A P20S6U 28.160V P20S6I 0.042A P5S7U 5.141V P5S7I 0.038A	--MON 030-- P5S7U 5.141V P5S9I 0.038A M10S9U -4.847V M10S9I 0.050A P12S7U 12.487V P12S7I 0.010A M12S7U -12.487V M12S7I 0.007A P5S8U 5.116V P5S8I 0.007A M5S8U -9.127V M5S8I 0.008A P10S8U 10.461V P10S8I 0.035A P10S9U -10.666V P10S9I 0.039A M10S10U 5.116V M10S10I 0.040A P5S10U 5.025V P5S10I 0.040A M5S10U -5.269V M5S10I 0.016A P10S10U 10.461V P10S10I 0.036A M10S11U -10.666V M10S11I 0.039A P5S11U 5.116V P5S11I 0.027A	--MON 046-- P5S9U 5.141V P5S9I 0.067A P10S9U 10.461V P10S9I 0.027A M10S9U -10.666V M10S9I 0.025A P5S10U 5.141V P5S10I 0.040A M5S10U -5.269V M5S10I 0.016A P10S10U 10.461V P10S10I 0.036A M10S11U -10.666V M10S11I 0.039A P5S11U 5.116V P5S11I 0.027A
FFT < SFA1> FFTSC 256 dB Peak -102.0 dB Freq 0.0 Hz	--TEST-- T0 150E T1 160F T2 190E T3 2B11 T4 3F1F T5 4139 T6 605B T7 6F43 T8 3742 T9 8124 T10 1D2C T11 640F T12 8F8D T13 6C9C T14 8E98 T15 7077	--AP COUNTERS-- AP[020] 0 AP[021] 26457 AP[022] 0 AP[023] 0 AP[024] 0 AP[025] 0 AP[026] 0 AP[027] 0 AP[028] 0 AP[029] 0 AP[02A] 0 AP[02B] 0 AP[02C] 0 AP[02D] 0 AP[02E] 0 AP[02F] 0	-- MUE -- HWSEC 00004431 UTSEC 308E7D03 UTUSEC 0000 XMITR OK RECUR OK ERRCNT 0 XMTCTR 232 RECCTR 106 ENABLE 31 TMRATE 2 SPSTATE 1 RPSTATE 13 STEST AA5500 FDM 91002C CCSAP 1081
CMD: 1C00C00000050000FF000097		UPDATE: 256	DATE: 03-17-94 GMT : 21:58:56

