

APPENDIX D:

USER'S MANUAL

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STANDARD NEW PRODUCT WARRANTY REGISTRATION CARD

COMPLIANCE STATEMENT

e:

s equipment has been tested and found to comply with the limits
a Class B digital device, pursuant to Part 15 of FCC Rules. These
ts are designed to provide reasonable protection against harmful
ference in a residential installation. This equipment generates,
s, and can radiate radio frequency energy and, if not installed and
d in accordance with the instructions, may cause harmful
ference to radio communications. However, there is no guarantee
interference will not occur in a particular installation. If this
pment does cause harmful interference to radio or television
ption, which can be determined by turning the equipment off and
the user is encouraged to try to correct the interference by one or
e of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different
from that to which the receiver is connected.
- Consult the dealer or an experienced radio/television
technician for help.

ce 1:

changes or modifications not expressly approved by the party
onsible for compliance could void the user's authority to operate
equipment.

ce 2:

lded interface cables, if any, must be used in order to comply with
emission limits.

CLASS B NOTICE

igital apparatus does not exceed Class B limits for radio noise
ission for a digital apparatus as set out in the Radio Interference
ulations of the Canadian Department of Communications.

SAFETY INSTRUCTIONS

1. Read these instructions. Save these instructions for later use.
2. Follow all warnings and instructions marked on the product.
3. Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
4. Do not use this product near water.
5. Do not place this product on an unstable cart, stand, or table. The product may fall, causing serious damage to the product.
6. Slots and openings in the cabinet and the back or bottom are provided for ventilation; to ensure reliable operation of the product and to protect it from overheating, these openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug, or other similar surface. This product should never be placed near or over a radiator or heat register, or in a built in installation unless proper ventilation is provided.
7. This product should be operated from the type of power indicated on the marking label. If you are not sure of the type of power available, consult your dealer or local power company.
8. Do not allow anything to rest on the power cord. Do not locate this product where persons will walk on the cord.
9. If an extension cord is used with this product, make sure that the total of the ampere ratings on the products plugged into the extension cord does not exceed the extension cord ampere rating. Also make sure that the total of all products plugged into the wall outlet does not exceed 15 amperes.
10. Never push objects of any kind into this product through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a risk of fire or electric shock. Never spill liquid of any kind on the product.

SAFETY INSTRUCTIONS

11. Do not attempt to service this product yourself, as opening or removing covers may expose you to dangerous voltage points or other risks. Refer all servicing to service personnel.
12. Unplug this product from the wall outlet and refer servicing to qualified service personnel under the following conditions:
 - a. When the power cord or plug is damaged or frayed.
 - b. If liquid has been spilled into the product.
 - c. If the product has been exposed to rain or water.
 - d. If the product does not operate normally when the operating instructions are followed. Adjust only those controls that are covered by the operating instructions since improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to normal operation.
 - e. If the product has been dropped or the cabinet has been damaged.
13. Use only the proper type of power supply cord set (provided in your manual accessories box) for this unit. It should be a detachable type:UL listed/CSA certified, type SVT/SJT, rated as 10A 125V minimum, VDE approved or its equivalent.
14. The Socket-Outlet is to be installed near the equipment and is easily accessible.

This product is manufactured in accordance with quality assurance system approved by ISO 9001 certification process.

GENERAL INFORMATION

Congratulations on selecting this high resolution multi-scan color monitor.
This high performance display contains the latest technology of flat screen design and micro-processor control. This monitor has been equipped with both automatic and manual adjustments.
The automatic controls are factory preset and feature automatic factory frequency scanning.
The manual controls feature use digital adjustments to personalize the display in various applications.
The ergonomic characteristics of the antiglare flat screen, high refresh rates, and tilt swivel base allow comfortable usage when operating for a long period of time in high resolutions.
This operating manual describes the functions and features in more detail so that you may obtain the maximum performance of your monitor.

