

Question # 1: Frequency Range

Low Frequency = 2.412 GHz

Mid Frequency = 2.440 GHz

High Frequency = 2.465 GHz

Question #2: Max Output Power

Low Frequency = 5.1dBm

Mid Frequency = 5.0dBm

High Frequency = 2.3dBm

Output power measured with HP Power Meter 437B (S/N 2949A026) CAL DATE: May 2001

Question #3: List of Antennas and Output Power

1. Pacific Wireless, M/N PMANT25-HD-PF1 Gain 24dBi
2. M/A-Com, M/N ANAD-159W-A-10-SM Gain 16dBi
3. M/A-Com, M/N ANCC-156A-S-12-NM Gain 7dBi
4. MAXRAD, M/N MFB24006 Gain 6dBi
5. MAXRAD, M/N MFB24008 Gain 8dBi
6. MAXRAD, M/N MFB24010 Gain 10dBi

FIELD STRENGTH OF THE FUNDAMENTAL

CUSTOMER: M/A-COM

EQUIPMENT: TRANSCEIVER TOWER

TESTED BY: ROBERT FOSTER

OPERATING MODE: FULL POWER

ANTENNA DISTANCE: 3 METERS

DATE: JUNE 7, 2001

TEST NUMBER: 4

PROCEDURE: ANSI C63.4 & FCC 97-114

TEST SPEC: FCC PART 15 SUBPART C

Pacific Wireless PMANT25-HD-PF1

FREQUENCY GHz	PEAK MEASURED LEVEL -dBm	QUASI- PEAK MEASURED LEVEL dBuV	ANTENNA HEIGHT (METERS)	TURNTABLE AZIMUTH (DEGREES)	ANTENNA H/V	ANTENNA FAC/CABLE LOSS dB	FIELD LEVEL dBuV/m ★	LIMIT dBuV/m (QP)
2.41	47	-	1.0	0	V	32.2	92.2	93.9
2.44	47	-	1.0	0	V	32.2	92.2	93.9
2.46	48	-	1.0	0	V	32.2	91.2	93.9

M/A-Com, M/N ANAD-159W-A-10-SM

FREQUENCY GHz	PEAK MEASURED LEVEL -dBm	QUASI- PEAK MEASURED LEVEL dBuV	ANTENNA HEIGHT (METERS)	TURNTABLE AZIMUTH (DEGREES)	ANTENNA H/V	ANTENNA FAC/CABLE LOSS dB	FIELD LEVEL dBuV/m ★	LIMIT dBuV/m (QP)
2.41	61	-	1.0	0	V	32.2	78.2	93.9
2.44	61	-	1.0	0	V	32.2	78.2	93.9
2.46	63	-	1.0	0	V	32.2	76.2	93.9

M/A-Com ANCC-156A-S-12-NM

FREQUENCY GHz	PEAK MEASURED LEVEL -dBm	QUASI- PEAK MEASURED LEVEL dBuV	ANTENNA HEIGHT (METERS)	TURNTABLE AZIMUTH (DEGREES)	ANTENNA H/V	ANTENNA FAC/CABLE LOSS dB	FIELD LEVEL dBuV/m ★	LIMIT dBuV/m (QP)
2.41	64	-	1.0	0	V	32.2	75.2	93.9
2.44	63	-	1.0	0	V	32.2	76.2	93.9
2.46	64	-	1.0	0	V	32.2	75.2	93.9

MAXRAD MFB24006

FREQUENCY GHz	PEAK MEASURED LEVEL -dBm	QUASI- PEAK MEASURED LEVEL dBuV	ANTENNA HEIGHT (METERS)	TURNTABLE AZIMUTH (DEGREES)	ANTENNA H/V	ANTENNA FAC/CABLE Loss dB	FIELD LEVEL dBuV/m ★	LIMIT dBuV/m (QP)
2.41	64	-	1.0	0	V	32.2	75.2	93.9
2.44	63	-	1.0	0	V	32.2	76.2	93.9
2.46	65	-	1.0	0	V	32.2	77.2	93.9

MAXRAD MFB24008

FREQUENCY GHz	PEAK MEASURED LEVEL -dBm	QUASI- PEAK MEASURED LEVEL dBuV	ANTENNA HEIGHT (METERS)	TURNTABLE AZIMUTH (DEGREES)	ANTENNA H/V	ANTENNA FAC/CABLE Loss dB	FIELD LEVEL dBuV/m ★	LIMIT dBuV/m (QP)
2.41	61	-	1.0	0	V	32.2	78.2	93.9
2.44	60	-	1.0	0	V	32.2	79.2	93.9
2.46	61	-	1.0	0	V	32.2	78.2	93.9

MAXRAD MFB24010

FREQUENCY GHz	PEAK MEASURED LEVEL -dBm	QUASI- PEAK MEASURED LEVEL dBuV	ANTENNA HEIGHT (METERS)	TURNTABLE AZIMUTH (DEGREES)	ANTENNA H/V	ANTENNA FAC/CABLE Loss dB	FIELD LEVEL dBuV/m ★	LIMIT dBuV/m (QP)
2.41	60	-	1.0	0	V	32.2	80.2	93.9
2.42	59	-	1.0	0	V	32.2	80.2	93.9
2.46	59	-	1.0	0	V	32.2	80.2	93.9

★All signals greater than 3dB from the limit are calculate to the nearest whole number.

★Field Level (dBuV/m) = [107 – Measured level (dBm)] + Antenna Factor/Cable Loss (dB)

Ambient Temperature: 68°F

Humidity: 25 %

Atmospheric Pressure: 29.8 "

Question #4: MPE Requirement

The M/A Com ISM Radio and all six antenna options is fully compliant with the MPE requirements for the general public. The ISM Radio has an external antenna that is mounted on top of a antenna tower occupational users and the general public will find is difficult to get with in three meters of the antenna. The field density from the antenna at three meters can be calculated as follows:

For worst case antenna with a gain of 24dBi

$$S = EIRP / 4\pi r^2$$

$$S = \text{mW/cm}^2$$

EIRP = mW measured at three meters

r = distance from source

$$S = 42 / 113 = 0.37 \text{mW/cm}^2$$

The ISM Radio is fully compliant with the MPE requirement for the general public of 1mW/cm².