MAR 18 1994

50 mhz  
CSOR

Figure 55

<p>FFT (SFA1) FFTSC 256 dB Peak -103.0 dB Freq 0.0 Hz</p>		<p>--MON 016---</p> <table border="0"> <tr><td>P10S3U</td><td>10.512U</td><td>5.165U</td></tr> <tr><td>P10S3I</td><td>0.002A</td><td>P5S7I</td><td>0.039A</td></tr> <tr><td>M10S3U</td><td>-10.718U</td><td>M5S7U</td><td>-4.872U</td></tr> <tr><td>M10S3I</td><td>0.001A</td><td>M5S7I</td><td>0.045A</td></tr> <tr><td>P5S4U</td><td>5.190U</td><td>P12S7U</td><td>12.546U</td></tr> <tr><td>P5S4I</td><td>0.000A</td><td>P12S7I</td><td>0.011A</td></tr> <tr><td>P12S4U</td><td>12.546U</td><td>M12S7U</td><td>-12.605U</td></tr> <tr><td>P12S4I</td><td>0.001A</td><td>M12S7I</td><td>0.007A</td></tr> <tr><td>M12S4U</td><td>-12.605U</td><td>P5S8U</td><td>5.165U</td></tr> <tr><td>M12S4I</td><td>0.004A</td><td>P5S8I</td><td>0.129U</td></tr> <tr><td>P20S5U</td><td>32.854U</td><td>M5S8U</td><td>-5.312U</td></tr> <tr><td>P20S5I</td><td>0.020A</td><td>M5S8I</td><td>0.110A</td></tr> <tr><td>P20S6U</td><td>28.298U</td><td>P10S8U</td><td>10.512U</td></tr> <tr><td>P20S6I</td><td>0.040A</td><td>P10S8I</td><td>0.036A</td></tr> <tr><td>P5S7U</td><td>5.165U</td><td>M10S8U</td><td>-10.717U</td></tr> <tr><td>P5S7I</td><td>0.039A</td><td>M10S8I</td><td>0.028A</td></tr> </table>	P10S3U	10.512U	5.165U	P10S3I	0.002A	P5S7I	0.039A	M10S3U	-10.718U	M5S7U	-4.872U	M10S3I	0.001A	M5S7I	0.045A	P5S4U	5.190U	P12S7U	12.546U	P5S4I	0.000A	P12S7I	0.011A	P12S4U	12.546U	M12S7U	-12.605U	P12S4I	0.001A	M12S7I	0.007A	M12S4U	-12.605U	P5S8U	5.165U	M12S4I	0.004A	P5S8I	0.129U	P20S5U	32.854U	M5S8U	-5.312U	P20S5I	0.020A	M5S8I	0.110A	P20S6U	28.298U	P10S8U	10.512U	P20S6I	0.040A	P10S8I	0.036A	P5S7U	5.165U	M10S8U	-10.717U	P5S7I	0.039A	M10S8I	0.028A	<p>--MON 030---</p> <table border="0"> <tr><td>P5S9U</td><td>5.165U</td></tr> <tr><td>P5S9I</td><td>0.068A</td></tr> <tr><td>P10S9U</td><td>10.512U</td></tr> <tr><td>P10S9I</td><td>0.028A</td></tr> <tr><td>M10S9U</td><td>-10.718U</td></tr> <tr><td>M10S9I</td><td>0.026A</td></tr> <tr><td>P5S10U</td><td>5.165U</td></tr> <tr><td>P5S10I</td><td>0.041A</td></tr> <tr><td>M5S10U</td><td>-5.337U</td></tr> <tr><td>M5S10I</td><td>0.018A</td></tr> <tr><td>P10S10U</td><td>10.512U</td></tr> <tr><td>P10S10I</td><td>0.032A</td></tr> <tr><td>M10S10U</td><td>-10.718U</td></tr> <tr><td>M10S10I</td><td>0.039A</td></tr> <tr><td>P5S11U</td><td>5.141U</td></tr> <tr><td>P5S11I</td><td>0.204A</td></tr> </table>	P5S9U	5.165U	P5S9I	0.068A	P10S9U	10.512U	P10S9I	0.028A	M10S9U	-10.718U	M10S9I	0.026A	P5S10U	5.165U	P5S10I	0.041A	M5S10U	-5.337U	M5S10I	0.018A	P10S10U	10.512U	P10S10I	0.032A	M10S10U	-10.718U	M10S10I	0.039A	P5S11U	5.141U	P5S11I	0.204A
P10S3U	10.512U	5.165U																																																																																																
P10S3I	0.002A	P5S7I	0.039A																																																																																															
M10S3U	-10.718U	M5S7U	-4.872U																																																																																															
M10S3I	0.001A	M5S7I	0.045A																																																																																															
P5S4U	5.190U	P12S7U	12.546U																																																																																															
P5S4I	0.000A	P12S7I	0.011A																																																																																															
P12S4U	12.546U	M12S7U	-12.605U																																																																																															
P12S4I	0.001A	M12S7I	0.007A																																																																																															
M12S4U	-12.605U	P5S8U	5.165U																																																																																															
M12S4I	0.004A	P5S8I	0.129U																																																																																															
P20S5U	32.854U	M5S8U	-5.312U																																																																																															
P20S5I	0.020A	M5S8I	0.110A																																																																																															
P20S6U	28.298U	P10S8U	10.512U																																																																																															
P20S6I	0.040A	P10S8I	0.036A																																																																																															
P5S7U	5.165U	M10S8U	-10.717U																																																																																															
P5S7I	0.039A	M10S8I	0.028A																																																																																															
P5S9U	5.165U																																																																																																	
P5S9I	0.068A																																																																																																	
P10S9U	10.512U																																																																																																	
P10S9I	0.028A																																																																																																	
M10S9U	-10.718U																																																																																																	
M10S9I	0.026A																																																																																																	
P5S10U	5.165U																																																																																																	
P5S10I	0.041A																																																																																																	
M5S10U	-5.337U																																																																																																	
M5S10I	0.018A																																																																																																	
P10S10U	10.512U																																																																																																	
P10S10I	0.032A																																																																																																	
M10S10U	-10.718U																																																																																																	
M10S10I	0.039A																																																																																																	
P5S11U	5.141U																																																																																																	
P5S11I	0.204A																																																																																																	
<p>--TEST-----</p> <table border="0"> <tr><td>T0</td><td>1911</td><td>-APL COUNTERS-</td></tr> <tr><td>T1</td><td>170D</td><td>APL020] 0</td></tr> <tr><td>T2</td><td>190F</td><td>APL021] 23505</td></tr> <tr><td>T3</td><td>2B19</td><td>APL023]</td></tr> <tr><td>T4</td><td>3F1F</td><td>APL024]</td></tr> <tr><td>T5</td><td>403A</td><td>APL025]</td></tr> <tr><td>T6</td><td>5B5B</td><td>APL026]</td></tr> <tr><td>T7</td><td>7446</td><td>APL027]</td></tr> <tr><td>T8</td><td>3943</td><td>APL028]</td></tr> <tr><td>T9</td><td>8224</td><td>APL029]</td></tr> <tr><td>T10</td><td>2325</td><td>APL02A]</td></tr> <tr><td>T11</td><td>5D19</td><td>APL02B]</td></tr> <tr><td>T12</td><td>8E95</td><td>APL02C]</td></tr> <tr><td>T13</td><td>5B78</td><td>APL02D]</td></tr> <tr><td>T14</td><td>8E95</td><td>APL02E]</td></tr> <tr><td>T15</td><td>6A76</td><td>APL02F]</td></tr> </table>	T0	1911	-APL COUNTERS-	T1	170D	APL020] 0	T2	190F	APL021] 23505	T3	2B19	APL023]	T4	3F1F	APL024]	T5	403A	APL025]	T6	5B5B	APL026]	T7	7446	APL027]	T8	3943	APL028]	T9	8224	APL029]	T10	2325	APL02A]	T11	5D19	APL02B]	T12	8E95	APL02C]	T13	5B78	APL02D]	T14	8E95	APL02E]	T15	6A76	APL02F]		<p>-- MUE ---</p> <table border="0"> <tr><td>HWSEC</td><td>00004329</td></tr> <tr><td>UTSEC</td><td>308E7D03</td></tr> <tr><td>UTUSEC</td><td>0000</td></tr> <tr><td>XMITR</td><td>OK</td></tr> <tr><td>RECUR</td><td>OK</td></tr> <tr><td>ERRCNT</td><td>0</td></tr> <tr><td>XMTCTR</td><td>232</td></tr> <tr><td>RECCTR</td><td>106</td></tr> <tr><td>ENABLE</td><td>31</td></tr> <tr><td>TMRATE</td><td>2</td></tr> <tr><td>SPSTATE</td><td>1</td></tr> <tr><td>RPSTATE</td><td>3</td></tr> <tr><td>STEST</td><td>A5500</td></tr> <tr><td>FDM</td><td>91002C</td></tr> <tr><td>CCSAP</td><td>1081</td></tr> </table>	HWSEC	00004329	UTSEC	308E7D03	UTUSEC	0000	XMITR	OK	RECUR	OK	ERRCNT	0	XMTCTR	232	RECCTR	106	ENABLE	31	TMRATE	2	SPSTATE	1	RPSTATE	3	STEST	A5500	FDM	91002C	CCSAP	1081																		
T0	1911	-APL COUNTERS-																																																																																																
T1	170D	APL020] 0																																																																																																
T2	190F	APL021] 23505																																																																																																
T3	2B19	APL023]																																																																																																
T4	3F1F	APL024]																																																																																																
T5	403A	APL025]																																																																																																
T6	5B5B	APL026]																																																																																																
T7	7446	APL027]																																																																																																
T8	3943	APL028]																																																																																																
T9	8224	APL029]																																																																																																
T10	2325	APL02A]																																																																																																
T11	5D19	APL02B]																																																																																																
T12	8E95	APL02C]																																																																																																
T13	5B78	APL02D]																																																																																																
T14	8E95	APL02E]																																																																																																
T15	6A76	APL02F]																																																																																																
HWSEC	00004329																																																																																																	
UTSEC	308E7D03																																																																																																	
UTUSEC	0000																																																																																																	
XMITR	OK																																																																																																	
RECUR	OK																																																																																																	
ERRCNT	0																																																																																																	
XMTCTR	232																																																																																																	
RECCTR	106																																																																																																	
ENABLE	31																																																																																																	
TMRATE	2																																																																																																	
SPSTATE	1																																																																																																	
RPSTATE	3																																																																																																	
STEST	A5500																																																																																																	
FDM	91002C																																																																																																	
CCSAP	1081																																																																																																	

