

LIST OF MEASUREMENT INSTRUMENTATION:

- **Rohde and Schwarz ESMI Receiver**
- **Compliance Design Biconical Antenna Set**
- **Compliance Design Non-Magnetic Tripod**
- **Compliance Design Antenna Mount Adaptor**
- **Compliance Design Dual Phase L.I.S.N., Qty. 2**
- **Compliance Design 4 Meter Mast**
- **Compliance Design Amplifier P2000**

Equipment Under Test Information, continued

CALCULATION OF DATA: RADIATED EMISSIONS - The antenna factors(including cable losses) of the biconical antennas used, and the pre-amplifier gain, are input into the memory of the spectrum analyzer. The spectrum analyzer then corrects the reading for amplitude automatically. The field strength reading can then be taken directly from the spectrum analyzer and compared to the FCC limits in dBuV/m. The following equation is used to convert to uV/m:

$$E_{uV/m} = \text{antilog}(E_{dBuV/m} / 20)$$

SAMPLE OF FIELD STRENGTH CALCULATION:

$$E_a = V_a + A_F + A_e + (-A_G)$$

Where E_a = Field Strength(uV/m)
 V_a = $20 \times \log_{10}$ (Measure RF voltage, uV)
 A_e = Cable Loss Factor, dB
 A_G = Amplifier Gain, dB
 A_F = Antenna Factor dB(m-1)

i.e. If the reading is 57.0 dBuV, the antenna factor 8.0 dB, cable loss factor 1.0 dB and Amplifier gain is 25.0 dB, so the field strength will be:

$$\begin{aligned} E_a(\text{dBuV/m}) &= 57 + 8 + 1 + (-25) \\ &= 41 \text{ dBuV/m} \end{aligned}$$

or

$$\begin{aligned} E_a(\text{uV/m}) &= 10^{(41/20)} \\ &= 112.20 \text{ uV/m} \end{aligned}$$

EUT CONFIGURATION AND CABLES

EUT:	SCSI Drive Array, FCC ID: K45-S700B
POWER SUPPLY:	Enlight Corporation; EN-825736
MONITOR:	Magnavox; FCC ID: A3KM043
SERIAL DEVICE:	Hidem modem; FCC ID: F8F5B2HIDEM2400
PARALLEL DEVICE:	Oki Data printer; FCC ID: B2K9F2390
KEYBOARD:	Acer keyboard; FCC ID: GQ87EEKB-101A
VIDEO CARD:	Diamond; FCC ID: FTUPM64221M
I/O CARD:	Adaptec; FCC ID: FGT2940UW
MOUSE:	Sejin; FCC ID: G115965M3
CD ROM:	Model: XM-6201B
POWER SUPPLY:	Antec Power Systems; Model: PCH-5300-1150
BACK PLANE:	SMS; Model: 22-0011-01 Rev. 1
HARD DRIVE:	Seagate Medalist; Model: ST 3660A
FLOPPY DISK:	Sony; Model: MPF520-E
EXTERNAL HARD DRIVE:	Seagate; Model: ST34555W
EXTERNAL HARD DRIVE CHASSIS:	Model: ZF3L-001
CABLES:	Shielded cables and power cords were used throughout system under test.

