



# TECHNICAL SERVICE MANUAL

Korebalance – Kinesthetic Ability Trainer



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This manual provides maintenance and service information for the Korebalance Kinesthetic ability Trainer. If replacement parts are required, contact SportKAT with the serial number of your unit to ensure accuracy of replacement parts.

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## LIMITED WARRANTY

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**Limited Warranty:** SportKAT warrants to the original purchaser that its products and replacement parts shall be free from defects in material and workmanship for a period of one (1) year from date of delivery. SportKAT's obligation under this warranty is expressly limited to supplying replacement parts and/or service for, or replacing, at its option, any product which is, in the sole discretion of SportKAT, found to be defective.

THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER EXPRESS WARRANTIES AND IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS OF PURPOSE. SPORTKAT'S OBLIGATION UNDER THESE WARRANTIES SHALL NOT INCLUDE ANY LIABILITY FOR LOSS OF PROFITS, DIRECT, INDIRECT OR CONSEQUENTIAL DAMAGES OR DELAYS. Some states, provinces, or countries do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusion or limitation may not apply. Any improper or negligent use, any alterations or repairs not in accordance with SportKAT's manuals or performed by others in such manner as in SportKAT's sole judgment affects the product materially and adversely, shall void these warranties. These warranties do not cover failures due to misuse, abuse, neglect, or lack of routine maintenance. No employee or representative of SportKAT is authorized to change these warranties in any way or grant any other warranty unless in writing and signed by a SportKAT officer. These warranties provide specific legal rights; but, there may be other available rights, which vary from state to state, province to province, or country to country.

### PLEASE

*Read this entire manual before operating the Korebalance Kinesthetic Ability Trainer.*

If you have any questions, please call:

**SportKAT, LLC**  
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[info@sportkat.com](mailto:info@sportkat.com)



# GENERAL WARNINGS AND SAFETY RULES

## Electrical Safety

1. The potential for electric shock exists with electrical equipment. Failure to follow facility protocols could result in serious injury.
2. Korebalance must be plugged into an outlet properly installed and grounded in accordance with all codes and ordinances.
3. To reduce the risk of injury, always unplug the unit from mains power, prior to moving the product to a different location.
4. To reduce the risk of injury, always unplug the unit from mains power, prior to removing the back cover.
5. This device is not waterproof; exposure to liquids can cause permanent damage to the product.
6. Do not use harsh chemical cleaners, damage to the product may result.
7. To reduce the risk of electromagnetic or other interference between Korebalance and other equipment, care must be taken to avoid proximity to such equipment.



Type B applied part

## Patient Safety

1. The center platform of the Korebalance is an unstable platform; ensure that patients understand that movement is expected when placing their feet onto the platform.
2. Do not attempt to swing from the handle bars
3. Do not disassemble any part of the Korebalance.
4. A medical professional or technician should ensure safety at all times (i.e. this may include placing a hand behind the patient at all times).
5. Calibration of the Accelerometer should be completed by a qualified person; failure to properly re-calibrate the system could result in erroneous information.

## INTENDED USE

Korebalance is intended for use in balance therapy, only by health care professionals with experience in balance therapy. Patient suitability must be judged by the health professional on a case by case basis.



**Medical Model**

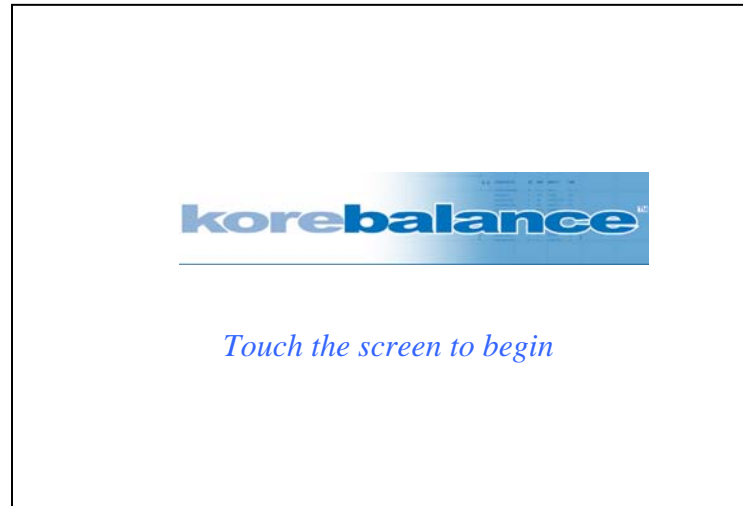


**Fitness Model**

The Korebalance is a fully integrated computerized training system. The software is pre-installed, including the Linux Operating System. The interactive 3D software games, along with assessment & training tools. The adjustable 17-inch touch-screen monitor provides an ample viewing area. The patented pneumatic pressure system allows for a 360° range of motion, while the ergonomically-designed handlebars allow for additional patient safety and provide freedom to complete complex exercises (fitness model only).