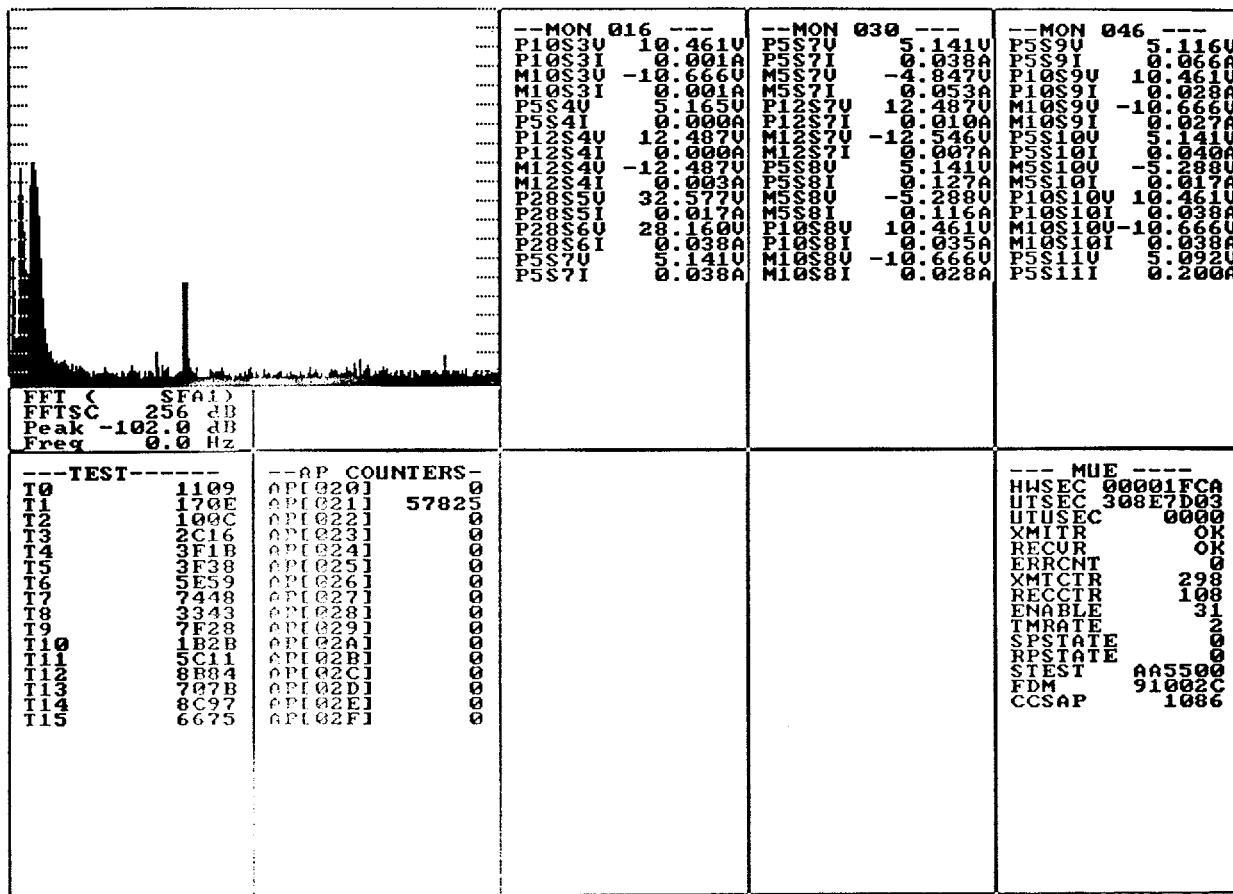
CMD:1C00C000000050000FF000097

UPDATE: 272

DATE: 03-17-94  
GMT: 21:54:32

MAR 18 1994  
64.815 mhz  
CSO 2

FIGURE 56



98. 866

MAR 18 1994

CSOZ

## Figure 57

	--MON 016-- P10S3U 10.461U P10S3I 0.001A M10S3U -10.666U M10S3I 0.001A P5S4U 5.141U P5S4I 0.000A P12S4U 12.487U P12S4I 0.000A M12S4U -12.546U M12S4I 0.003A P28S5U 32.577U P28S5I 0.019A P28S6U 28.160U P28S6I 0.039A P5S7U 5.141U P5S7I 0.038A	--MON 030-- P5S7U 5.141U P5S7I 0.038A M5S7U -4.847U M5S7I 0.053A P12S7U 12.487U P12S7I 0.010A M12S7U -12.546U M12S7I 0.007A P5S8U 5.116U P5S8I 0.012A M5S8U -5.288U M5S8I 0.016A P10S8U 10.461U P10S8I 0.035A M10S8U -10.666U M10S8I 0.028A	--MON 046-- P5S9U 5.116U P5S9I 0.066A P10S9U 10.461U P10S9I 0.027A M10S9U -10.666U M10S9I 0.027A P5S10U 5.141U P5S10I 0.040A M5S10U -5.288U M5S10I 0.018A P10S10U 10.461U P10S10I 0.038A M10S10U -10.666A M10S10I 0.038A P5S11U 5.116A P5S11I 0.200A
FFT ( SFA1 ) FFTSC 256 dB Peak -103.0 dB Freq 0.0 Hz	--TEST-- T0 150B T1 0E11 T2 110E T3 2F17 T4 401E T5 4C39 T6 5C5B T7 7747 T8 3345 T9 8325 T10 202B T11 5E0B T12 8C86 T13 6C7C T14 8C97 T15 7678	--AP COUNTERS-- AP[Q20] 0 AP[Q21] 55937 AP[Q22] 0 AP[Q23] 0 AP[Q24] 0 AP[Q25] 0 AP[Q26] 0 AP[Q27] 0 AP[Q28] 0 AP[Q29] 0 AP[Q2A] 0 AP[Q2B] 0 AP[Q2C] 0 AP[Q2D] 0 AP[Q2E] 0 AP[Q2F] 0	-- MUE -- HWSEC 00001F23 UTSEC 308E7D03 UTUSEC 0000 XMITR OK RECUR OK ERRCNT 0 XMICTR 96 RECCTR 106 ENABLE 31 TMRATE 32 SPSTATE 0 RPSTATE 0 STEST AA5500 FDM 91002C CCSAP 1088

CMD:1C000C000000000000000097

UPDATE: 176

DATE: 03-17-94  
GMT: 19:20:52

MAR 18 1994

(00 m + 13)