MONITOR FEATURES

Multi-scanning at horizontal frequencies of 30KHz to 70KHz,
vertical frequencies of 50Hz to 140Hz
15.5 inch(14" viewable) Sony Trinitron® picture tube
0.25mm aperture grille pitch
Microprocessor-based design with digital controls
Windows® 95 & 98 plug and play(VESA® DDC2B/DDC2B+/DDC2Bi)
11 Preset modes
Overscan capability for increased viewable area
Compatible with standard IBM VGA, extended VGA, Super VGA,
IBM XGA, XGA/2, as well as all VESA® ergonomic standards
Universal power supply
EMC (CE Marking) compliant (TC092) (TC095)
VESA® Display Power Management Signaling(DPMS™) compatible

EQUIPMENT CHECKLIST

Determine the most convenient location for your monitor.
Make sure that you have enough room to install cables and
connect the monitor to the system unit and power supply.

Open the shipping carton and check the contents of the package.
The package should include the following items:

- * 15" Color Monitor
- * AC Power Cord
- * Signal Cable
- * Owner's Manual

Note : If any item(s) are missing or damaged, contact your dealer
immediately.

2. Remove the monitor from its shipping carton(see figure 1).
Save the carton and packaging materials in case you need to
relocate the monitor.

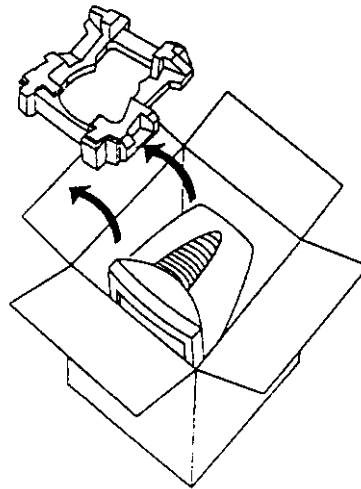


Figure 1

WICK SET-UP

Setting up your monitor is easy. All you have to do is make a few simple connections and adjustments. The procedure is as follows:

Start up

Switch the power off to both your monitor and computer. The location of the power switch is on the lower right hand corner of the monitor.

Power cable Connection.

Connect the female end of the power cable to the power input on the back of the monitor. Next, plug the male cable to the wall outlet for power.

To power input of monitor.

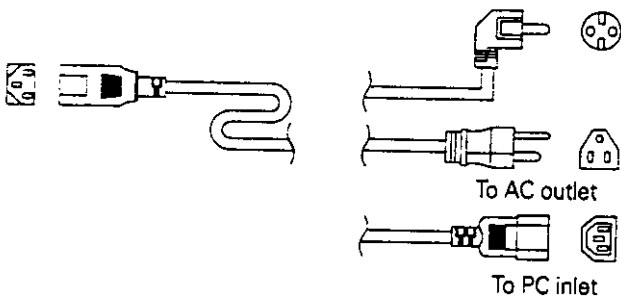
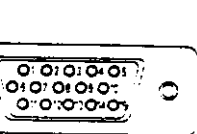


Figure 2

Signal cable connection

Connect the 15 pin signal cable to the your computer. Lock both screws to ensure grounding.



15pin connector

Figure 3

PIN NO.	DESCRIPTION	PIN NO.	DESCRIPTION
1.	Video red	9.	N. C
2.	Video green	10.	Ground
3.	Video blue	11.	Ground
4.	N. C	12.	SDA
5.	DDC Return	13.	Hor-Sync
6.	Video red ground	14.	Ver-Sync
7.	Video green ground	15.	SCL
8.	Video blue ground		

4. **Power ON**
Switch ON the power to both your color monitor and computer.
5. **Adjusting the Picture**
Adjust the controls, if necessary, to get the best picture.
A description of the functions of the controls may be found in the next section.
6. **Adjusting the Tilt-Swivel Base**
The tilt-swivel base can be adjusted for your maximum viewing comfort, it can be adjusted through angles of 90° horizontally and 16° vertically.