Korebalance	Medical	Fitness
Width	36" (91.4 cm)	36" (91.4 cm)
Depth	48" (121.9cm)	48" (121.9cm)
Overall Height	74" to 80" (188cm to 203.2cm)	74" to 80" (188cm to 203.2cm)
Maximum Tilt Angle	20°	20°
Handle Bars (H x D)	49" x 37" (124.5 cm x 94 cm)	49" x 29" (124.5 cm x 73.7 cm)
Product Weight	165 lbs (75kg)	165 lbs (75kg)
Maximum Patient Weight	500lbs (227kg)	500lbs (227kg)

## Stand-by Screen



The Korebalance GUI automatically returns to the Stand-by Screen after fifteen (15) minutes of no activity. Simply touch the GUI and the Korebalance will advance to the Log-In Screen.

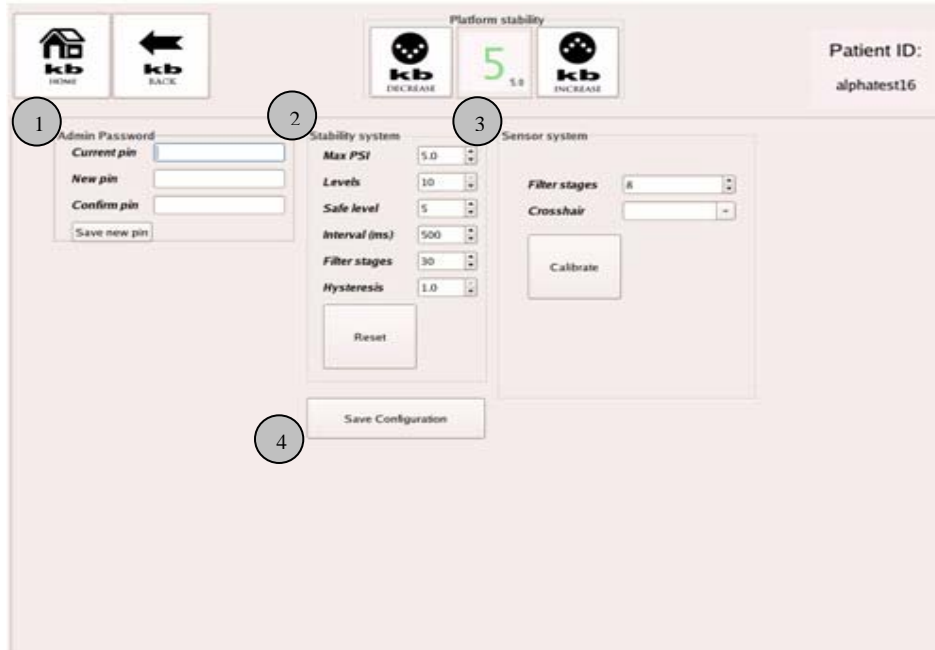
## LOG-IN SCREEN

 A screenshot of the log-in screen. At the top, it says 'User Details'. Below that, it says 'Please enter your patient ID using the onscreen keyboard then touch Enter key.' There is a text input field labeled 'Patient ID:'. Below the input field is a 'Messages' section with a 'Close' button. At the bottom, there is an on-screen keyboard with various keys including numbers, letters, and function keys like 'Backspace', 'Enter', and 'Space'.	<p>Using the on-screen keyboard; enter the Patient ID for the selected patient.</p> <p><b>Note: Initial entry of patient data must be completed by the Administrator (Admin).</b></p> <p><b>Note: For complete instructions on creating, editing, and or deleting a patient record; see the Korebalance Operating Instructions.</b></p>
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<h3>NAVIGATIONAL OVERVIEW</h3>	<p>From every screen the User will be able to return to the Home Screen and re-navigate if necessary. In addition, each screen will have a “BACK” button which will allow the User to move back one screen</p> <p><b>Note: The BACK button is not functional from the Home Screen, because there is no additional screen in which to go back.</b></p>
<h3>HOME SCREEN</h3>	<p>The HOME Screen is the starting point for subsequent tests, protocols, games, and results.</p> <p>Each page is divided into two sections:</p> <ul style="list-style-type: none"> <li>• <u>Information Section</u> provides information as to the current patient and the current pressure level programmed and measured in the bladder system.</li> <li>• <u>Active Screen Section</u> is used to navigate throughout the Korebalance screens.</li> </ul> <p>The lower right corner shows the computer serial number and the installed software version.</p>