CSOZ

Figure 58

 <p>FFT ( SFA1 )  FFTSC 256 dB  Peak -102.0 dB  Freq 0.0 Hz</p>		<p>--MON 016---</p> <table border="0"> <tbody> <tr><td>P10S3U</td><td>10.461U</td></tr> <tr><td>P10S3I</td><td>0.001A</td></tr> <tr><td>M10S3U</td><td>-10.666U</td></tr> <tr><td>M10S3I</td><td>0.001A</td></tr> <tr><td>P5S4U</td><td>5.141U</td></tr> <tr><td>P5S4I</td><td>0.000A</td></tr> <tr><td>P12S4U</td><td>12.487U</td></tr> <tr><td>P12S4I</td><td>0.000A</td></tr> <tr><td>M12S4U</td><td>-12.546U</td></tr> <tr><td>M12S4I</td><td>0.002A</td></tr> <tr><td>P20S5U</td><td>32.557U</td></tr> <tr><td>P20S5I</td><td>0.019A</td></tr> <tr><td>P20S6U</td><td>28.160U</td></tr> <tr><td>P20S6I</td><td>0.041A</td></tr> <tr><td>P5S7U</td><td>5.116U</td></tr> <tr><td>P5S7I</td><td>0.038A</td></tr> </tbody> </table> <p>--MON 030---</p> <table border="0"> <tbody> <tr><td>P5S7U</td><td>5.116U</td></tr> <tr><td>P5S7I</td><td>0.038A</td></tr> <tr><td>M5S7U</td><td>-4.847U</td></tr> <tr><td>M5S7I</td><td>0.052A</td></tr> <tr><td>P12S7U</td><td>12.487U</td></tr> <tr><td>P12S7I</td><td>0.010A</td></tr> <tr><td>M12S7U</td><td>-12.487U</td></tr> <tr><td>M12S7I</td><td>0.007A</td></tr> <tr><td>P5S8U</td><td>5.116U</td></tr> <tr><td>P5S8I</td><td>0.027A</td></tr> <tr><td>M5S8U</td><td>-5.122U</td></tr> <tr><td>M5S8I</td><td>0.023A</td></tr> <tr><td>P10S8U</td><td>10.461U</td></tr> <tr><td>P10S8I</td><td>0.035A</td></tr> <tr><td>M10S8U</td><td>-10.666U</td></tr> <tr><td>M10S8I</td><td>0.028A</td></tr> </tbody> </table> <p>--MON 046---</p> <table border="0"> <tbody> <tr><td>P5S9U</td><td>5.116U</td></tr> <tr><td>P5S9I</td><td>0.067A</td></tr> <tr><td>P10S9U</td><td>10.461U</td></tr> <tr><td>P10S9I</td><td>0.028A</td></tr> <tr><td>M10S9U</td><td>-10.666U</td></tr> <tr><td>M10S9I</td><td>0.027A</td></tr> <tr><td>P5S10U</td><td>5.141U</td></tr> <tr><td>P5S10I</td><td>0.039A</td></tr> <tr><td>M5S10U</td><td>-5.128A</td></tr> <tr><td>M5S10I</td><td>0.038A</td></tr> <tr><td>P10S10U</td><td>10.461U</td></tr> <tr><td>P10S10I</td><td>0.038A</td></tr> <tr><td>M10S10U</td><td>-10.666U</td></tr> <tr><td>M10S10I</td><td>0.038A</td></tr> <tr><td>P5S11U</td><td>5.092U</td></tr> <tr><td>P5S11I</td><td>0.200A</td></tr> </tbody> </table>	P10S3U	10.461U	P10S3I	0.001A	M10S3U	-10.666U	M10S3I	0.001A	P5S4U	5.141U	P5S4I	0.000A	P12S4U	12.487U	P12S4I	0.000A	M12S4U	-12.546U	M12S4I	0.002A	P20S5U	32.557U	P20S5I	0.019A	P20S6U	28.160U	P20S6I	0.041A	P5S7U	5.116U	P5S7I	0.038A	P5S7U	5.116U	P5S7I	0.038A	M5S7U	-4.847U	M5S7I	0.052A	P12S7U	12.487U	P12S7I	0.010A	M12S7U	-12.487U	M12S7I	0.007A	P5S8U	5.116U	P5S8I	0.027A	M5S8U	-5.122U	M5S8I	0.023A	P10S8U	10.461U	P10S8I	0.035A	M10S8U	-10.666U	M10S8I	0.028A	P5S9U	5.116U	P5S9I	0.067A	P10S9U	10.461U	P10S9I	0.028A	M10S9U	-10.666U	M10S9I	0.027A	P5S10U	5.141U	P5S10I	0.039A	M5S10U	-5.128A	M5S10I	0.038A	P10S10U	10.461U	P10S10I	0.038A	M10S10U	-10.666U	M10S10I	0.038A	P5S11U	5.092U	P5S11I	0.200A	
P10S3U	10.461U																																																																																																		
P10S3I	0.001A																																																																																																		
M10S3U	-10.666U																																																																																																		
M10S3I	0.001A																																																																																																		
P5S4U	5.141U																																																																																																		
P5S4I	0.000A																																																																																																		
P12S4U	12.487U																																																																																																		
P12S4I	0.000A																																																																																																		
M12S4U	-12.546U																																																																																																		
M12S4I	0.002A																																																																																																		
P20S5U	32.557U																																																																																																		
P20S5I	0.019A																																																																																																		
P20S6U	28.160U																																																																																																		
P20S6I	0.041A																																																																																																		
P5S7U	5.116U																																																																																																		
P5S7I	0.038A																																																																																																		
P5S7U	5.116U																																																																																																		
P5S7I	0.038A																																																																																																		
M5S7U	-4.847U																																																																																																		
M5S7I	0.052A																																																																																																		
P12S7U	12.487U																																																																																																		
P12S7I	0.010A																																																																																																		
M12S7U	-12.487U																																																																																																		
M12S7I	0.007A																																																																																																		
P5S8U	5.116U																																																																																																		
P5S8I	0.027A																																																																																																		
M5S8U	-5.122U																																																																																																		
M5S8I	0.023A																																																																																																		
P10S8U	10.461U																																																																																																		
P10S8I	0.035A																																																																																																		
M10S8U	-10.666U																																																																																																		
M10S8I	0.028A																																																																																																		
P5S9U	5.116U																																																																																																		
P5S9I	0.067A																																																																																																		
P10S9U	10.461U																																																																																																		
P10S9I	0.028A																																																																																																		
M10S9U	-10.666U																																																																																																		
M10S9I	0.027A																																																																																																		
P5S10U	5.141U																																																																																																		
P5S10I	0.039A																																																																																																		
M5S10U	-5.128A																																																																																																		
M5S10I	0.038A																																																																																																		
P10S10U	10.461U																																																																																																		
P10S10I	0.038A																																																																																																		
M10S10U	-10.666U																																																																																																		
M10S10I	0.038A																																																																																																		
P5S11U	5.092U																																																																																																		
P5S11I	0.200A																																																																																																		
<p>---TEST---</p> <table border="0"> <tbody> <tr><td>T0</td><td>2128</td><td>--AP COUNTERS--</td></tr> <tr><td>T1</td><td>282D</td><td>AP[020] 0</td></tr> <tr><td>T2</td><td>1F29</td><td>AP[021] 55085</td></tr> <tr><td>T3</td><td>322F</td><td>AP[022] 0</td></tr> <tr><td>T4</td><td>3B3C</td><td>AP[023] 0</td></tr> <tr><td>T5</td><td>3F27</td><td>AP[024] 0</td></tr> <tr><td>T6</td><td>575D</td><td>AP[025] 0</td></tr> <tr><td>T7</td><td>7F45</td><td>AP[026] 0</td></tr> <tr><td>T8</td><td>3941</td><td>AP[027] 0</td></tr> <tr><td>T9</td><td>8A26</td><td>AP[028] 0</td></tr> <tr><td>T10</td><td>2027</td><td>AP[029] 0</td></tr> <tr><td>T11</td><td>6834</td><td>AP[02A] 0</td></tr> <tr><td>T12</td><td>6C5C</td><td>AP[02B] 0</td></tr> <tr><td>T13</td><td>6468</td><td>AP[02C] 0</td></tr> <tr><td>T14</td><td>8D97</td><td>AP[02D] 0</td></tr> <tr><td>T15</td><td>627A</td><td>AP[02E] 0</td></tr> </tbody> </table>	T0	2128	--AP COUNTERS--	T1	282D	AP[020] 0	T2	1F29	AP[021] 55085	T3	322F	AP[022] 0	T4	3B3C	AP[023] 0	T5	3F27	AP[024] 0	T6	575D	AP[025] 0	T7	7F45	AP[026] 0	T8	3941	AP[027] 0	T9	8A26	AP[028] 0	T10	2027	AP[029] 0	T11	6834	AP[02A] 0	T12	6C5C	AP[02B] 0	T13	6468	AP[02C] 0	T14	8D97	AP[02D] 0	T15	627A	AP[02E] 0	<p>--- MUE ---</p> <table border="0"> <tbody> <tr><td>HWSEC</td><td>00001ED2</td></tr> <tr><td>UTSEC</td><td>308E7D03</td></tr> <tr><td>UTUSEC</td><td>0000</td></tr> <tr><td>XMITR</td><td>OK</td></tr> <tr><td>RECUR</td><td>OK</td></tr> <tr><td>ERRCNT</td><td>0</td></tr> <tr><td>XMTCTR</td><td>434</td></tr> <tr><td>RECCTR</td><td>108</td></tr> <tr><td>ENABLE</td><td>31</td></tr> <tr><td>TMRATE</td><td>2</td></tr> <tr><td>SPSTATE</td><td>0</td></tr> <tr><td>RPSTATE</td><td>0</td></tr> <tr><td>STEST</td><td>AA5500</td></tr> <tr><td>FDM</td><td>91002C</td></tr> <tr><td>CCSAP</td><td>1086</td></tr> </tbody> </table>	HWSEC	00001ED2	UTSEC	308E7D03	UTUSEC	0000	XMITR	OK	RECUR	OK	ERRCNT	0	XMTCTR	434	RECCTR	108	ENABLE	31	TMRATE	2	SPSTATE	0	RPSTATE	0	STEST	AA5500	FDM	91002C	CCSAP	1086	<p>CMD:1C00C000000050000FF000097</p> <p>UPDATE: 272 DATE: 03-17-94</p> <p>GMT : 19:19:31</p>																			
T0	2128	--AP COUNTERS--																																																																																																	
T1	282D	AP[020] 0																																																																																																	
T2	1F29	AP[021] 55085																																																																																																	
T3	322F	AP[022] 0																																																																																																	
T4	3B3C	AP[023] 0																																																																																																	
T5	3F27	AP[024] 0																																																																																																	
T6	575D	AP[025] 0																																																																																																	
T7	7F45	AP[026] 0																																																																																																	
T8	3941	AP[027] 0																																																																																																	
T9	8A26	AP[028] 0																																																																																																	
T10	2027	AP[029] 0																																																																																																	
T11	6834	AP[02A] 0																																																																																																	
T12	6C5C	AP[02B] 0																																																																																																	
T13	6468	AP[02C] 0																																																																																																	
T14	8D97	AP[02D] 0																																																																																																	
T15	627A	AP[02E] 0																																																																																																	
HWSEC	00001ED2																																																																																																		
UTSEC	308E7D03																																																																																																		
UTUSEC	0000																																																																																																		
XMITR	OK																																																																																																		
RECUR	OK																																																																																																		
ERRCNT	0																																																																																																		
XMTCTR	434																																																																																																		
RECCTR	108																																																																																																		
ENABLE	31																																																																																																		
TMRATE	2																																																																																																		
SPSTATE	0																																																																																																		
RPSTATE	0																																																																																																		
STEST	AA5500																																																																																																		
FDM	91002C																																																																																																		
CCSAP	1086																																																																																																		