Question 4: User Manual Info

General Safety Information

The Federal Communications Commission (FCC), with its action in the General docket, 79-144, March 13, 1985, has adopted a safety standard for the human exposure to radio frequency electromagnetic energy emitted by FCC regulated equipment. Proper operation of this radio as summarized below will result in user exposure substantially below the FCC recommended limits,

- Do not operate this radio when someone is within the proximity of the antenna. The following minimum distances should be observed:
 1. Two feet for 0dbi antennas.
 2. Three feet for gain antennas to 6dbi or when the antenna type is not known.
- Do not operate this radio if any of the RF connectors are not secure or if open connections are not properly terminated.

The following general safety guidelines should also be followed:

- Do not operate this radio near electrical blasting caps or in an explosive atmosphere.
- The equipment must be properly grounded according to the installation instructions.
- Only a qualified technician must service the equipment.

**Processing Gain
Test - CH1**

GE-Harris CH1 Processing Gain Pass2.xls

**Measured by
Richard Abrahams**

Frequency Offset (kHz)	Jammer/Signal Ratio (dB)	Processing Gain (dB)		
-8500	5.0	17.3		
-8450	4.9	17.2		
-8400	4.9	17.2		
-8350	4.8	17.1		
-8300	4.8	17.1		
-8250	4.7	17.0		
-8200	4.6	16.9		
-8150	4.3	16.6		
-8100	4.0	16.3		
-8050	3.9	16.2		
-8000	3.6	15.9		
-7950	3.5	15.8		
-7900	3.4	15.7		
-7850	3.4	15.7		
-7800	3.6	15.9		
-7750	3.7	16.0		
-7700	4.0	16.3		
-7650	4.1	16.4		
-7600	4.1	16.4		
-7550	4.1	16.4		
-7500	4.1	16.4		
-7450	3.9	16.2		
-7400	3.9	16.2		
-7350	3.7	16.0		
-7300	3.7	16.0		
-7250	3.6	15.9		
-7200	2.8	15.1		
-7150	2.7	15.0		
-7100	2.7	15.0		
-7050	2.8	15.1		
-7000	2.8	15.1		
-6950	2.8	15.1		
-6900	3.5	15.8		
-6850	3.5	15.8		
-6800	3.6	15.9		
-6750	3.6	15.9		
-6700	3.6	15.9		
-6650	3.6	15.9		
-6600	3.5	15.8		
-6550	3.4	15.7		
-6500	3.2	15.5		
-6450	3.0	15.3		
-6400	2.8	15.1		
-6350	2.7	15.0		

Processing Gain

GE-Harris CH6 Processing Gain Pass2.xls

Measured by**Test - CH6, 2nd Pass****Richard Abrahams**

Frequency	Jammer/Signal	Processing		
Offset (kHz)	Ratio (dB)	Gain (dB)		
-8500	3.5	15.8		
-8450	3.5	15.8		
-8400	3.4	15.7		
-8350	3.4	15.7		
-8300	3.4	15.7		
-8250	3.3	15.6		
-8200	3.2	15.5		
-8150	3.0	15.3		
-8100	2.8	15.1		
-8050	2.6	14.9		
-8000	2.4	14.7		
-7950	2.2	14.5		
-7900	2.0	14.3		
-7850	2.1	14.4		
-7800	2.2	14.5		
-7750	2.4	14.7		
-7700	2.7	15.0		
-7650	2.9	15.2		
-7600	3.1	15.4		
-7550	3.2	15.5		
-7500	3.1	15.4		
-7450	3.0	15.3		
-7400	2.8	15.1		
-7350	2.6	14.9		
-7300	2.3	14.6		
-7250	2.1	14.4		
-7200	1.9	14.2		
-7150	1.8	14.1		
-7100	1.7	14.0		
-7050	1.8	14.1		
-7000	2.0	14.3		
-6950	2.2	14.5		
-6900	2.4	14.7		
-6850	2.6	14.9		
-6800	2.7	15.0		
-6750	2.8	15.1		
-6700	2.8	15.1		
-6650	2.7	15.0		
-6600	2.5	14.8		
-6550	2.2	14.5		
-6500	2.0	14.3		
-6450	1.7	14.0		
-6400	1.4	13.7		
-6350	1.3	13.6		

Test - CH6

Richard Abrahams

	GE-Harris		Harris PRISM S/N 8A	
Frequency Offset (kHz)	Jammer/Signal Ratio (dB)	Processing Gain (dB)	Jammer/Signal Ratio (dB)	Processing Gain (dB)
-8500	-0.3	12.0	9.2	21.5
-8450	-0.1	12.2	8.9	21.2
-8400	-0.1	12.2	8.8	21.1
-8350	-0.1	12.2	8.5	20.8
-8300	-0.1	12.2	8.5	20.8
-8250	-0.1	12.2	8.0	20.3
-8200	-0.4	11.9	7.8	20.1
-8150	-0.6	11.7	7.8	20.1
-8100	-0.8	11.5	7.7	20.0
-8050	-1.0	11.3	7.6	19.9
-8000	-1.2	11.1	7.4	19.7
-7950	-1.4	10.9	7.1	19.4
-7900	-1.7	10.6	7.1	19.4
-7850	-1.7	10.6	7.0	19.3
-7800	-1.7	10.6	6.7	19.0
-7750	-1.5	10.8	6.2	18.5
-7700	-1.3	11.0	6.2	18.5
-7650	-1.1	11.2	5.9	18.2
-7600	-1.1	11.2	5.9	18.2
-7550	-1.0	11.3	5.6	17.9
-7500	-1.0	11.3	5.6	17.9
-7450	-1.0	11.3	5.5	17.8
-7400	-1.1	11.2	5.4	17.7
-7350	-1.2	11.1	5.1	17.4
-7300	-1.5	10.8	5.1	17.4
-7250	-1.7	10.6	5.3	17.6
-7200	-1.9	10.4	5.1	17.4
-7150	-2.1	10.2	5.1	17.4
-7100	-2.2	10.1	5.1	17.4
-7050	-2.2	10.1	5.1	17.4
-7000	-2.1	10.2	5.1	17.4
-6950	-2.1	10.2	5.0	17.3
-6900	-2.0	10.3	4.6	16.9
-6850	-1.7	10.6	4.6	16.9
-6800	-1.6	10.7	4.6	16.9
-6750	-1.4	10.9	4.6	16.9
-6700	-1.4	10.9	4.6	16.9
-6650	-1.5	10.8	4.8	17.1
-6600	-1.7	10.6	4.8	17.1
-6550	-2.0	10.3	4.8	17.1
-6500	-2.3	10.0	4.8	17.1
-6450	-2.4	9.9	4.8	17.1
-6400	-2.7	9.6	4.8	17.1
-6350	-2.7	9.6	4.7	17.0

