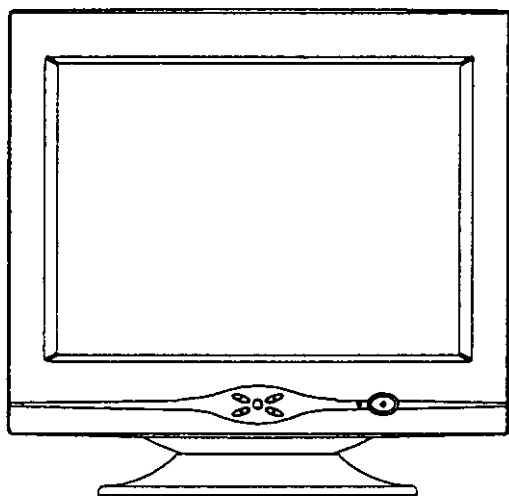# APPENDIX D:

USER'S MANUAL

Operation & Installation Guide

MODEL NO. : KD-1910 T

19" Multi-Scan Color Monitor
(18.0"diag. Viewing area)

LPP-1910T REV. 00

TABLE OF CONTENTS

**STANDARD NEW PRODUCT WARRANTY
REGISTRATION CARD**

FCC COMPLIANCE STATEMENT

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

Notice 1:
The changes or modifications not expressly approved by the party
responsible for compliance could void the user's authority to operate
the equipment.

Notice 2:
Shielded interface cables, if any, must be used in order to comply with
the emission limits.

DOC CLASS B NOTICE
This digital apparatus does not exceed Class B limits for radio noise
emission for a digital apparatus as set out in the Radio Interference
Regulations of the Canadian Department of Communications.

i

Read these instructions. Save these instructions for later use.

Follow all warnings and instructions marked on the product.

Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

Do not use this product near water.

Do not place this product on an unstable cart, stand, or table. The product may fall, causing serious damage to the product.

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.

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.

Do not allow anything to rest on the power cord. Do not locate this product where persons will walk on the cord.

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.

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 95KHz, vertical frequencies of 50Hz to 160Hz
- 19 inch(18" 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)
- 13 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
- Compatible with Apple® Macintosh™
- Universal power supply
- (MPR II) compliant (TCO92) (TCO95)
- 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:

* 19" 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).
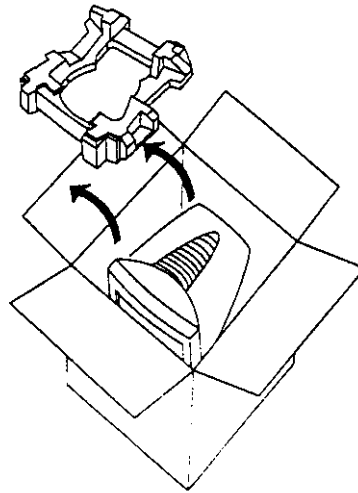Save the carton and packaging materials in case you need to
relocate the monitor.

Figure 1

QUICK 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:

1. 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.

2. 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.

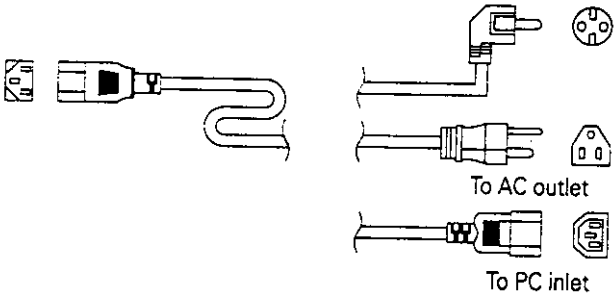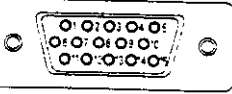

To AC outlet

To PC inlet

Figure 2

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

D type 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	

3

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°
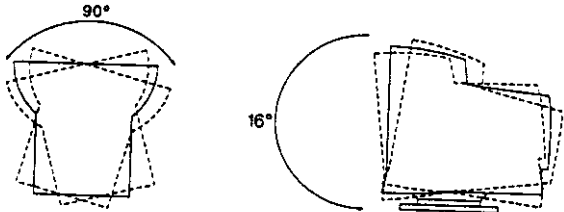   horizontally and 16° vertically.