MAR 18 1994

106.403

C502

Figure 59

	--MON 016-- P10S3U 10.461U P10S3I 0.001A M10S3U -10.666U M10S3I 0.001A P5S4U 5.141U P5S4I 0.000A P12S4U 12.487U P12S4I 0.000A M12S4U -12.487U M12S4I 0.003A P28S5U 32.572U P28S5I 0.017A P28S6U 28.160U P28S6I 0.038A P5S7U 5.116U P5S7I 0.038A	--MON 030-- P5S7U 5.116U P5S7I 0.038A M5S7U -4.847U M5S7I 0.051A P12S7U 12.428U P12S7I 0.010A M12S7U -12.487U M12S7I 0.007A P5S8U 5.116U P5S8I 0.127A M5S8U -5.263U M5S8I 0.116A P10S8U 10.461U P10S8I 0.035A M10S8U -10.666U M10S8I 0.028A	--MON 046-- P5S9U 5.116U P5S9I 0.068A P10S9U 10.410U P10S9I 0.030A M10S9U -10.666U M10S9I 0.027A P5S10U 5.141U P5S10I 0.040A M5S10U -5.288U M5S10I 0.017A P10S10U 10.461U P10S10I 0.030A M10S10U -10.666U M10S10I 0.038A P5S11U 5.092U P5S11I 0.204A
FFT < SFA1> FFTSC 256 dB Peak -101.0 dB Freq 0.0 Hz	--TEST-- T0 1F30 T1 1A42 T2 1E2F T3 2942 T4 342E T5 3B41 T6 5958 T7 7847 T8 3343 T9 38543 T10 2536 T11 5D42 T12 695D T13 706B T14 8D9A T15 6579	--AP COUNTERS-- AP[020] 0 AP[021] 52857 AP[022] 0 AP[023] 0 AP[024] 0 AP[025] 0 AP[026] 0 AP[027] 0 AP[028] 0 AP[029] 0 AP[02A] 0 AP[02B] 0 AP[02C] 0 AP[02D] 0 AP[02E] 0 AP[02F] 0	--MUE-- HWSEC 00001E03 UTSEC 308E7D03 UTUSEC 0000 XMITR OK RECUR OK ERRCNT 0 XMTCTR 96 RECCTR 106 ENABLE 31 TMRATE 2 SPSTATE 0 RPSTATE 0 STEST AA5500 FDM 91002C CCSAP 1080

CMD:1C00C000000050000FF000097

UPDATE: 144 DATE: 03-17-94

GMT: 19:16:04

MAR 18 1994

127.868

CSO 2

Figure 60

	--MON 016---	--MON 030---	--MON 046---
	P10S3U 10.461V P10S3I 0.001A M10S3U -10.666V M10S3I 0.001A P5S4U 5.141V P5S4I 0.000A P12S4U 12.487V P12S4I 0.000A M12S4U -12.487V M12S4I 0.003A P28S5U 32.573V P28S5I 0.000A P28S6U 28.022V P28S6I 0.038A P5S7U 5.116V P5S7I 0.038A	P5S7U 5.116V P5S7I 0.038A M5S7U -4.847V M5S7I 0.052A P12S7U 12.428V P12S7I 0.010A M12S7U -12.487V M12S7I 0.007A P5S8U 5.116V P5S8I 0.023A M5S8U -5.1263V M5S8I 0.016A P10S8V 10.461V P10S8I 0.034A M10S8V -10.666V M10S8I 0.034A P5S11U 5.092V P5S11I 0.210A	P5S9U 5.116V P5S9I 0.067A P10S9U 10.410V P10S9I -10.666V P5S10U 5.141V P5S10I 0.041A M5S10U -5.268V M5S10I 0.017A P10S10V 10.461V P10S10I 0.038A M10S10U -10.666V M10S10I 0.038A P5S11V 5.092V P5S11I 0.210A
FFT < SF41 > FFTSC 256 dB Peak -100.0 dB Freq 0.0 Hz			
----TEST----	--AP COUNTERS--  T0 474E APL0201 0 T1 1055 APL0211 38961 T2 474E APL0221 0 T3 2055 APL0231 0 T4 474D APL0241 0 T5 3C54 APL0251 0 T6 6064 APL0261 0 T7 7D54 APL0271 0 T8 4B4E APL0281 0 T9 8558 APL0291 0 T10 454D APL02A1 0 T11 6755 APL02B1 0 T12 7B6F APL02C1 0 T13 6574 APL02D1 0 T14 8D98 APL02E1 0 T15 657A APL02F1 0		---- MUE ---- HWSEC 000018EB UTSEC 308E7D03 UTUSEC 0000 XMITR OK RECUR OK ERRCNT 0 XMICTR 96 RECCTR 106 ENABLE 31 TMRATE 2 SPSTATE 0 RPSTATE 0 STEST AA5500 FDM 91002C CCSAP 1088