FCC ID: K45-S700B

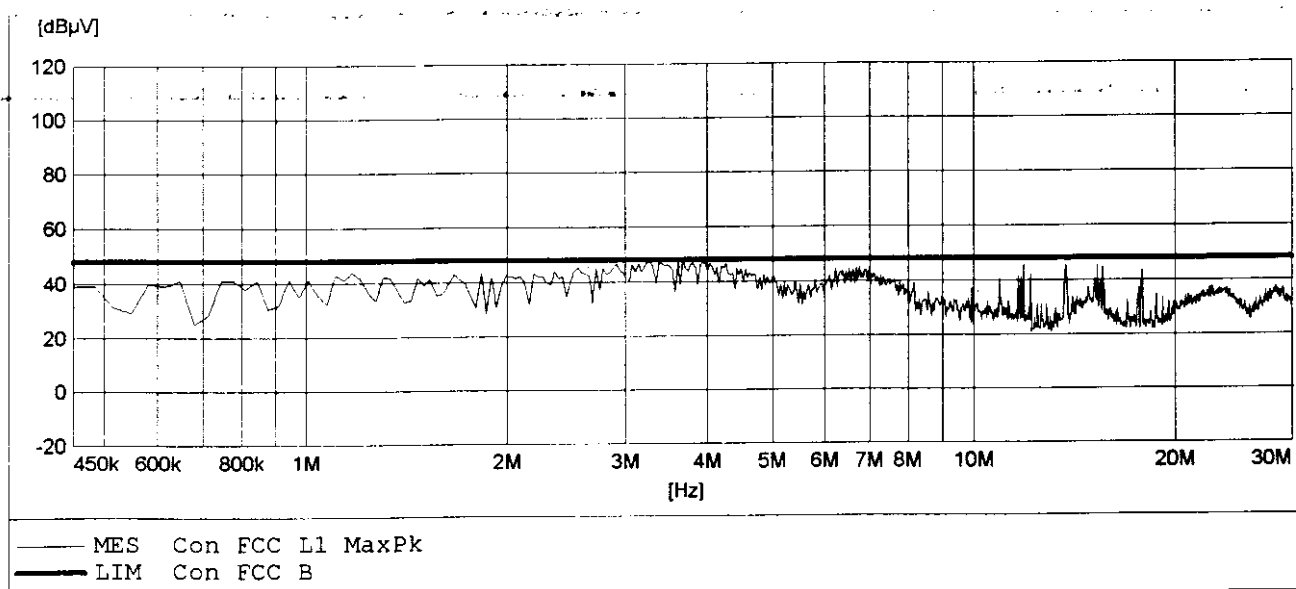
CONDUCTED DATA

SMS Data Products Group, Inc.

FCC ID: K45-S700B

Model: SCSI Drive Array

PHASE SIDE



Signature: Kevin Kirby
Kevin Kirby, EMC Engineer

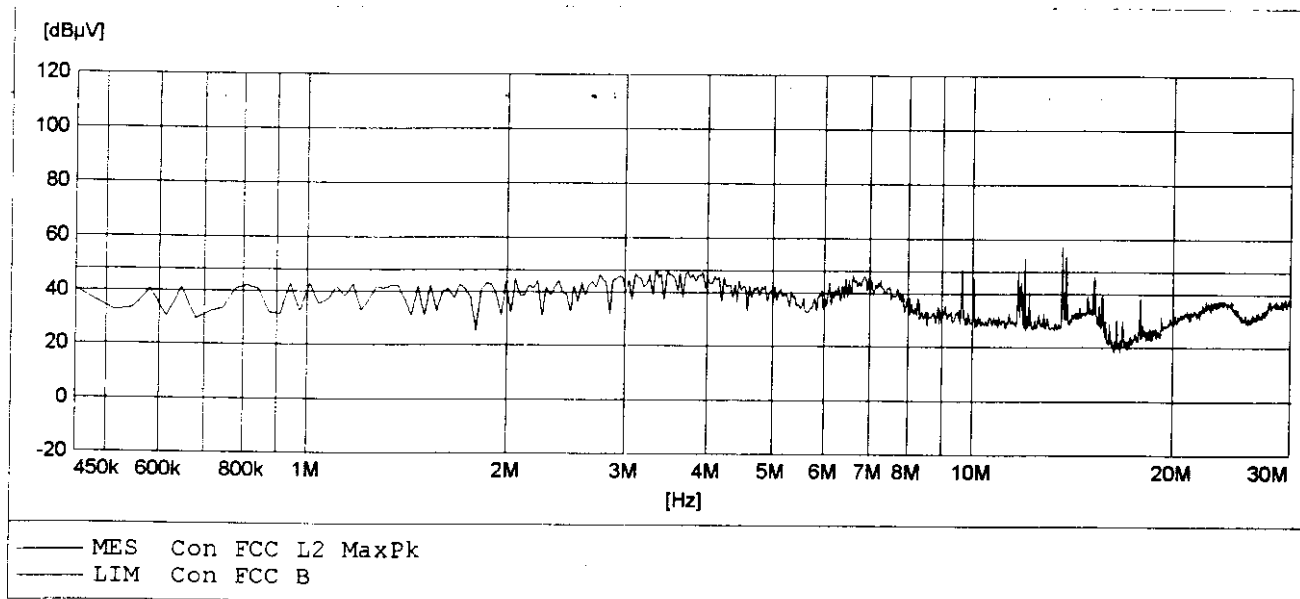
CONDUCTED DATA

SMS Data Products Group, Inc.