Test - CH6

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-6300	-2.7	9.6	4.6	16.9
-6250	-2.7	9.6	4.5	16.8
-6200	-2.4	9.9	4.4	16.7
-6150	-2.2	10.1	4.4	16.7
-6100	-2.0	10.3	4.4	16.7
-6050	-1.8	10.5	4.4	16.7
-6000	-1.8	10.5	4.4	16.7
-5950	-1.8	10.5	4.3	16.6
-5900	-2.1	10.2	4.3	16.6
-5850	-2.4	9.9	4.3	16.6
-5800	-2.7	9.6	4.1	16.4
-5750	-3.1	9.2	4.1	16.4
-5700	-3.4	8.9	4.1	16.4
-5650	-3.6	8.7	4.1	16.4
-5600	-3.9	8.4	5.0	17.3
-5550	-3.9	8.4	5.1	17.4
-5500	-3.9	8.4	5.9	18.2
-5450	-3.8	8.5	6.3	18.6
-5400	-3.6	8.7	6.3	18.6
-5350	-3.2	9.1	6.2	18.5
-5300	-3.0	9.3	5.9	18.2
-5250	-2.8	9.5	5.4	17.7
-5200	-2.5	9.8	4.7	17.0
-5150	-2.5	9.8	4.4	16.7
-5100	-2.5	9.8	4.0	16.3
-5050	-2.5	9.8	3.7	16.0
-5000	-2.7	9.6	3.7	16.0
-4950	-2.9	9.4	3.5	15.8
-4900	-3.2	9.1	2.8	15.1
-4850	-3.2	9.1	2.7	15.0
-4800	-3.2	9.1	2.7	15.0
-4750	-3.2	9.1	2.7	15.0
-4700	-3.1	9.2	2.7	15.0
-4650	-2.8	9.5	2.7	15.0
-4600	-2.6	9.7	2.8	15.1
-4550	-2.4	9.9	2.8	15.1
-4500	-2.3	10.0	3.0	15.3
-4450	-2.2	10.1	3.0	15.3
-4400	-2.2	10.1	3.4	15.7
-4350	-2.2	10.1	3.6	15.9
-4300	-2.3	10.0	3.7	16.0
-4250	-2.5	9.8	3.7	16.0
-4200	-2.7	9.6	3.8	16.1
-4150	-3.0	9.3	3.8	16.1
-4100	-3.1	9.2	3.8	16.1
-4050	-3.2	9.1	3.8	16.1
-4000	-3.3	9.0	3.6	15.9
-3950	-3.3	9.0	3.4	15.7
-3900	-3.2	9.1	3.3	15.6
-3850	-3.0	9.3	3.2	15.5
-3800	-2.7	9.6	3.0	15.3
-3750	-2.5	9.8	2.8	15.1

Test - CH6

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-3700	-2.5	9.8	2.7	15.0
-3650	-2.4	9.9	2.6	14.9
-3600	-2.4	9.9	2.6	14.9
-3550	-2.5	9.8	2.5	14.8
-3500	-2.7	9.6	2.5	14.8
-3450	-2.8	9.5	2.3	14.6
-3400	-3.1	9.2	2.5	14.8
-3350	-3.3	9.0	2.7	15.0
-3300	-3.4	8.9	2.9	15.2
-3250	-3.7	8.6	3.0	15.3
-3200	-4.0	8.3	3.1	15.4
-3150	-3.2	9.1	3.2	15.5
-3100	-3.1	9.2	3.2	15.5
-3050	-2.8	9.5	3.3	15.6
-3000	-2.6	9.7	3.4	15.7
-2950	-2.6	9.7	3.1	15.4
-2900	-2.6	9.7	3.3	15.6
-2850	-2.6	9.7	3.5	15.8
-2800	-2.7	9.6	3.6	15.9
-2750	-2.8	9.5	3.6	15.9
-2700	-3.1	9.2	3.5	15.8
-2650	-3.3	9.0	3.6	15.9
-2600	-3.5	8.8	3.7	16.0
-2550	-3.7	8.6	3.8	16.1
-2500	-3.8	8.5	3.7	16.0
-2450	-3.8	8.5	3.7	16.0
-2400	-3.7	8.6	4.1	16.4
-2350	-3.5	8.8	4.1	16.4
-2300	-3.4	8.9	4.1	16.4
-2250	-3.2	9.1	4.1	16.4
-2200	-3.0	9.3	4.0	16.3
-2150	-2.8	9.5	3.9	16.2
-2100	-2.9	9.4	3.9	16.2
-2050	-2.9	9.4	3.8	16.1
-2000	-3.0	9.3	3.5	15.8
-1950	-3.1	9.2	3.2	15.5
-1900	-3.3	9.0	3.1	15.4
-1850	-3.5	8.8	2.8	15.1
-1800	-3.5	8.8	2.6	14.9
-1750	-3.6	8.7	2.6	14.9
-1700	-3.7	8.6	2.4	14.7
-1650	-3.6	8.7	2.4	14.7
-1600	-3.4	8.9	2.3	14.6
-1550	-3.2	9.1	2.4	14.7
-1500	-3.0	9.3	2.6	14.9
-1450	-2.9	9.4	2.7	15.0
-1400	-2.8	9.5	2.9	15.2
-1350	-2.7	9.6	3.0	15.3
-1300	-2.7	9.6	3.3	15.6
-1250	-2.8	9.5	3.4	15.7
-1200	-3.0	9.3	3.5	15.8
-1150	-3.2	9.1	3.6	15.9