CMD:1C00C000000050000FF000097

UPDRATE: 48

DATE: 03-17-94  
GMT: 18:54:21

MAR 18 1994

C502  
159.646 m + }

Figure 61

	--MON 016---	--MON 030---	--MON 046---
	P10S3U 10.461U P10S3I 0.001A M10S3U -10.666U M10S3I 0.001A P5S4U 5.141U P5S4I 0.000A P12S4U 12.428U P12S4I 0.000A M12S4U -12.487U M12S4I 0.002A P28S5U 32.577U P28S5I 0.000A P28S6U 28.160U P28S6I 0.038A P5S7U 5.141U P5S7I 0.038A	P5S7U 5.141U P5S7I 0.038A M5S7U -4.847U M5S7I 0.052A P12S7U 12.428U P12S7I 0.010A M12S7U -12.487U M12S7I 0.007A P5S8U 5.116U P5S8I 0.127A M5S8U -5.263U M5S8I 0.116A P10S8U 10.461U P10S8I 0.034A M10S8U -10.666U M10S8I 0.028A	P5S9U 5.116U P5S9I 0.066A P10S9U 10.410U P10S9I 0.022A M10S9U -10.666U M10S9I 0.021A P5S10U 5.141U P5S10I 0.040A M5S10U -5.288U M5S10I 0.017A P10S10U 10.410U P10S10I 0.036A M10S10U -10.666U M10S10I 0.038A P5S11U 5.092U P5S11I 0.202A
FFT ( SFA1 )			
FFTSC 256 dB			
Peak -99.0 dB			
Freq 0.0 Hz			
----TEST----	--AP COUNTERS--		---- MUE ----
T0 3A4B	API[020]	0	HWSEC 00001810
T1 0B50	API[021]	36649	UTSEC 308E7D03
T2 3A4A	API[022]	0	UTUSEC 0000
T3 2E51	API[023]	0	XMITR OK
T4 374B	API[024]	0	RECUR OK
T5 3C50	API[025]	0	ERRCNT 0
T6 5E63	API[026]	0	XMTCTR 434
T7 7755	API[027]	0	RECCTR 108
T8 3C4F	API[028]	0	ENABLE 31
T9 8951	API[029]	0	TMRATE 2
T10 394A	API[02A]	0	SPSTATE 1
T11 6551	API[02B]	0	RPSTATE 1
T12 796E	API[02C]	0	STEST AA5500
T13 6673	API[02D]	0	FDM 91002C
T14 8E98	API[02E]	0	CCSAP 1081
T15 677C	API[02F]	0	

CMD:IC00C000000050000FF00009?

UPDATE: 112 DATE: 03-17-94  
GMT : 18:50:42

MAR 18 1994

CSO2

170.371 m/s

Figure 62

	--MON 016---	--MON 030---	--MON 046---
	P10S3U 10.359U P10S3I 0.001A M10S3U -10.356AU M10S3I 0.002A P5S4U 5.116U P5S4I 0.000A P12S4U 12.369U P12S4I 0.001A M12S4U -12.487U M12S4I 0.004A P28S5U 32.439U P28S5I 0.019A P28S6U 27.884U P28S6I 0.038A P5S7U 5.092U P5S7I 0.036A	P5S7U 5.092U P5S7I 0.036A MDS7U -4.798U MDS7I 0.050A P12S7U 12.369U P12S7I 0.010A M12S7U -12.428U M12S7I 0.097A P5S8U 5.092U P5S8I 0.125A M5S8U -5.239U M5S8I 0.112A P10S8U 10.358U P10S8I 0.033A M10S8U -10.563U M10S8I 0.027A	P5S9U 5.092U P5S9I 0.065A P10S9U 10.359U P10S9I 0.026A M10S9U -10.564U M10S9I 0.026A P5S10U 5.116U P5S10I 0.038A M5S10U -5.263U M5S10I 0.017A P10S10U 10.358U P10S10I 0.033A M10S10U -10.564U M10S10I 0.037A P5S11U 5.092U P5S11I 0.196A
FFT ( SFA1 )			
FFTSC 256 dB			
Peak -97.0 dB			
Freq 0.0 Hz			
---TEST---	--AP COUNTERS--		--- MUE ---
T0 4E5B T1 1161 T2 4E5C T3 1062 T4 505A T5 395E T6 5D64 T7 2863 T8 4C5C T9 A062 T10 4E59 T11 6C53 T12 817B T13 6B77 T14 8D98 T15 6A7A	APl020] 0 APl021] 29696 APl022] 0 APl023] 0 APl024] 0 APl025] 0 APl026] 0 APl027] 0 APl028] 0 APl029] 0 APl02A] 0 APl02B] 0 APl02C] 0 APl02D] 0 APl02E] 0 APl02F] 0		HWSEC 0000131D HTSEC 308E7D03 UTUSEC 0000 XMITR OK RECUR OK ERRCNT 0 XMTCTR 232 RECCTR 106 ENABLE 31 TMRATE 0 SPSTATE 3 RPSTATE 3 SIEST AA5500 FDM 91002C CCSAP 1080

UPDRATE: 128 DATE: 03-17-94  
GMT: 18:29:35

MAR 18 1994

CSO 2

180.934

Figure 63

	--MON 016-- P10S3U 10.359U P10S3I 0.001A M10S3U -10.564U M10S3I 0.002A P5S4U 5.092U P5S4I 0.000A P12S4U 12.369U P12S4I 0.001A M12S4U -12.487U M12S4I 0.004A P20S5U 32.043U P20S5I 0.019A P20S6U 27.884U P20S6I 0.038A P5S7U 5.092U P5S7I 0.036A	--MON 030-- P5S7U 5.092U P5S7I 0.036A M5S7U -4.798U M5S7I 0.050A P12S7U 12.369U P12S7I 0.010A M12S7U -12.487U M12S7I 0.007A P5S8U 5.092U P5S8I 0.023A P10S8U 10.358U P10S8I 0.033A M10S8U -10.563U M10S8I 0.026A	--MON 046-- P5S9U 5.092U P5S9I 0.065A P10S9U 10.359U P10S9I -10.564U P5S10U 5.092U P5S10I 0.038A M5S10U -5.263U M5S10I 0.017A P10S10U 10.358U P10S10I 0.037A M10S10U -10.564U M10S10I 0.037A P5S11U 5.092U P5S11I 0.196A
FFT ( SFA1 ) FFTSC 256 dB Peak -98.0 dB Freq 0.0 Hz	--TEST-- T0 0D0A T1 0911 T2 1A16 T3 171A T4 3C1B T5 2934 T6 5D5B T7 3E46 T8 3A46 T9 722E T10 1F2B T11 7021 T12 7F74 T13 7B75 T14 8D98 T15 837C	--AP COUNTERS-- APL020J 0 APL021J 25488 APL022J 0 APL023J 0 APL024J 0 APL025J 0 APL026J 0 APL027J 0 APL028J 0 APL029J 0 APL02AJ 0 APL02BJ 0 APL02CJ 0 APL02DJ 0 APL02EJ 0 APL02FJ 0	-- MUE -- HWSEC 000010DE UTSEC 308E7D03 UTUSEC 0000 XMITR OK RECUR OK ERRCNT 0 XMTCTR 434 RECCTR 108 ENABLE 31 TMRATE 2 SPSTATE 1 PPSTATE 3 STEST AA5500 FDM 91002C CCSAP 1083