## ADMINISTRATION SCREEN



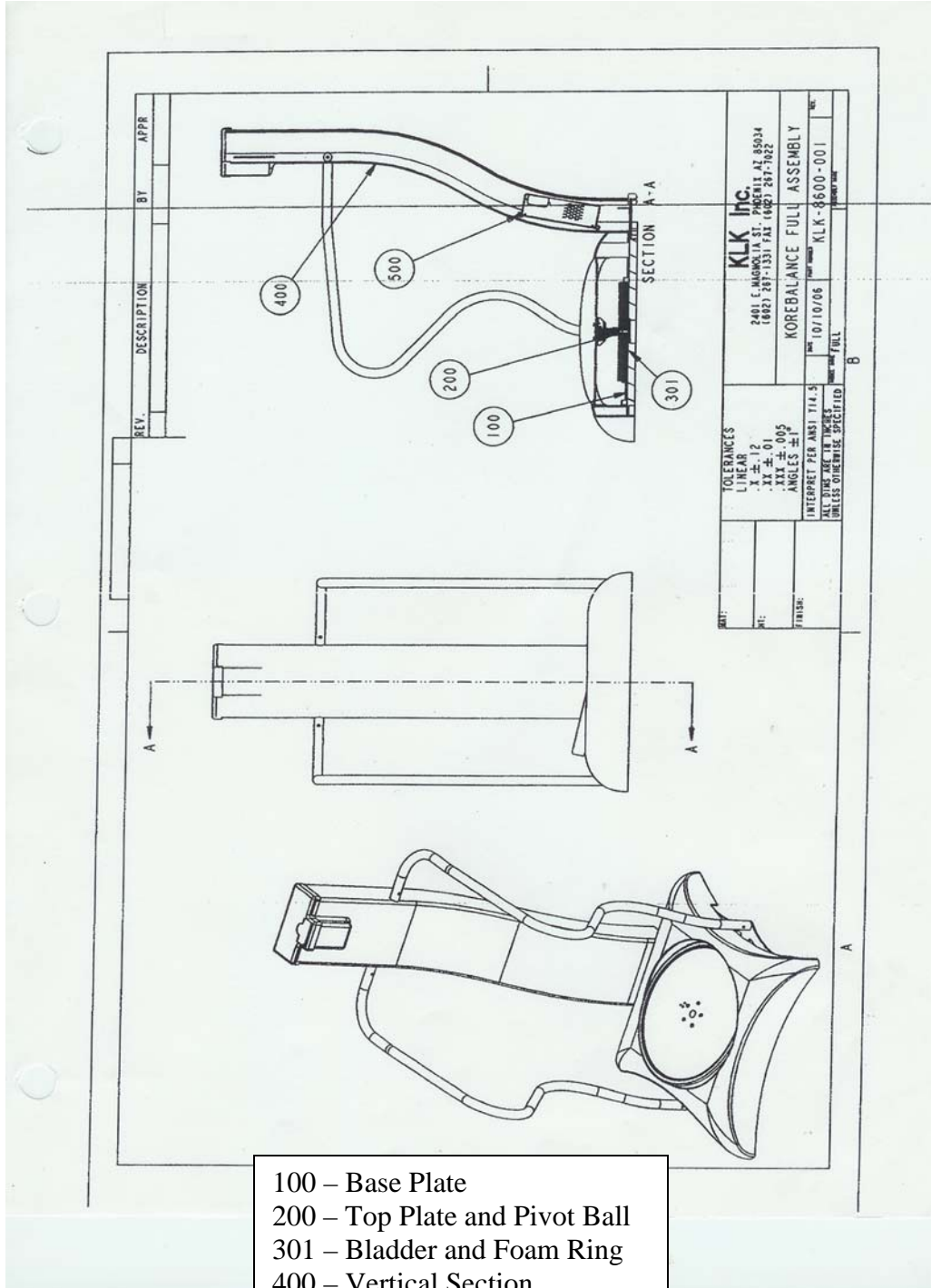
Note: This screen is intended to be operated by the “Administrator” responsible for the Korebalance System only.