FCC ID: K45-S700B

Model: SCSI Drive Array

NEUTRAL SIDE



Signature: 
Kevin Kirby, EMC Engineer

RADIATED DATA

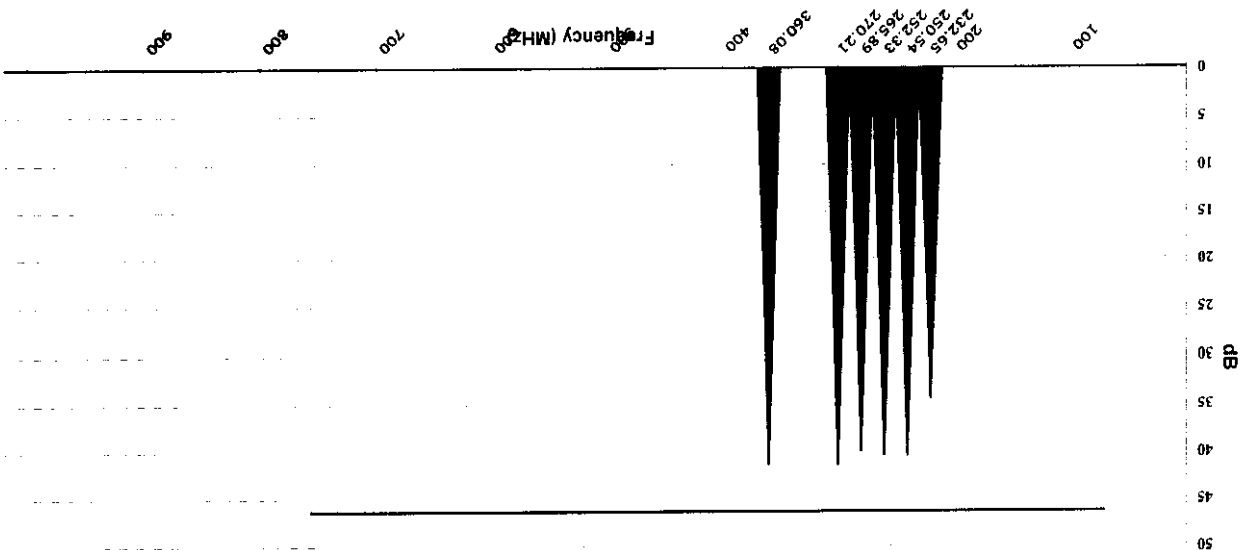
SMS Data Products Group, Inc.
SCSI Drive Array
FCC ID: K45-S700B

FREQ. ANTENNA	FIELD STRENGTH	FCC LIMIT	MARGIN
(MHz)	(dBuV/m)	(dBuV/m)	(dB)
POLARIZ.	(uV/m)	(uV/m)	

232.65	H	34.42	52.60	46.00	200	11.58
250.54	H	40.49	105.80	46.00	200	5.51
252.33	H	40.43	105.08	46.00	200	5.57
265.89	H	40.01	100.12	46.00	200	5.99
270.21	H	41.48	118.58	46.00	200	4.52
360.08	H	41.48	118.58	46.00	200	4.52

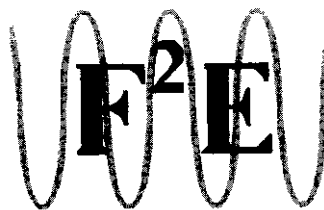
Class B Limit

Emmissions V



CPU speeds over 106MHz were tested to 2000MHz with the following settings to perform the measurement:
Peak Detector, Resolution BW at 1MHz, and Video BW at 1MHz

INITIALS *KAC*
Kevin Kirby, EMC Engineer



F² Engineering Testing Laboratory

APPENDIX

to

Report No. 8106-01-61

for

SMS Data Products Group, Inc.

22930 Shaw Road

Sterling, VA 20166

FCC ID: K45-S700B

EUT COMPLIES
WITHOUT
MODIFICATIONS