

EXHIBIT E2

FREQUENCY STABILITY VS. VOLTAGE

Instruments Used:

HP 500 MHz Universal Counter
Model 5328A S/N 1848A10091

10 MHz Rubidium Frequency Standard
EFRATOM Model FRK-L S/N 25016879

Fluke Digital Voltmeter
Model 8050A

Variable DC Power Supply

Assigned Frequency = 460.0000 MHz

Battery Voltage	Frequency (MHz)	Variance (PPM)
3.60	459.999 991	-0.02
3.50	459.999 977	-0.05
3.40	459.999 998	-0.00
3.30	460.000 011	+0.02
3.20	460.000 036	+0.08
3.10	460.000 042	+0.09
3.00	460.000 062	+0.13
2.90	460.000 088	+0.19
2.80	459.999 925	-0.16
2.70	459.999 894	-0.23

Microcontroller disables operation below this voltage.

Measurements made and recorded by:

Sept. 27, 1999

Nathan R. Jacob P. Eng

FREQUENCY STABILITY VS. TEMPERATURE

Instruments Used:

HP 500 MHz Universal Counter
Model 5328A S/N 1848A10091

10 MHz Rubidium Frequency Standard
EFRATOM Model FRK-L S/N 25016879

Associated Environmental Chamber
Model EK2114

Assigned Frequency = 460.0000 MHz

Temperature (°C)	Frequency (MHz)	Variance (PPM)
50	459.999 602	-0.87
40	459.999 708	-0.64
30	459.999 740	-0.57
20	459.999 622	-0.82
10	459.999 932	-0.15
0	459.999 600	-0.87
-10	459.999 640	-0.78
-20	459.999 760	-0.52
-30	460.000 193	+0.42

Microcontroller disables operation beyond this temperature range.

Measurements made and recorded by: _____

Sept. 27, 1999

Nathan R. Jacob P. Eng.