1. Admin Password – allows the Administrator to change the “admin” password
2. Stability system – allows for modification of bladder/platform (pressure) stability settings
  - A. Max PSI – maximum bladder pressure, range 2.0 to 15.0
  - B. Levels – number of levels for varying the stability, rang 3 to 10.  
Note: If the Level setting is adjusted below the current platform stability setting, the value will remain above until the setting is decreased to below the new Level setting.
  - C. Safe Level – the initial pressure level when returning to safe (after 15 minutes of inactivity).
  - D. Interval (ms) – the time between pressure management checks, range 100 to 5000.

- E. Filter stages – the number of stages of the averaging filter for incoming data, range 0 to 100.
- F. Hysteresis – the amount by which the bladder can deviate before coming back onto compliance, range 0.1 to 1.0.
- G. Reset – restores all the above to the original factory settings.
3. Sensor system – allows for modification of items related to the accelerometer
  - A. Filter stages - the number of stages of noise filtering for incoming data
  - B. Crosshairs – allows choosing different designs for crosshairs.
4. Save Configuration – this button saves all the changes made and sets them as the new default settings.

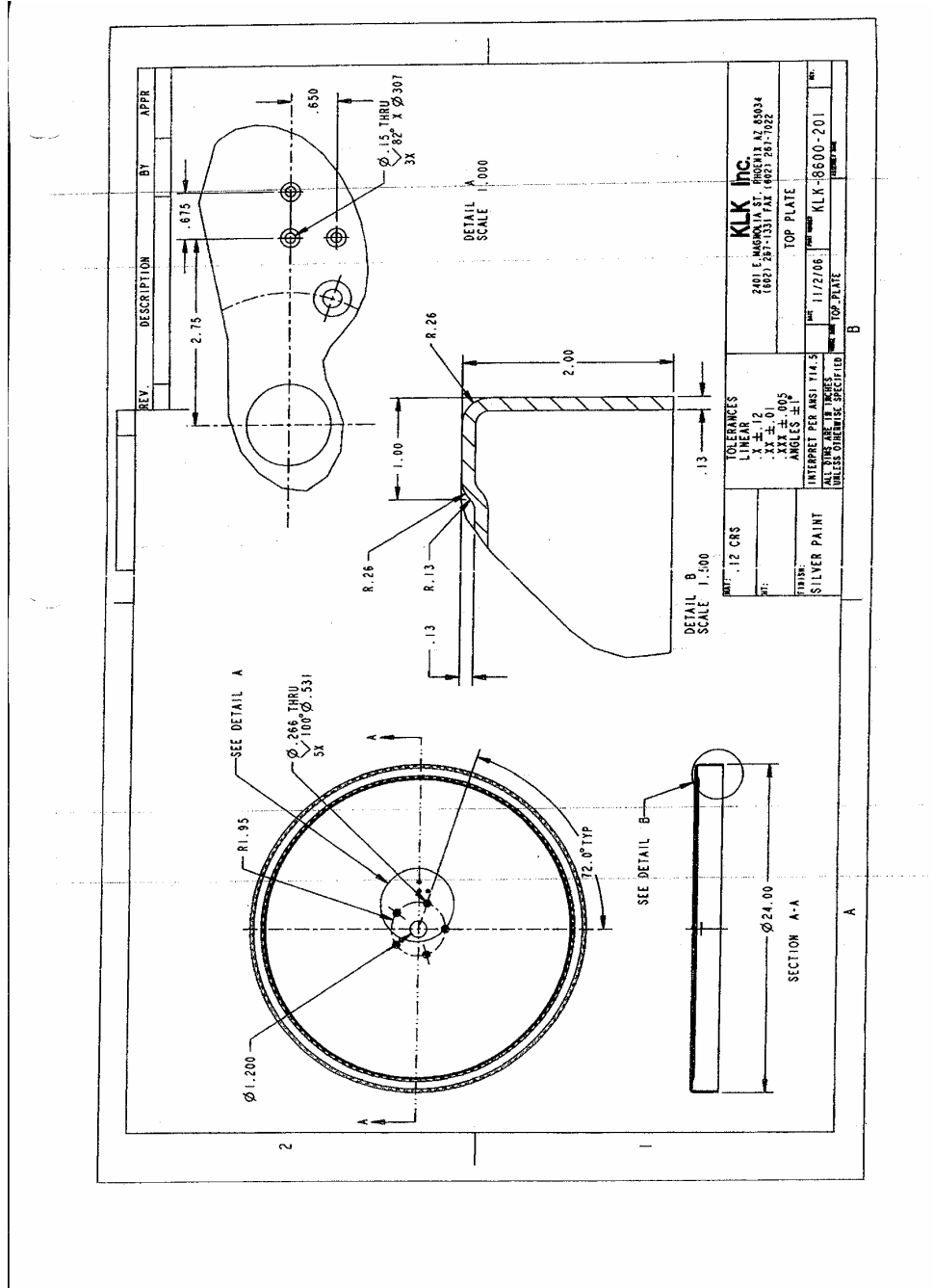


## Korebalance – Full Assembly



- 100 – Base Plate
- 200 – Top Plate and Pivot Ball
- 301 – Bladder and Foam Ring
- 400 – Vertical Section
- 500 – Integrated Computer