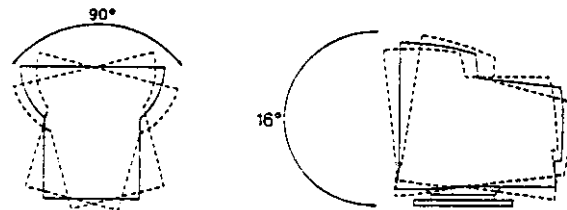


Figure 4

Note:

Due to the sensitivity of this monitor to earth's magnetic field, you may experience minor irregularities in the display if you swivel the monitor through more than 90° while the monitor is ON. If such behavior occurs, please turn the monitor OFF and ON again. The display should return to normal.

7. Setup of the Video Circuitry

To use the full potential of this product, it is necessary to first set the video circuitry of the computer according to the maximum capabilities of this monitor.

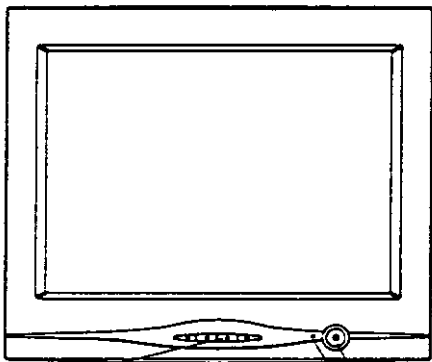
This can be expressed in any of the following ways:

- 1280 × 1024 60Hz
- 1024 × 768 76Hz

FRONT CONTROL PANEL

There are a few switches that are located on your monitor. The power indicator and adjustable controls allows the user to maximize the display for individual preferences. The description of these functions are as follows :

Front Control Panel



FRONT CONTROL PANEL POWER ON/OFF SWITCH
POWER INDICATOR

Figure 5

Power ON/OFF Switch

Press this button to turn the power ON or OFF. There will be a short delay before the display appears.

Power Indicator

This power indicator illuminates when the power is switched ON and the power cord is properly attached.

MODE	ON	STAND BY	SUSPEND	OFF
Power Indicator	Green	Amber	Green/Amber Blink 1.0 sec	Green/Amber Blink 2.0 sec

ON-SCREEN DISPLAY

DIGITAL CONTROL PANEL

The digital control panel is located at the bottom of your color monitor. If you are not satisfied with the factory settings, use these controls to program those you prefer in each resolution.

Then, these adjusted settings are kept in memory even if you change resolution or turn off the monitor.



front control panel


1. Enter 

This button will enable the On Screen Display(OSD-instructions for using the OSD are described in the following section).

This button is also used to select the function in the Main Menu or to save the setting in the Sub Menu.

2. Exit / Degauss 

This button manually degausses the CRT. It may be used if the display becomes discolored or washed out in appearance. This button can also be used to exit from the OSD.

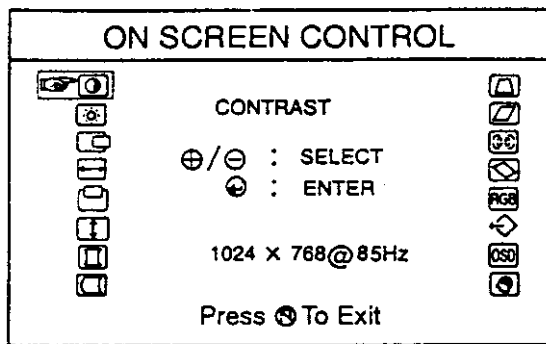
3. Up 

Use this button to move down the OSD selection menu and adjust the attribute of the monitor while in OSD mode. Pressing this button out of the OSD menu allows you to increase the level of contrast of the display screen.

4. Down 

Use this button to move up the OSD selection menu and adjust the attribute of the monitor while in OSD mode. Pressing this button out of the OSD menu allows you to decrease the level of contrast of the display screen.

MENU DESCRIPTIONS



Menu Descriptions

CONTRAST

Adjusts the black level of the display.

BRIGHTNESS

Adjusts the luminosity level of the display.

H - POSITION(HORIZONTAL POSITION)

Select this control and then use the - and + buttons to center the image horizontally on the screen.

H - SIZE(HORIZONTAL SIZE)

Select this control and then use the - and + buttons to expand or decrease the image width to horizontally fill the screen.