UPDRATE: 176

DATE: 03-17-94  
GMT : 18:20:00

3-18-94

CS02

183.15 mHz

Figure 64

<p>FFT ( SFA1 ) FFTSC 256 dB Peak -99.0 dB Freq 0.0 Hz</p>		--MON 016---	--MON 030---	--MON 046---	
P10S3U	10.3590	P5S7U	5.092V	P5S9U	5.092V
P10S3I	0.001A	P5S7I	0.036A	P5S9I	0.065A
M10S3U	-10.5640	M5S7U	-4.7980	P10S9U	10.359U
M10S3I	0.001A	M5S7I	0.050A	M10S9I	-10.512U
P5S4U	5.0920	P12S7U	12.3690	M10S9U	0.026A
P5S4I	0.000A	P12S7I	0.0100	P10S9I	0.026A
P12S4U	12.3690	M12S7U	-12.428V	P5S10U	5.092U
P12S4I	0.001A	M12S7I	0.006A	P5S10I	0.038A
M12S4U	-12.487U	P5S8U	5.092U	M5S10U	-5.263U
M12S4I	0.003A	P5S8I	0.122A	M5S10I	0.017A
P28S5U	32.301U	M5S8U	-5.239U	P10S10U	10.358U
P28S5I	0.019A	P10S8U	10.358U	M10S10U	-10.512U
P28S6U	27.884U	P10S8I	0.023A	M10S10I	0.036A
P28S6I	0.038A	M10S8U	-10.563A	P5S11U	5.092U
P5S7U	0.092U	M10S8I	0.026A	P5S11I	0.194A
P5S7I	0.036A				
<b>--TEST--</b>		<b>--AP COUNTERS--</b>		<b>-- MUE --</b>	
T0	0608	APL020	0	HWSec 00000CBF	
T1	1406	APL021	17502	UTSEC 308E7D03	
T2	0F09	APL022	0	UTUSEC 0000	
T3	0F0D	APL023	0	XMITR OK	
T4	3D16	APL024	0	RECUR OK	
T5	4137	APL025	0	ERRCNT 0	
T6	5C59	APL026	0	XMTCTR 434	
T7	4049	APL027	0	RECCTR 108	
T8	3643	APL028	0	ENABLE 31	
T9	AB22	APL029	0	TMRATE 2	
T10	1A29	APL02A	0	SPSTATE 0	
T11	6D0C	APL02B	0	RPSTATE 3	
T12	7669	APL02C	0	STEST AA5500	
T13	7990	APL02D	0	FDM 91002C	
T14	8D92	APL02E	0	CCSAP 1080	
T15	737C	APL02F	0		

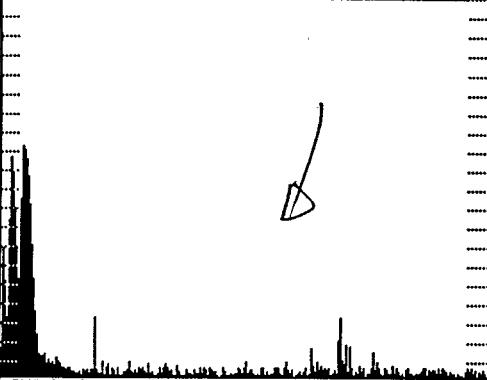
UPDRATE: 160 DATE: 03-17-94  
GMT : 18:02:26

3-18-94

C902

205 MHz

Figure 65

	--MON 016-- P10S3U 10.359U P10S3I 0.001A M10S3U -10.564U M10S3I 0.003A P5S4U 5.092U P5S4I 0.000A P12S4U 12.369U P12S4I -12.428U M12S4U -12.428U M12S4I 0.004A P28S5U 32.301U P28S5I 0.019A P28S6U 27.884U P28S6I 0.036A P5S7U 5.092U P5S7I 0.036A	--MON 030-- P5S7U 5.092U P5S9I 0.036A M5S7U -4.774U M5S9I 0.058U P12S2U 12.369U P12S2I -12.428U M12S2U 5.092U M12S2I 0.122U P5S8U 5.092U P5S8I 0.122U M5S8U -5.123U M5S8I 0.106A P10S8U 10.358U P10S8I 0.034A M10S8U -10.563U M10S8I 0.026A	--MON 046-- P5S9U 5.092U P5S9I 0.065U P10S9U 10.359U P10S9I -10.512U M10S9U 0.028A M10S9I 0.092U P5S10U 5.092U P5S10I 0.038A M5S10U -5.239U M5S10I 0.016A P10S10U 10.358U P10S10I 0.037A M10S10U -10.512U M10S10I 0.037A P5S11U 5.092U P5S11I 0.192A
FFT ( SFA1 ) FFTSC 256 dB Peak -98.0 dB Freq 0.0 Hz	--TEST-- T0 0009 T1 0008 T2 0002 T3 1200 T4 3E16 T5 3B35 T6 5D56 T7 3E46 T8 3643 T9 9B22 T10 1721 T11 670D T12 8277 T13 6A76 T14 8D97 T15 697A	--AP COUNTERS-- APL0201 0 APL0211 14835 APL0221 0 APL0231 0 APL0241 0 APL0251 0 APL0261 0 APL0271 0 APL0281 0 APL0291 0 APL02A1 0 APL02B1 0 APL02C1 0 APL02D1 0 APL02E1 0 APL02F1 0	--- MUE --- HWSEC 00000B6B UISEC 308E7D03 UTUSEC 0000 XMITR OK RECUR OK ERRRCNT 0 XMTCTR 96 RECCTR 106 ENABLE 31 TMRATE 22 SPSTATE 0 RFSTATE 1 SIEST AA5500 FDM 91002C CCSAP 1080
		UPDRATE: 144	DATE: 03-17-94 GMT : 17:56:46

3-18-94

C 502

249 m+3

Figure 66

	--MON 016---	--MON 030---	--MON 046---
	P10S3U 10.359U P10S3I 0.001A M10S3U -10.564U M10S3I 0.001A P5S4U 5.092U P5S4I 0.000A P12S4U 12.369U P12S4I 0.001A M12S4U -12.428U M12S4I 0.003A P28S5U 32.301U P28S6U 27.884U P28S6I 0.0019A P5S7U 5.0892U P5S7I 0.035A	P5S7U 5.092U P5S7I 0.005A M5S7U -4.774U M5S7I 0.050A P12S7U 12.369U P12S7I 0.010A M12S7U -12.428U M12S7I 0.007A P5S8U 5.092U P5S8I 0.122A M5S8U -5.239U M5S8I 0.110A P10S8U 10.358U P10S8I 0.0033A M10S8U -10.563U M10S8I 0.026A	P5S9U 5.092U P5S9I 0.005A P10S9U 10.359U P10S9I 0.026A M10S9U -10.512U M10S9I 0.026A P5S10U 5.092U P5S10I 0.030A M5S10U -5.239U M5S10I 0.017A P10S10U 10.358U P10S10I 0.030A M10S10U -10.512U M10S10I 0.037A P5S11U 5.0892U P5S11I 0.192A
FFT ( SFA1 )			
FFTSC 256 dB			
Peak -101.0 dB			
Freq 0.0 Hz			
---TEST---	--AP COUNTERS--		--- MUE ---
T0 0E04 T1 1C09 T2 0E06 T3 0C09 T4 4019 T5 3F3C T6 5E59 T7 3B44 T8 3942 T9 9F22 T10 1D28 T11 630F T12 7B6C T13 7673 T14 8D98 T15 7C76	APL0201 0 APL0211 13947 APL0221 0 APL0231 0 APL0241 0 APL0251 0 APL0261 0 APL0271 0 APL0281 0 APL0291 0 APL02A1 0 APL02B1 0 APL02C1 0 APL02D1 0 APL02E1 0 APL02F1 0		HWSEC 00000AF6 UTSEC 308E7D03 UTUSEC 0000 XMITR OK RECUR OK ERRCNT 0 XMTCTR 434 RECCTR 108 ENABLE 31 TMRATE 2 SPSTATE 0 RPSTATE 1 STEST AA5500 FDM 91002C CCSAP 1085