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:

   - 1600 × 1200   77Hz
   - 1280 × 1024   88Hz
   - 1024 × 768 118Hz
   - 800 × 600 153Hz
   - 640 × 480 160Hz

4

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

DIGITAL CONTROL PANEL ————

—— POWER ON/OFF SWITCH

—— POWER INDICATOR

Figure 5

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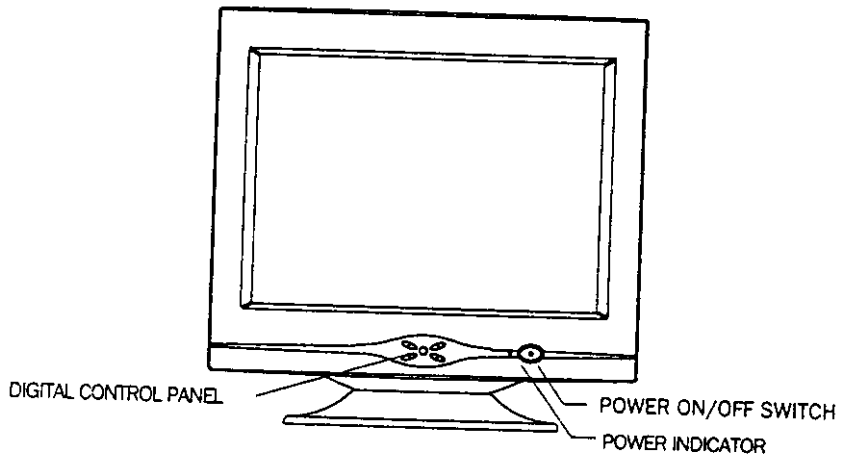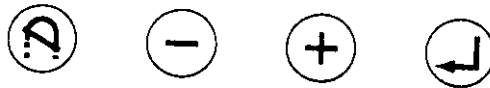   Press this button to turn the power ON or OFF. There will be
    a short delay before the display appears.

2. 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 ⊖
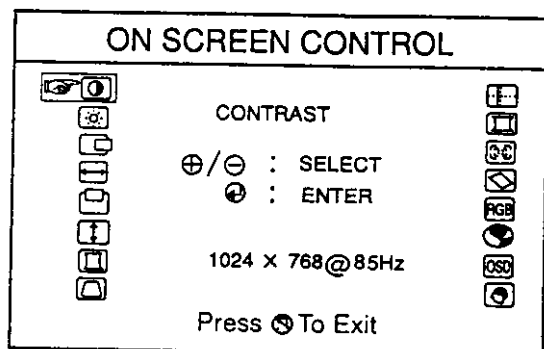
Use this button to move up the OSD selection menu and adjust the
attribute of the monitor while in OSD mode. Pressing this button out
of the OSD menu allows you to decrease the level of contrast of
the display screen.

MENU DESCRIPTIONS

```
┌─────────────────────────────────┐
│      ON SCREEN CONTROL          │
├─────────────────────────────────┤
│ [☞⊙]                      [⊞]   │
│  [❀]      CONTRAST        [⊡]   │
│  [⊡]                      [⊛]   │
│  [⊟]   ⊕/⊖  :  SELECT     [⊗]   │
│  [⊡]      ⊕  :  ENTER     [RGB] │
│  [⊡]                      [❂]   │
│  [⊡]    1024 × 768@85Hz   [OSD] │
│  [⊡]                      [⊙]   │
│       Press ⊗ To Exit           │
└─────────────────────────────────┘
```

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.

7

PIN BALANCE ▱

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

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).