V-POSITION(VERTICAL POSITION)

Select this control and then use the - and + buttons to center the image vertically on the screen.

V-SIZE(VERTICAL SIZE)

Select this control and then use the - and + buttons to adjust the image height to vertically fill the screen.

SIDE - PIN(PINCUSHION)

Select this control, then use the - and + buttons to straighten the sides of the image by pulling them in opposing directions.

PIN BALANCE 

Select this control, then use the - and + buttons to straighten the sides of the image by pulling them in the corresponding direction.

CORNER PIN 

Select this control, then use the - and + buttons to straighten the top and ENTER bottom corners of the image by pulling them in opposing directions.

TRAPEZOID 

Select this control, then use the - and + buttons to even the widths of the top and bottom of the display (pulling the sides in opposite directions).

PARALLELOGRAM 

Select this control, then use the - and + buttons to center the top and bottom of the display (pulling the sides in the corresponding direction).

MOIRE 

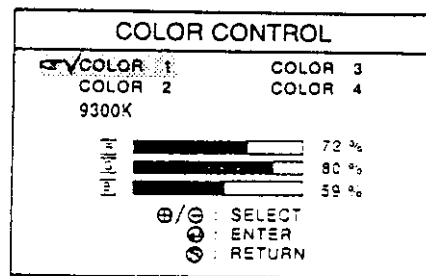
Select this control, then press the + and - buttons to be disappeared the moire.

ROTATION 

Use the - and + buttons to rotate the image until the sides of the image are parallel to the edge of the bezel.

COLOR CONTROL(TEMPERATURE) 

Select this control, then use the - and + buttons to scroll to the desired color temperature. Use the ENTER button to select either the 9300K, 6500K or 5500K or USER, for a custom setting.



GAIN(RED) **R**

Select "COLOR 4: USER" then use the ENTER button to scroll up and down the RGB menu to R (Red). Use the - and + buttons to adjust the red level of the display.

GAIN(GREEN) **G**

Select "COLOR 4: USER" then use the ENTER button to scroll up and down the RGB menu to G (Green). Use the - and + buttons to adjust the green level of the display.

GAIN(BLUE) **B**

Select "color 4: USER" then use the ENTER button to scroll up and down the RGB menu to B (Blue). Use the - and + buttons to adjust the blue level of the display.

LANGUAGE ↔

Select this control, then use the + and - buttons to choose from : English, German(deutsch), Spanish(español), Italian(italiano) or French(français)

OSD POSITION **OSD**

Select this control, then use the ENTER button to select in which direction to move the OSD menu. Use the - and + buttons to move the menu.

RESET **R**

Restores the display settings to the original factory reset values. Press and hold down the Enter button until the progress bar disappears.

TIMING GUIDE

The 15" color monitor is a multi-frequency monitor. It operates at horizontal frequencies between 30 KHz and 70 KHz, vertical frequencies between 50 Hz and 140 Hz. Because of its microprocessor-based design, it offers auto-synchronization and auto-sizing capabilities. This monitor offers 11 pre-programmed settings as listed in the table below.

TABLE

Preset		Resolution		Frequency	
		Horizontal	Vertical	Horizontal	Vertical
VGA	M1	720	400	31.5 KHz	70 Hz
	M2	640	480	31.5 KHz	60 Hz
VESA	M3	640	480	37.5 KHz	75 Hz
	M4	800	600	46.9 KHz	75 Hz
	M5	1024	768	60.0 KHz	75 Hz
	M6	1152	864	67.5 KHz	75 Hz
	M7	1280	1024	64.0 KHz	60 Hz
VESA	M8	640	480	43.3 KHz	85 Hz
ERGONOMIC	M9	800	600	53.7 KHz	85 Hz
	M10	1024	768	68.7 KHz	85 Hz
MAC	M11	832	624	49.7 KHz	75 Hz

* In addition to 11 factory modes, there are 8 additional user modes.
If more than 7 modes are inputted, it will be overridden in accordance with saving order of additional modes.

- In case of using Macintosh, you must need Mac adapter.