Test - CH6

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-1100	-3.3	9.0	3.7	16.0
-1050	-3.6	8.7	3.9	16.2
-1000	-3.9	8.4	3.7	16.0
-950	-4.0	8.3	3.6	15.9
-900	-4.0	8.3	3.7	16.0
-850	-3.9	8.4	3.7	16.0
-800	-3.8	8.5	3.7	16.0
-750	-3.7	8.6	3.6	15.9
-700	-3.5	8.8	3.7	16.0
-650	-3.5	8.8	3.7	16.0
-600	-3.4	8.9	3.8	16.1
-550	-3.4	8.9	3.7	16.0
-500	-3.5	8.8	4.0	16.3
-450	-3.5	8.8	3.7	16.0
-400	-3.6	8.7	4.3	16.6
-350	-3.8	8.5	4.7	17.0
-300	-4.0	8.3	4.4	16.7
-250	-4.1	8.2	4.1	16.4
-200	-4.2	8.1	3.8	16.1
-150	-4.2	8.1	3.6	15.9
-100	-4.1	8.2	3.3	15.6
-50	-3.8	8.5	2.9	15.2
0	0.5	12.8	2.3	14.6
50	-2.9	9.4	2.2	14.5
100	-3.5	8.8	2.4	14.7
150	-3.3	9.0	2.8	15.1
200	-3.3	9.0	3.2	15.5
250	-3.4	8.9	3.4	15.7
300	-3.5	8.8	3.3	15.6
350	-3.6	8.7	3.7	16.0
400	-3.8	8.5	3.8	16.1
450	-3.9	8.4	3.5	15.8
500	-4.1	8.2	2.9	15.2
550	-4.2	8.1	3.0	15.3
600	-4.3	8.0	2.9	15.2
650	-4.3	8.0	2.7	15.0
700	-4.2	8.1	2.6	14.9
750	-4.0	8.3	2.6	14.9
800	-3.9	8.4	2.7	15.0
850	-3.7	8.6	2.8	15.1
900	-3.6	8.7	2.9	15.2
950	-3.5	8.8	3.1	15.4
1000	-3.4	8.9	3.2	15.5
1050	-3.4	8.9	3.6	15.9
1100	-3.4	8.9	3.9	16.2
1150	-3.5	8.8	3.9	16.2
1200	-3.7	8.6	3.8	16.1
1250	-3.8	8.5	3.6	15.9
1300	-3.9	8.4	3.6	15.9
1350	-4.1	8.2	3.4	15.7
1400	-4.1	8.2	3.3	15.6
1450	-4.1	8.2	3.2	15.5

Test - CH6

Richard Abrahams

1500	-4.0	8.3	2.9	15.2
1550	-3.8	8.5	3.1	15.4
1600	-3.6	8.7	3.0	15.3
1650	-3.4	8.9	3.0	15.3
1700	-3.2	9.1	2.9	15.2
1750	-3.2	9.1	2.9	15.2
1800	-3.2	9.1	2.9	15.2
1850	-3.2	9.1	3.0	15.3
1900	-3.4	8.9	3.0	15.3
1950	-3.6	8.7	3.1	15.4
2000	-3.8	8.5	3.2	15.5
2050	-4.0	8.3	3.4	15.7
2100	-4.3	8.0	3.7	16.0
2150	-4.4	7.9	3.7	16.0
2200	-4.4	7.9	3.7	16.0
2250	-4.4	7.9	3.8	16.1
2300	-4.4	7.9	3.7	16.0
2350	-4.3	8.0	3.6	15.9
2400	-4.1	8.2	3.6	15.9
2450	-3.9	8.4	3.5	15.8
2500	-3.8	8.5	3.3	15.6
2550	-3.7	8.6	3.4	15.7
2600	-3.7	8.6	3.4	15.7
2650	-3.7	8.6	3.3	15.6
2700	-3.8	8.5	3.4	15.7
2750	-3.8	8.5	3.4	15.7
2800	-3.9	8.4	3.4	15.7
2850	-4.0	8.3	3.5	15.8
2900	-4.1	8.2	3.6	15.9
2950	-4.2	8.1	3.6	15.9
3000	-4.1	8.2	3.8	16.1
3050	-4.0	8.3	3.7	16.0
3100	-3.8	8.5	4.1	16.4
3150	-3.7	8.6	4.0	16.3
3200	-3.5	8.8	3.9	16.2
3250	-3.4	8.9	4.2	16.5
3300	-3.2	9.1	4.1	16.4
3350	-3.3	9.0	3.9	16.2
3400	-3.3	9.0	3.9	16.2
3450	-3.4	8.9	3.7	16.0
3500	-3.5	8.8	3.5	15.8
3550	-3.8	8.5	3.4	15.7
3600	-4.0	8.3	3.3	15.6
3650	-4.1	8.2	3.3	15.6
3700	-4.3	8.0	3.3	15.6
3750	-4.3	8.0	3.1	15.4
3800	-4.3	8.0	3.1	15.4
3850	-4.2	8.1	3.1	15.4
3900	-4.0	8.3	3.1	15.4
3950	-3.9	8.4	3.1	15.4
4000	-3.7	8.6	3.1	15.4
4050	-3.7	8.6	3.2	15.5