CONVERGENCE ▦

Select this control, then use the + and - buttons to scroll to the desired convergence use the ENTER button to select either the horizontal vertical, Dy mamic convergence

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.
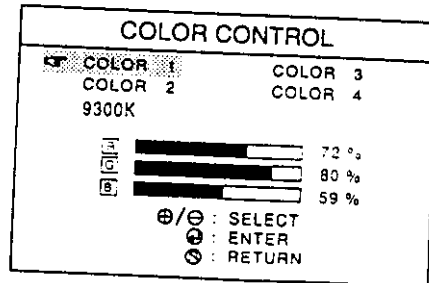
MOIRE ▦

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) RGB

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, 5500K, USER for a custom setting.

```
┌─────────────────────────────────┐
│         COLOR CONTROL           │
├─────────────────────────────────┤
│ ▱ COLOR  1          COLOR  3    │
│    COLOR  2          COLOR  4    │
│   9300K                          │
│                                  │
│   ▣ ████████████▭      72 %     │
│   ▣ ███████████████▭   80 %     │
│   ▣ █████████▭         59 %     │
│                                  │
│      ⊕/⊖ : SELECT               │
│        ⊖ : ENTER                │
│        ⊘ : RETURN               │
└─────────────────────────────────┘
```

8

- GAIN(RED) R

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

-GAIN(GREEN) G

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

GAIN(BLUE) B

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

NGUAGE

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

D POSITION [OSD]

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

ALL

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

9

TIMING GUIDE

The 19" color monitor is a multi-frequency monitor. It operates at horizontal frequencies between 30 KHz and 95 KHz, vertical frequencies between 50 Hz and 160 Hz. Because of its microprocessor-based design, it offers auto-synchronization and auto-sizing capabilities. This monitor offers 13 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	80.0 KHz	75 Hz
	M8	1600	1200	93.8 KHz	75 Hz
VESA (ERGONOMIC)	M9	640	480	43.3 KHz	85 Hz
	M10	800	600	53.7 KHz	85 Hz
	M11	1024	768	68.7 KHz	85 Hz
	M12	1280	1024	91.1 KHz	85 Hz
MAC	M13	832	624	49.7 KHz	75 Hz

* In addition to 13 factory modes, there are 8 additional user modes. If more than 8 modes are inputted. it will be overrided in accordance with saving order of additional modes.

* In case of using Macintosh. you must need Mac adapter.

ECIFICATIONS

icture tube	19" (18.0" viewable) nonglare, anti-static, dark Sony Trintron® tube with tinted aperture grill and 90° deflection Aperture Grille Pitch 0.25mm
esolution	1600(H) × 1200(V) Non-interlaced (addressable)
Maximum Dot Clock	202.5MHz at - 3 dB (nominal)
ideo input	Analog, positive going signal(0.7V p-p)
orizontal input	TTL, positive or negative going pulse(2.4~5V p-p)
ertical input	TTL, positive or negative going pulse(2.4~5V p-p)
can frequency	Horizontal: 30~95KHz Vertical: 50~160Hz
tandard display area	352mm(H) × 264mm(V) / 13.9"(H) × 10.4"(V)
isplay color	Unlimited
ower input	100~240V AC, 50/60Hz
use rating	250V, S 3.0A(UL, CSA, TÜV) or T 3.15A(TÜV)
ower consumption	On : Less than 120W Stand by : Less than 15W Suspend : Less than 15W Off : Less than 8W
perating mperature	0 To 40 Degree C.
mensions	460mm(W) × 469.5mm(H) × 469mm(D) / 18.1"(W) × 18.5"(H) × 18.5"(D)
eight	24.0Kg (net) / 52.8 lbs

KDS USA

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 perfomed 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 many 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 _____

Product Information:
Model_____(You may place one of the labels from the box here)
Serial Number _____
Date Purchased _____

Return Information:
Please detach and return completed from to:
Customer Service

KDS, USA Inc.
2300 Edison Way
Garden Grove, CA 92841
Tel: 800-283-1311
Fax: 714-379-5592