SPECIFICATIONS

Picture tube	15" (14.0" viewable) nonglare, anti-static, dark Sony Trinitron® tube with tinted aperture grill and 90° deflection Aperture Grille Pitch 0.25mm
Resolution	1280(H) × 1024(V) Non-interlaced (addressable)
Maximum Dot Clock	100MHz at - 3 dB (nominal)
Video input	Analog, positive going signal(0.7V p-p)
Horizontal input	TTL, positive or negative going pulse(2.4~5V p-p)
Vertical input	TTL, positive or negative going pulse(2.4~5V p-p)
Scan frequency	Horizontal: 30~70KHz Vertical: 50~140Hz
Standard display area	270mm(H) × 202mm(V) / 10.6"(H) × 7.9"(V)
Display color	Unlimited
Power input	100~240V AC, 50/60Hz
Fuse rating	250V, S 3.0A(UL, CSA, TÜV) or T 3.15A(TÜV)
Power consumption	On : Less than 90W Stand by : Less than 15W Suspend : Less than 15W Off : Less than 8W
Operating temperature	0 To 40 Degree C.
Dimensions	366mm(W) × 368mm(H) × 402mm(D) 14.4"(W) × 14.5"(H) × 15.8"(D)
Weight	14.4Kg(net) / 31.7lbs



STANDARD NEW PRODUCT WARRANTY

Korea Data Systems, Inc.(KDS)warrants your new monitor product against defects in material and workmanship for a period of three(3) years from the date of the original purchase of the new product. This limited warranty covers the end-user for three(3) years on parts, two(2) years on the CRT, and one(1) year on labor for new product purchases only. Any product defect not originating from defects in materials or workmanship will not be considered covered under warranty

In the unlikely event that a component should fail during its three-year warranty period due to a defect in materials or workmanship, KDS will repair or replace, at its option, the entire monitor with a new or re-certified monitor of equal or greater value. For units, which fail within the first thirty (30)days following the date of purchase, in-warranty replacement will cover parts and labor. KDS will replace the defective product with new product of equal or greater value. For units which fail beyond thirty (30) days, but within the first twelve(12) months of ownership, in-warranty replacement will cover parts and labor.

For units which fail beyond the first twelve(12) months of ownership, charges for labor will apply to in-warranty repairs. In-warranty replacement will cover parts. For units which fail beyond the first twenty-four(24)months of ownership, and up to the end of the three-year warranty period, charges for labor will apply to in - warranty repairs. If replacement of the picture tube(CRT) or main control board is required, parts. replacement charges will apply for those parts . In-warranty replacement will cover remaining parts. For any warranty replacement, the customer is responsible for one-way freight charges to a specified KDS service center. All parts and labor warranty coverage listed above is limited by the exclusions listed below under "WARRANTY EXCLUSION." Replacement product will continue to be covered under the original owner's three-year warranty period, or for a period of 90 days, whichever is greater. Replacement product will be shipped to the customer at KDS' expense to any point in the continental U.S.A. To take advantage of warranty services call:

KDS Customer Service Department at(800)283-1311

ENHANCED WARRANTY OPTION

KDS will upgrade the standard three(3) year limited warranty on new monitor product purchases to include all parts and labor for three years from the date of original purchase, upon request. This enhancement must be requested within ninety(90)days of original purchase date. This warranty enhancement offer is subject to change, and replaces any previous offers. Contact KDS Customer Service for details on pricing and payment methods for warranty enhancement.

WARRANTY EXCLUSIONS

This limited warranty does not cover the repair of cracked, scratched, broken or modified plastics; other cosmetic damage, or parts that have been altered, defaced or removed; or scratching, cracking or breakage of the CRT. This limited warranty does not apply to failures caused by accident, misuse, abuse, negligence, commercial use, improper shipping, acts of God or alterations and repairs not performed by KDS or its authorized agents. This limited warranty does not cover repair of monitors whose display quality degrades through normal usage. KDS Shall not be liable for any incidental or consequential damages resulting from the use of this product.