Test - CH6

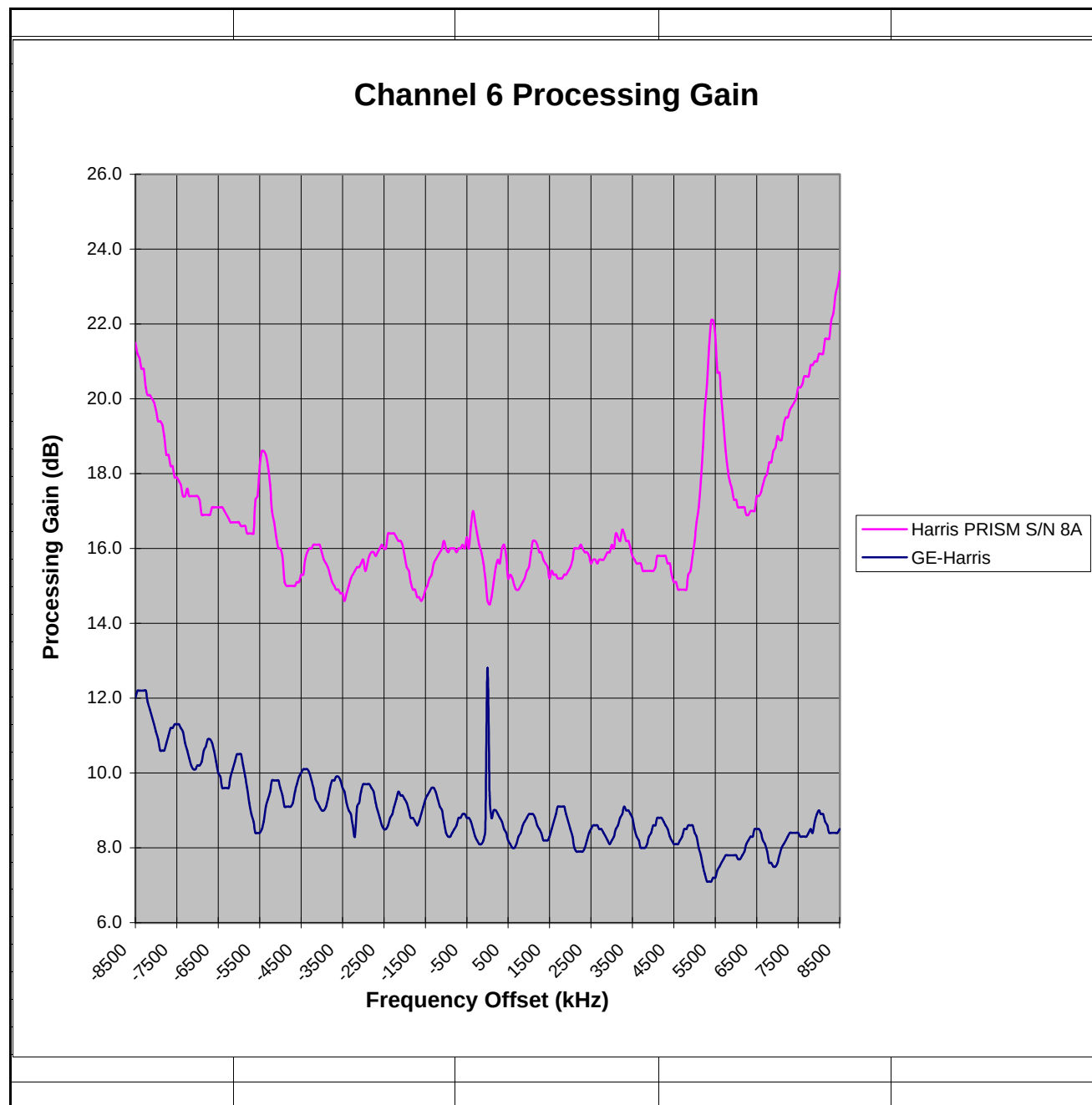
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4100	-3.5	8.8	3.5	15.8
4150	-3.5	8.8	3.5	15.8
4200	-3.5	8.8	3.5	15.8
4250	-3.6	8.7	3.5	15.8
4300	-3.7	8.6	3.5	15.8
4350	-3.8	8.5	3.3	15.6
4400	-4.0	8.3	3.3	15.6
4450	-4.1	8.2	3.0	15.3
4500	-4.2	8.1	2.8	15.1
4550	-4.2	8.1	2.8	15.1
4600	-4.2	8.1	2.6	14.9
4650	-4.1	8.2	2.6	14.9
4700	-4.0	8.3	2.6	14.9
4750	-3.8	8.5	2.6	14.9
4800	-3.8	8.5	2.6	14.9
4850	-3.7	8.6	3.0	15.3
4900	-3.7	8.6	3.1	15.4
4950	-3.7	8.6	3.5	15.8
5000	-3.9	8.4	3.9	16.2
5050	-4.0	8.3	4.4	16.7
5100	-4.3	8.0	4.8	17.1
5150	-4.5	7.8	5.5	17.8
5200	-4.8	7.5	6.4	18.7
5250	-5.0	7.3	7.4	19.7
5300	-5.2	7.1	8.1	20.4
5350	-5.2	7.1	9.1	21.4
5400	-5.2	7.1	9.8	22.1
5450	-5.1	7.2	9.8	22.1
5500	-5.1	7.2	9.4	21.7
5550	-4.9	7.4	8.4	20.7
5600	-4.8	7.5	8.4	20.7
5650	-4.7	7.6	7.7	20.0
5700	-4.6	7.7	7.0	19.3
5750	-4.5	7.8	6.3	18.6
5800	-4.5	7.8	5.8	18.1
5850	-4.5	7.8	5.5	17.8
5900	-4.5	7.8	5.3	17.6
5950	-4.5	7.8	5.0	17.3
6000	-4.5	7.8	5.0	17.3
6050	-4.6	7.7	4.8	17.1
6100	-4.6	7.7	4.8	17.1
6150	-4.5	7.8	4.8	17.1
6200	-4.4	7.9	4.8	17.1
6250	-4.2	8.1	4.6	16.9
6300	-4.1	8.2	4.6	16.9
6350	-4.0	8.3	4.7	17.0
6400	-4.0	8.3	4.7	17.0
6450	-3.8	8.5	4.7	17.0
6500	-3.8	8.5	5.1	17.4
6550	-3.8	8.5	5.1	17.4
6600	-3.9	8.4	5.2	17.5
6650	-4.1	8.2	5.4	17.7

Test - CH6

Richard Abrahams

[illegible]



Processing Gain

GE-Harris CH6 Processing Gain Pass2.xls

Measured by**Test - CH6, 2nd Pass****Richard Abrahams**

-6300	1.3	13.6		
-6250	1.4	13.7		
-6200	1.6	13.9		
-6150	1.9	14.2		
-6100	2.2	14.5		
-6050	2.4	14.7		
-6000	2.7	15.0		
-5950	2.9	15.2		
-5900	3.0	15.3		
-5850	3.0	15.3		
-5800	3.4	15.7		
-5750	3.4	15.7		
-5700	3.4	15.7		
-5650	3.3	15.6		
-5600	3.2	15.5		
-5550	3.2	15.5		
-5500	3.5	15.8		
-5450	3.8	16.1		
-5400	3.5	15.8		
-5350	3.5	15.8		
-5300	3.7	16.0		
-5250	3.6	15.9		
-5200	3.5	15.8		
-5150	3.3	15.6		
-5100	2.9	15.2		
-5050	2.5	14.8		
-5000	2.0	14.3		
-4950	1.7	14.0		
-4900	1.4	13.7		
-4850	1.2	13.5		
-4800	1.1	13.4		
-4750	1.2	13.5		
-4700	1.3	13.6		
-4650	1.7	14.0		
-4600	2.0	14.3		
-4550	2.3	14.6		
-4500	2.5	14.8		
-4450	2.7	15.0		
-4400	2.8	15.1		
-4350	2.8	15.1		
-4300	2.6	14.9		
-4250	2.5	14.8		
-4200	2.3	14.6		
-4150	2.1	14.4		
-4100	1.9	14.2		
-4050	1.7	14.0		
-4000	1.6	13.9		
-3950	1.6	13.9		
-3900	1.6	13.9		
-3850	1.6	13.9		
-3800	1.8	14.1		
-3750	1.9	14.2		