UPDATE: 128 DATE: 03-17-94  
GMT: 17:54:49

CSD2 3-18-94  
300 mhz

Figure 67

				-SCOPE PARAMS- ADC1 32511 [ 1, 0 ] -OFF- -OFF- Chan. : 0 S/Dv : 128.00 mU/Dv : 8.29 Speed : PKT(01) Trig : -OFF- If > : 0 Step : 1
--TEST--	--AP COUNTERS--	-QTY OUTPUTS-	--UC COUNTERS--	--- MUE ---
T0 F97F APL0141 0		LFF1P2 0000	UCL0001 3	HWSEC 00000214
T1 F97F APL0151 0		V1 0000	UCL0011 0	UTSEC 309261C1
T2 FA7F APL0161 0		V2 0000	UCL0021 2525	UTUSEC 0000
T3 FA7F APL0171 0		V3 0000	UCL0031 0	XMITR OK
T4 F97F APL0181 2525		V4 0000	UCL0041 0	RECUR OK
T5 F77F APL0191 0		V5 0000	UCL0051 0	ERRCNT 0
T6 F87F APL01A1 0		V6 0000	UCL0061 0	XMTCTR 96
T7 F97F APL01B1 0		V7 0000	UCL0071 25742	RECCTR 106
T8 F87F APL01C1 0		V8 0000		ENABLE 31
T9 FA7F APL01D1 0		V9 0000		TMRATE 2
T10 F97F APL01E1 0		V10 0000		SPSTATE 0
T11 F97F APL01F1 0		MAG1DC 0000		RPSTATE 0
T12 F87F APL0201 0		MAG2DC 0000		STEST AA5500
T13 FB7F APL0211 0		MAG3DC 0000		FDM 91002C
T14 F87F APL0221 0		MAG1AC 0000		CCSAP 1080
T15 F97F APL0231 0		MAG2AC 0000		

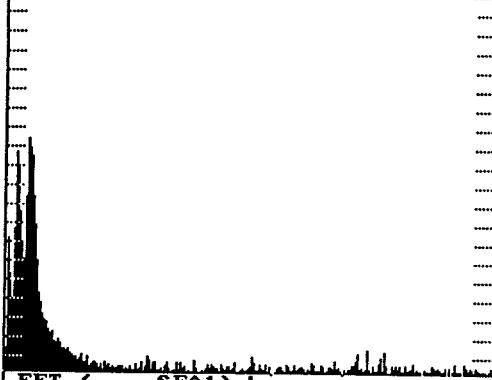
CMD:1C000C000000050000FF0000097

UPDRATE: 368

DATE: 03-20-94  
GMT : 16:09:41

21 Mar 94  
 CSO 2  
 300 MHz

Figure 68

	--MON 016---	--MON 030---	--MON 046---
P10S3U 10.359U	P5S7U 5.092U	P5S9U 5.092U	P5S9U 5.092U
P10S3I 0.001A	P5S7I 0.0035A	P5S9I 0.0065A	P5S9I 0.0065A
M10S3U -10.564U	M5S7U -4.774U	P10S9U 10.359U	P10S9U 10.359U
M10S3I 0.002A	M5S7I 0.0050A	M10S9I 0.0026A	M10S9I 0.0026A
P5S4U 0.0092U	P12S7U 12.369U	M10S9U -10.564U	M10S9U -10.564U
P5S4I 0.0060A	P12S7I 0.010A	P5S10U 5.092U	P5S10U 5.092U
P12S4U 12.369U	M12S7U -12.428U	P5S10I 5.0933A	P5S10I 5.0933A
P12S4I 0.0060A	M12S7I 0.006A	M5S10U -5.239U	M5S10U -5.239U
M12S4U -12.428U	P5S8U 5.092U	M5S10I 0.017A	M5S10I 0.017A
M12S4I 0.004A	P5S8I 0.0122A	P10S10U 10.358U	P10S10U 10.358U
P28S5U 32.301U	M5S8U -5.239U	M10S10U -10.512U	M10S10U -10.512U
P28S5I 0.019A	M5S8I 0.0110A	M10S10I 0.0037A	M10S10I 0.0037A
P28S6U 27.884U	P10S8U 10.358U	F5S11U 5.093U	F5S11U 5.093U
P28S6I 0.038A	P10S8I 0.0033A	P5S11I 0.192A	P5S11I 0.192A
P5S7U 0.0092U	M10S8U -10.512U		
P5S7I 0.0035A	M10S8I 0.0026A		

FFT ( SFA1 )  
 FFTSC 256 dB  
 Peak -104.0 dB  
 Freq 0.0 Hz

---TEST---

	APL COUNTERS-
T0 0E06	APL020 0
T1 0C03	APL021 10670
T2 0905	APL022 0
T3 1307	APL023 0
T4 3914	APL024 0
T5 2D38	APL025 0
T6 0D95B	APL026 0
T7 3645	APL027 0
T8 3443	APL028 0
T9 9510	APL029 0
T10 2D33	APL02A 0
T11 7615	APL02B 0
T12 6E5A	APL02C 0
T13 866E	APL02D 0
T14 8C97	APL02E 0
T15 7C7B	APL02F 0

UPDATE: 160 DATE: 03-17-94  
 GMT : 17:48:00

--- MUE ---  
 HWSEC 0000095D  
 UTSEC 308E7D03  
 UTUSEC 0000  
 XMITR OK  
 RECUR OK  
 ERRCNT 0  
 XMTCTR 2322  
 RECCTR 166  
 ENABLE 31  
 TMRATE 0  
 SPSTATE 0  
 RPSTATE 0  
 STEST AA5500  
 FDM 91002C  
 CCSAP 1080

3-18-94

CS02

402 mhz

Figure 69

				-SCOPE PARAMS-
				ADC1 32511 [ 1, 0 ]
				-OFF-
				-OFF-
				Chan. S/Dv 128.00 mV/Dv 8.29 Speed PKT(01) Trig -OFF- If > 0 Step 1
<hr/>				
---TEST---		--AP COUNTERS--	-QTY OUTPUTS-	--UC COUNTERS--
T0	F97F	API014]	0	LFF1P2 0000
T1	F97F	API015]	0	U1 0000
T2	F97F	API016]	0	U2 0000
T3	F97F	API017]	0	U3 0000
T4	F97F	API018]	3419	U4 0000
T5	F97F	API019]	0	U5 0000
T6	F97F	API01A]	0	U6 0000
T7	F97F	API01B]	0	U7 0000
T8	F97F	API01C]	0	U8 0000
T9	F97F	API01D]	0	U9 0000
T10	F97F	API01E]	0	U10 0000
T11	F97F	API020]	0	MAG1DC 0000
T12	F97F	API020]	0	MAG2DC 0000
T13	F97F	API021]	0	MAG3DC 0000
T14	F97F	API022]	0	MAG1AC 0000
T15	F97F	API023]	0	MAG2AC 0000
<hr/>				
--- MUE ---				
HWSEC 000002C0				
UTSEC 309261C1				
UTUSEC 0000				
XMITR OK				
RECUR OK				
ERRCNT 0				
XMTCTR 4344				
RECCTR 1088				
ENABLE 31				
TMRATE 32				
SPSTATE 0				
RPSTATE 0				
STEST AA5500				
FDM 91002C				
CCSAP 1080				

CMD: 1C00UC000000500000FF000097

UPDATE: 416

DATE: 03-20-94

GMT : 16:12:33

CS02  
21 Mar 94

Yours mH3

Figure 70

## SUMMARY

This testing has shown the level of susceptibility to EMC. In all three of the tests, particularly CS01, there was a measurable effect on the operation of the instrument. However spacecraft testing we have done indicates that the test levels greatly exceed input levels that exist on the power bus. Measurements of actual bus noise will be made during space-craft EMC testing to provide further verification of this.

Susceptability could be reduced by adding additional filtering to the IDPU power system. This would require substantial re-work which does not appear to be justified by the test results.