This limited warranty gives you specific rights, and you may have other rights which may vary from state to state.

REGISTRATION CARD

1. Extended Warranty Options:

(Below are two warranty enhancement options which increase the standard limited warranty coverage)

(Check)

Option 1: Two(2) year labor warranty enhancement

(this option extends the limited one(1) year labor Warranty to two(2) years)

Option 2: Three(3) year full warranty enhancement

(this option extends coverage on all monitor components and labor to three(3) years)

(To effect an extended warranty the preferred option must be 'checked' and payment must be included with this form. Payment may be made via check, VISA or Master Card.)

Make checks payable to KDS, USA and mail with this completed form.

Credit Card Information

- Type of card: VISA or Master Card (circle one)
- Name on Card: _____
- Credit Card Number: _____
- Expiration Date: _____

2. Your Information:

First Name _____ Last Name _____
Title _____
Company _____
Address _____
City, ST Zip _____
Telephone _____ FAX _____

3. Product Information:

Model _____ (You may place one of the labels from the box here)
Serial Number _____
Date Purchased _____

4. Return Information:

Please detach and return completed from to:
Customer Service

KDS, USA Inc.
12300 Edison Way
Garden Grove, CA 92841
Tel: 800-283-1311
Fax: 714-379-5592

APPENDIX B: Emissions Equipment List

DESCRIPTION	MANUFACTURER	MODEL NUMBER	SERIAL NUMBER	CAL. LAB
AMPLIFIER	HEWLETT PACKARD	11975A	2304A00348	TEST EQUITY
AMPLIFIER (S/A 1)	RHEIN TECH	PR-1040	N/A	RTL
AMPLIFIER (S/A 2)	RHEIN TECH	RTL2	N/A	RTL
AMPLIFIER (S/A 3)	RHEIN TECH	8447F	2944A03783	RTL
AMPLIFIER (S/A 4)	RHEIN TECH	8447D	2727A05397	RTL
BICONICAL/LOG ANTENNA 1	ANTENNA RESEARCH	LPB-2520	1037	LIBERTY LABS
BICONICAL/LOG ANTENNA 2	ANTENNA RESEARCH	LPB-2520	1036	LIBERTY LABS
FIELD SITE SOURCE	EMCO	4610	9604-1313	RTL
FILTER (ROOM 1)	SOLAR	8130	947305	RTL
FILTER (ROOM 2)	SOLAR	8130	947306	RTL
HARMONIC MIXER 1	HEWLETT PACKARD	11970K	2332A00563	TELOGY
HARMONIC MIXER 2	HEWLETT PACKARD	11970A	2332A01199	TELOGY
HORN ANTENNA 1	EMCO	3160-10	9606-1033	EMCO
HORN ANTENNA 2	EMCO	3160-9	9605-1051	EMCO
HORN ANTENNA 3	EMCO	3160-7	9605-1054	EMCO
HORN ANTENNA 4	EMCO	3160-8	9605-1044	EMCO
HORN ANTENNA 5	EMCO	3160-03	9508-1024	EMCO
LISN (ROOM 1/L1)	SOLAR	7225-1		ACUCAL
LISN (ROOM 1/L2)	SOLAR	7225-1		ACUCAL
LISN (ROOM 2/L1)	SOLAR	7225-1	900078	ACUCAL
LISN (ROOM 2/L2)	SOLAR	7225-1	900077	ACUCAL
PRE-AMPLIFIER	HEWLETT PACKARD	8449B OPT	3008A00505	TELOGY
QUASI-PEAK ADAPTER (S/A 1)	HEWLETT PACKARD	85650A	3145A01599	ACUCAL
QUASI-PEAK ADAPTER (S/A 2)	HEWLETT PACKARD	85650A	2811A01276	ACUCAL
QUASI-PEAK ADAPTER (S/A 3)	HEWLETT PACKARD	85650A	2521A00473	ACUCAL
QUASI-PEAK ADAPTER (S/A 4)	HEWLETT PACKARD	85650A	2521A01032	ACUCAL
RF PRESELECTOR (S/A 1)	HEWLETT PACKARD	85685A	3146A01309	ACUCAL
SIGNAL GENERATOR (HP)	HEWLETT PACKARD	8660C	1947A02956	ACUCAL
SIGNAL GENERATOR (WAVETEK)	WAVETEK	3510B	4952044	ACUCAL
SPECTRUM ANALYZER 1	HEWLETT PACKARD	8566B	3138A07771	ACUCAL
SPECTRUM ANALYZER 2	HEWLETT PACKARD	8567A	2841A00614	ACUCAL
SPECTRUM ANALYZER 4	HEWLETT PACKARD	8567A	2727A00535	ACUCAL
TUNABLE DIPOLE	EMCO	3121	274	LIBERTY LABS