Processing Gain

GE-Harris CH6 Processing Gain Pass2.xls

Measured by**Test - CH6, 2nd Pass****Richard Abrahams**

-3700	2.0	14.3		
-3650	2.1	14.4		
-3600	2.1	14.4		
-3550	2.1	14.4		
-3500	2.1	14.4		
-3450	2.0	14.3		
-3400	1.8	14.1		
-3350	1.7	14.0		
-3300	1.6	13.9		
-3250	1.6	13.9		
-3200	1.6	13.9		
-3150	1.8	14.1		
-3100	2.0	14.3		
-3050	2.1	14.4		
-3000	2.2	14.5		
-2950	2.3	14.6		
-2900	2.4	14.7		
-2850	2.3	14.6		
-2800	2.1	14.4		
-2750	2.0	14.3		
-2700	1.9	14.2		
-2650	1.7	14.0		
-2600	1.6	13.9		
-2550	1.5	13.8		
-2500	1.4	13.7		
-2450	1.4	13.7		
-2400	1.5	13.8		
-2350	1.6	13.9		
-2300	1.8	14.1		
-2250	2.1	14.4		
-2200	2.2	14.5		
-2150	2.3	14.6		
-2100	2.3	14.6		
-2050	2.2	14.5		
-2000	2.1	14.4		
-1950	1.9	14.2		
-1900	1.6	13.9		
-1850	1.2	13.5		
-1800	1.1	13.4		
-1750	0.9	13.2		
-1700	0.9	13.2		
-1650	1.1	13.4		
-1600	1.3	13.6		
-1550	1.7	14.0		
-1500	2.0	14.3		
-1450	2.2	14.5		
-1400	2.4	14.7		
-1350	2.4	14.7		
-1300	2.2	14.5		
-1250	2.1	14.4		
-1200	2.0	14.3		
-1150	1.9	14.2		

Processing Gain

GE-Harris CH6 Processing Gain Pass2.xls

Measured by**Test - CH6, 2nd Pass****Richard Abrahams**

-1100	1.7	14.0		
-1050	1.5	13.8		
-1000	1.3	13.6		
-950	1.1	13.4		
-900	0.9	13.2		
-850	0.8	13.1		
-800	0.8	13.1		
-750	0.8	13.1		
-700	1.0	13.3		
-650	1.1	13.4		
-600	1.3	13.6		
-550	1.5	13.8		
-500	1.8	14.1		
-450	2.0	14.3		
-400	2.0	14.3		
-350	1.9	14.2		
-300	1.5	13.8		
-250	1.0	13.3		
-200	0.5	12.8		
-150	0.0	12.3		
-100	-0.2	12.1		
-50	-0.1	12.2		
0	0.1	12.4		
50	0.3	12.6		
100	0.3	12.6		
150	0.6	12.9		
200	1.0	13.3		
250	1.3	13.6		
300	1.7	14.0		
350	1.8	14.1		
400	1.8	14.1		
450	1.6	13.9		
500	1.2	13.5		
550	0.7	13.0		
600	0.3	12.6		
650	0.2	12.5		
700	0.2	12.5		
750	0.3	12.6		
800	0.5	12.8		
850	0.8	13.1		
900	1.2	13.5		
950	1.5	13.8		
1000	1.7	14.0		
1050	1.8	14.1		
1100	1.7	14.0		
1150	1.6	13.9		
1200	1.3	13.6		
1250	1.1	13.4		
1300	0.9	13.2		
1350	0.8	13.1		
1400	0.8	13.1		
1450	0.9	13.2		

Processing Gain

GE-Harris CH6 Processing Gain Pass2.xls

Measured by**Test - CH6, 2nd Pass****Richard Abrahams**

1500	1.0	13.3		
1550	1.0	13.3		
1600	1.1	13.4		
1650	1.1	13.4		
1700	1.2	13.5		
1750	1.2	13.5		
1800	1.2	13.5		
1850	1.3	13.6		
1900	1.3	13.6		
1950	1.2	13.5		
2000	1.1	13.4		
2050	1.0	13.3		
2100	0.9	13.2		
2150	0.8	13.1		
2200	0.7	13.0		
2250	0.7	13.0		
2300	0.7	13.0		
2350	0.8	13.1		
2400	0.9	13.2		
2450	1.1	13.4		
2500	1.1	13.4		
2550	1.1	13.4		
2600	0.9	13.2		
2650	0.8	13.1		
2700	0.5	12.8		
2750	0.4	12.7		
2800	0.3	12.6		
2850	0.2	12.5		
2900	0.2	12.5		
2950	0.3	12.6		
3000	0.4	12.7		
3050	0.6	12.9		
3100	0.7	13.0		
3150	0.9	13.2		
3200	1.2	13.5		
3250	1.3	13.6		
3300	1.4	13.7		
3350	1.5	13.8		
3400	1.4	13.7		
3450	1.3	13.6		
3500	1.0	13.3		
3550	0.7	13.0		
3600	0.4	12.7		
3650	0.0	12.3		
3700	-0.2	12.1		
3750	-0.4	11.9		
3800	-0.4	11.9		
3850	-0.2	12.1		
3900	0.0	12.3		
3950	0.4	12.7		
4000	0.6	12.9		
4050	0.9	13.2		

Processing Gain

GE-Harris CH6 Processing Gain Pass2.xls

Measured by**Test - CH6, 2nd Pass****Richard Abrahams**

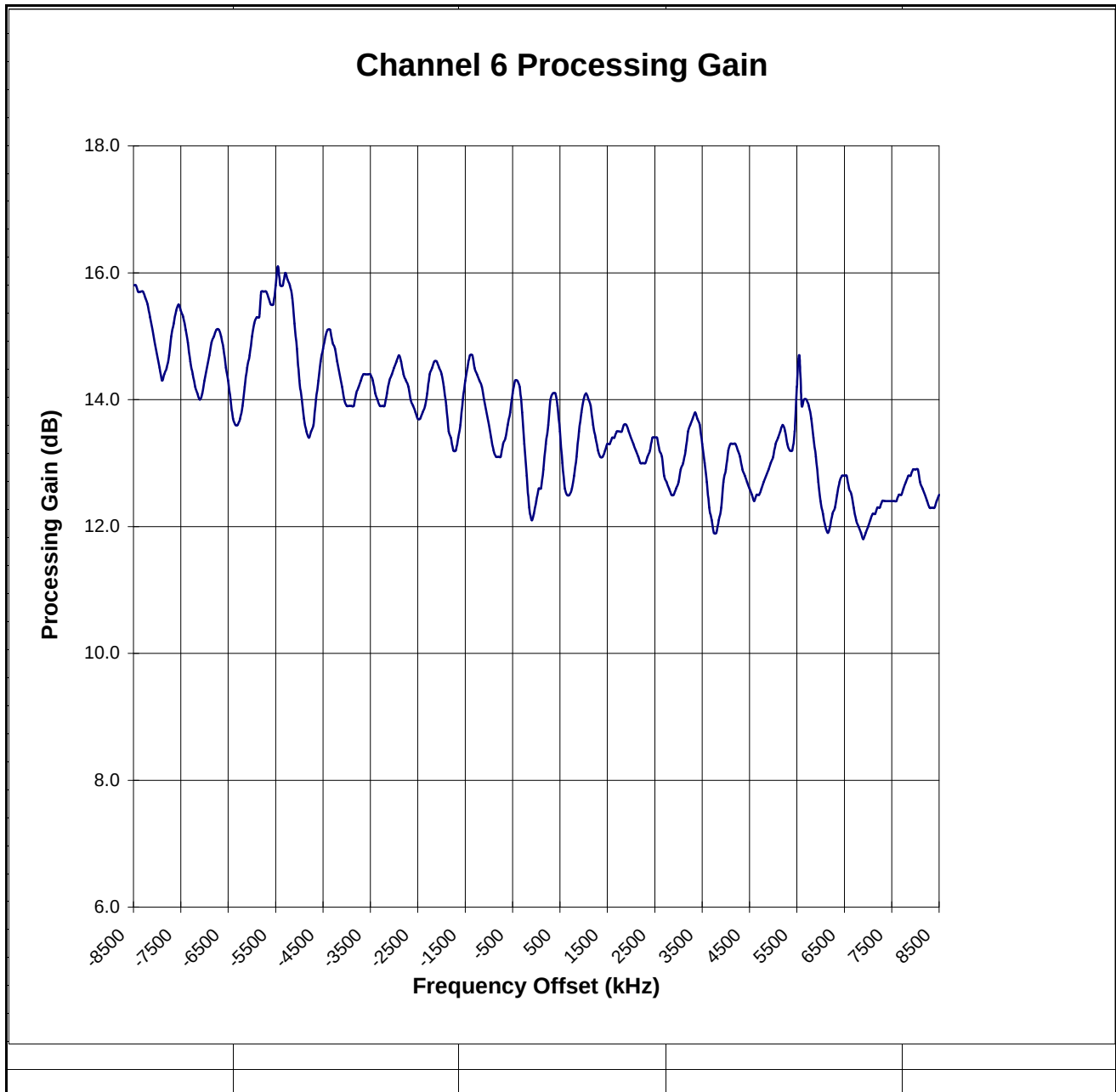
4100	1.0	13.3		
4150	1.0	13.3		
4200	1.0	13.3		
4250	0.9	13.2		
4300	0.8	13.1		
4350	0.6	12.9		
4400	0.5	12.8		
4450	0.4	12.7		
4500	0.3	12.6		
4550	0.2	12.5		
4600	0.1	12.4		
4650	0.2	12.5		
4700	0.2	12.5		
4750	0.3	12.6		
4800	0.4	12.7		
4850	0.5	12.8		
4900	0.6	12.9		
4950	0.7	13.0		
5000	0.8	13.1		
5050	1.0	13.3		
5100	1.1	13.4		
5150	1.2	13.5		
5200	1.3	13.6		
5250	1.2	13.5		
5300	1.0	13.3		
5350	0.9	13.2		
5400	0.9	13.2		
5450	1.2	13.5		
5500	1.9	14.2		
5550	2.4	14.7		
5600	1.6	13.9		
5650	1.7	14.0		
5700	1.7	14.0		
5750	1.6	13.9		
5800	1.4	13.7		
5850	1.1	13.4		
5900	0.8	13.1		
5950	0.4	12.7		
6000	0.1	12.4		
6050	-0.1	12.2		
6100	-0.3	12.0		
6150	-0.4	11.9		
6200	-0.3	12.0		
6250	-0.1	12.2		
6300	0.0	12.3		
6350	0.2	12.5		
6400	0.4	12.7		
6450	0.5	12.8		
6500	0.5	12.8		
6550	0.5	12.8		
6600	0.3	12.6		
6650	0.2	12.5		

Test - CH6, 2nd Pass

GE-Harris CH6 Processing Gain Pass2.xls

**Measured by
Richard Abrahams**

[illegible]



**Processing Gain
Test - CH1**

GE-Harris CH1 Processing Gain Pass2.xls

**Measured by
Richard Abrahams**

-6300	2.6	14.9		
-6250	2.7	15.0		
-6200	2.9	15.2		
-6150	3.2	15.5		
-6100	3.5	15.8		
-6050	3.8	16.1		
-6000	4.0	16.3		
-5950	4.2	16.5		
-5900	4.5	16.8		
-5850	4.6	16.9		
-5800	4.7	17.0		
-5750	4.7	17.0		
-5700	4.7	17.0		
-5650	4.5	16.8		
-5600	4.5	16.8		
-5550	4.5	16.8		
-5500	4.5	16.8		
-5450	4.5	16.8		
-5400	4.7	17.0		
-5350	4.9	17.2		
-5300	5.0	17.3		
-5250	4.9	17.2		
-5200	4.8	17.1		
-5150	4.5	16.8		
-5100	4.1	16.4		
-5050	3.7	16.0		
-5000	3.2	15.5		
-4950	2.8	15.1		
-4900	2.4	14.7		
-4850	2.3	14.6		
-4800	2.3	14.6		
-4750	2.3	14.6		
-4700	2.6	14.9		
-4650	2.9	15.2		
-4600	3.2	15.5		
-4550	3.6	15.9		
-4500	3.8	16.1		
-4450	3.8	16.1		
-4400	4.0	16.3		
-4350	4.0	16.3		
-4300	3.9	16.2		
-4250	3.7	16.0		
-4200	3.5	15.8		
-4150	3.3	15.6		
-4100	3.1	15.4		
-4050	3.0	15.3		
-4000	2.8	15.1		
-3950	2.7	15.0		
-3900	2.8	15.1		
-3850	2.8	15.1		
-3800	2.9	15.2		
-3750	3.0	15.3		