APPENDIX C: Conducted and Radiated Test Methodology

The power line conducted emission measurements were performed in a Series 81 type shielded enclosure manufactured by Rayproof. The EUT was assembled on a wooden table 80 centimeters high. Power was fed to the EUT through a 50 ohm / 50 microhenry Line Impedance Stabilization Network (LISN). The EUT LISN was fed power through an A.C. filter box on the outside of the shielded enclosure. The filter box and EUT LISN housing are bonded to the ground plane of the shielded enclosure. A second LISN, the peripheral LISN, provides isolation for the EUT test peripherals. This peripheral LISN was also fed A.C. power. A metal power outlet box, which is bonded to the ground plane and electrically connected to the peripheral LISN, powers the EUT host peripherals.

The spectrum analyzer was connected to the A.C. line through an isolation transformer. The 50-ohm output of the EUT LISN was connected to the spectrum analyzer input through a Solar 400 kHz high-pass filter. The filter is used to prevent overload of the spectrum analyzer from noise below 400 kHz. Conducted emission levels were measured on each current-carrying line with the spectrum analyzer operating in the CISPR quasi-peak mode (or peak mode if applicable). The analyzer's 6 dB bandwidth was set to 9 kHz. No video filter less than 10 times the resolution bandwidth was used. Average measurements are performed in linear mode using a 10 kHz resolution bandwidth, a 1 Hz video bandwidth, and by increasing the sweep time in order to obtain a calibrated measurement. The emission spectrum was scanned from (150/450) kHz to 30 MHz. The highest emission amplitudes relative to the appropriate limit were measured and have been recorded in this report.

Before final measurements of radiated emissions were made on the open-field three/ten meter range; the EUT was scanned indoors at one and three meter distances. This was done in order to determine its emissions spectrum signature. The physical arrangement of the test system and associated cabling was varied in order to determine the effect on the EUT's emissions in amplitude, direction and frequency. This process was repeated during final radiated emissions measurements on the open-field range, at each frequency, in order to insure that maximum emission amplitudes were attained.

Final radiated emissions measurements were made on the three-meter, open-field test site. The EUT was placed on a nonconductive turntable 0.8 meters above the ground plane. The spectrum was examined from 30 MHz to 1000 MHz.

At each frequency, the EUT was rotated 360 degrees, and the antenna was raised and lowered from one to four meters in order to determine the maximum emission levels. Measurements were taken using both horizontal and vertical antenna polarizations. The spectrum analyzer's 6 dB bandwidth was set to 120 kHz, and the analyzer was operated in the CISPR quasi-peak detection mode. No video filter less than 10 times the resolution bandwidth was used. When any clock exceeds 108 MHz, the EUT was tested between 1 to 2 Gigahertz in peak mode with the resolution bandwidth set at 1 MHz as stated in ANSI C63.4. The highest emission amplitudes relative to the appropriate limit were measured and recorded in this report.

Note: Rhein Tech Laboratories, Inc. has implemented procedures to minimize errors that occur from test instruments, calibration, procedures, and test setups. Test instrument and calibration errors are documented from the manufacturer or calibration lab. Other errors have been defined and calculated within the Rhein Tech quality manual, section 6.1. Rhein Tech implements the following procedures to minimize errors that may occur: yearly as well as daily calibration methods, technician training, and emphasis to employees on avoiding error.