**Processing Gain
Test - CH1**

GE-Harris CH1 Processing Gain Pass2.xls

**Measured by
Richard Abrahams**

-3700	3.0	15.3		
-3650	3.1	15.4		
-3600	3.1	15.4		
-3550	3.1	15.4		
-3500	3.1	15.4		
-3450	3.0	15.3		
-3400	2.8	15.1		
-3350	2.7	15.0		
-3300	2.7	15.0		
-3250	2.7	15.0		
-3200	2.8	15.1		
-3150	2.9	15.2		
-3100	3.0	15.3		
-3050	3.3	15.6		
-3000	3.4	15.7		
-2950	3.5	15.8		
-2900	3.5	15.8		
-2850	3.4	15.7		
-2800	3.2	15.5		
-2750	3.1	15.4		
-2700	3.0	15.3		
-2650	2.8	15.1		
-2600	2.6	14.9		
-2550	2.5	14.8		
-2500	2.4	14.7		
-2450	2.4	14.7		
-2400	2.5	14.8		
-2350	2.6	14.9		
-2300	2.8	15.1		
-2250	3.0	15.3		
-2200	3.1	15.4		
-2150	3.2	15.5		
-2100	3.2	15.5		
-2050	3.1	15.4		
-2000	2.9	15.2		
-1950	2.7	15.0		
-1900	2.4	14.7		
-1850	2.1	14.4		
-1800	1.9	14.2		
-1750	1.8	14.1		
-1700	1.9	14.2		
-1650	2.0	14.3		
-1600	2.3	14.6		
-1550	2.7	15.0		
-1500	3.0	15.3		
-1450	3.3	15.6		
-1400	3.4	15.7		
-1350	3.4	15.7		
-1300	3.3	15.6		
-1250	3.1	15.4		
-1200	2.9	15.2		
-1150	2.8	15.1		

**Processing Gain
Test - CH1**

GE-Harris CH1 Processing Gain Pass2.xls

**Measured by
Richard Abrahams**

-1100	2.6	14.9		
-1050	2.4	14.7		
-1000	2.1	14.4		
-950	1.9	14.2		
-900	1.7	14.0		
-850	1.6	13.9		
-800	1.5	13.8		
-750	1.5	13.8		
-700	1.7	14.0		
-650	1.9	14.2		
-600	2.0	14.3		
-550	2.2	14.5		
-500	2.5	14.8		
-450	2.7	15.0		
-400	2.7	15.0		
-350	2.6	14.9		
-300	2.3	14.6		
-250	1.8	14.1		
-200	1.3	13.6		
-150	1.0	13.3		
-100	0.8	13.1		
-50	0.9	13.2		
0	1.2	13.5		
50	1.1	13.4		
100	1.3	13.6		
150	1.6	13.9		
200	1.9	14.2		
250	2.2	14.5		
300	2.4	14.7		
350	2.6	14.9		
400	2.5	14.8		
450	2.2	14.5		
500	1.8	14.1		
550	1.3	13.6		
600	1.0	13.3		
650	0.8	13.1		
700	0.8	13.1		
750	0.9	13.2		
800	1.1	13.4		
850	1.4	13.7		
900	1.7	14.0		
950	2.0	14.3		
1000	2.2	14.5		
1050	2.2	14.5		
1100	1.9	14.2		
1150	2.0	14.3		
1200	1.7	14.0		
1250	1.4	13.7		
1300	1.1	13.4		
1350	1.2	13.5		
1400	1.4	13.7		
1450	1.4	13.7		

**Processing Gain
Test - CH1**

GE-Harris CH1 Processing Gain Pass2.xls

**Measured by
Richard Abrahams**

1500	1.4	13.7		
1550	1.2	13.5		
1600	1.7	14.0		
1650	1.8	14.1		
1700	1.8	14.1		
1750	1.8	14.1		
1800	1.8	14.1		
1850	1.8	14.1		
1900	1.6	13.9		
1950	1.3	13.6		
2000	1.5	13.8		
2050	1.4	13.7		
2100	1.3	13.6		
2150	1.2	13.5		
2200	1.1	13.4		
2250	0.8	13.1		
2300	0.5	12.8		
2350	0.7	13.0		
2400	1.1	13.4		
2450	1.4	13.7		
2500	1.4	13.7		
2550	1.3	13.6		
2600	1.2	13.5		
2650	1.0	13.3		
2700	0.3	12.6		
2750	-0.3	12.0		
2800	-0.5	11.8		
2850	0.1	12.4		
2900	0.4	12.7		
2950	0.2	12.5		
3000	0.8	13.1		
3050	0.9	13.2		
3100	0.6	12.9		
3150	0.3	12.6		
3200	1.6	13.9		
3250	1.3	13.6		
3300	1.9	14.2		
3350	1.9	14.2		
3400	1.8	14.1		
3450	1.6	13.9		
3500	1.3	13.6		
3550	1.0	13.3		
3600	0.5	12.8		
3650	0.2	12.5		
3700	-0.1	12.2		
3750	-0.4	11.9		
3800	-0.4	11.9		
3850	-0.3	12.0		
3900	-0.4	11.9		
3950	0.3	12.6		
4000	0.8	13.1		
4050	1.1	13.4		

**Processing Gain
Test - CH1**

GE-Harris CH1 Processing Gain Pass2.xls

**Measured by
Richard Abrahams**

4100	1.2	13.5		
4150	1.2	13.5		
4200	1.1	13.4		
4250	1.0	13.3		
4300	0.9	13.2		
4350	0.8	13.1		
4400	0.7	13.0		
4450	0.7	13.0		
4500	0.6	12.9		
4550	0.4	12.7		
4600	0.4	12.7		
4650	0.5	12.8		
4700	0.0	12.3		
4750	0.0	12.3		
4800	0.5	12.8		
4850	0.5	12.8		
4900	0.5	12.8		
4950	0.6	12.9		
5000	0.6	12.9		
5050	0.9	13.2		
5100	0.9	13.2		
5150	1.1	13.4		
5200	1.0	13.3		
5250	0.6	12.9		
5300	0.7	13.0		
5350	0.6	12.9		
5400	0.7	13.0		
5450	0.7	13.0		
5500	1.9	14.2		
5550	1.9	14.2		
5600	1.8	14.1		
5650	1.8	14.1		
5700	1.8	14.1		
5750	1.7	14.0		
5800	1.5	13.8		
5850	1.2	13.5		
5900	0.9	13.2		
5950	0.6	12.9		
6000	0.2	12.5		
6050	-0.2	12.1		
6100	-0.4	11.9		
6150	-1.1	11.2		
6200	-0.9	11.4		
6250	-0.9	11.4		
6300	-0.9	11.4		
6350	-0.9	11.4		
6400	-0.9	11.4		
6450	-0.1	12.2		
6500	0.1	12.4		
6550	0.1	12.4		
6600	0.1	12.4		
6650	0.1	12.4		

Test - CH1

GE-Harris CH1 Processing Gain Pass2.xls

Richard Abrahams

[illegible]