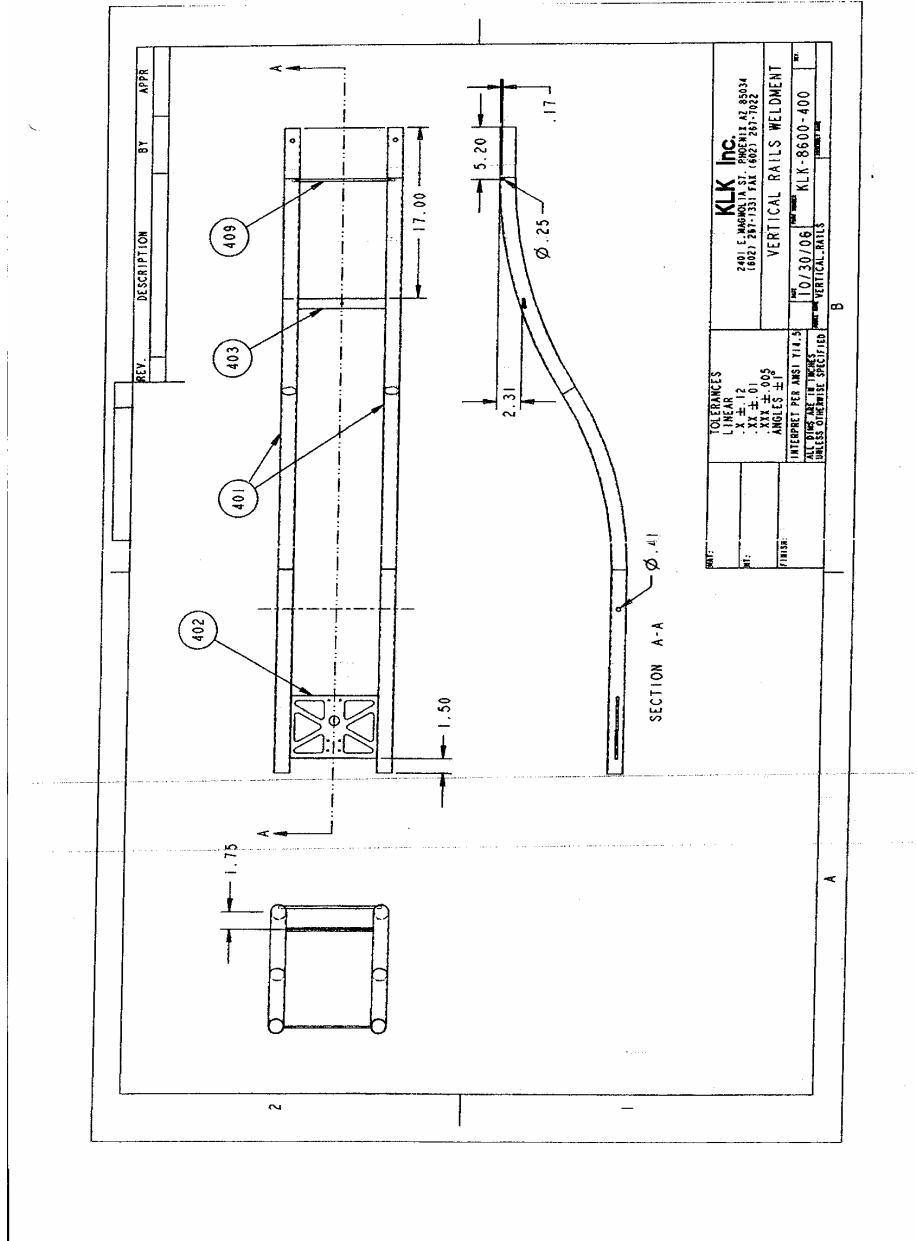
## Korebalance - Top Plate



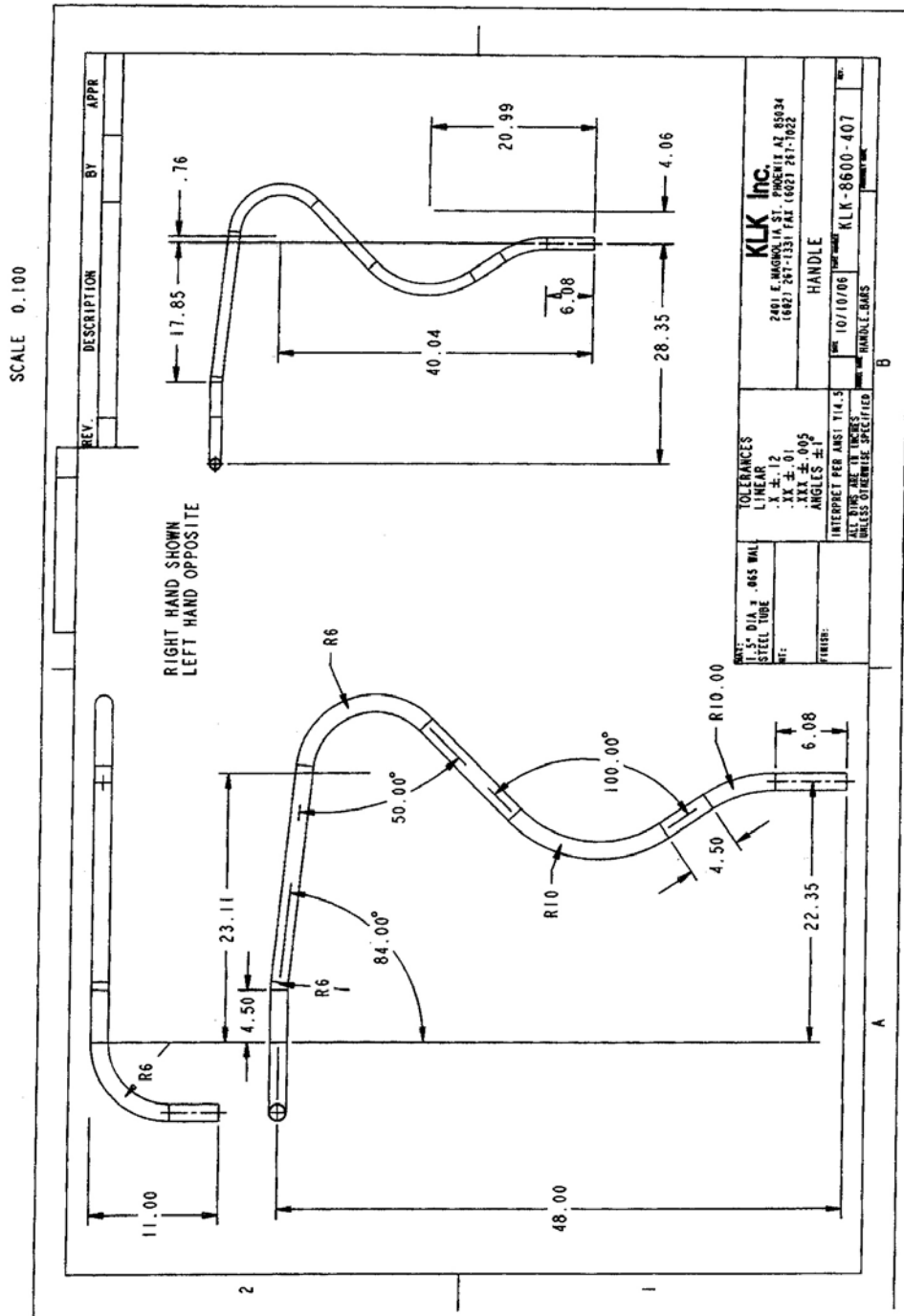




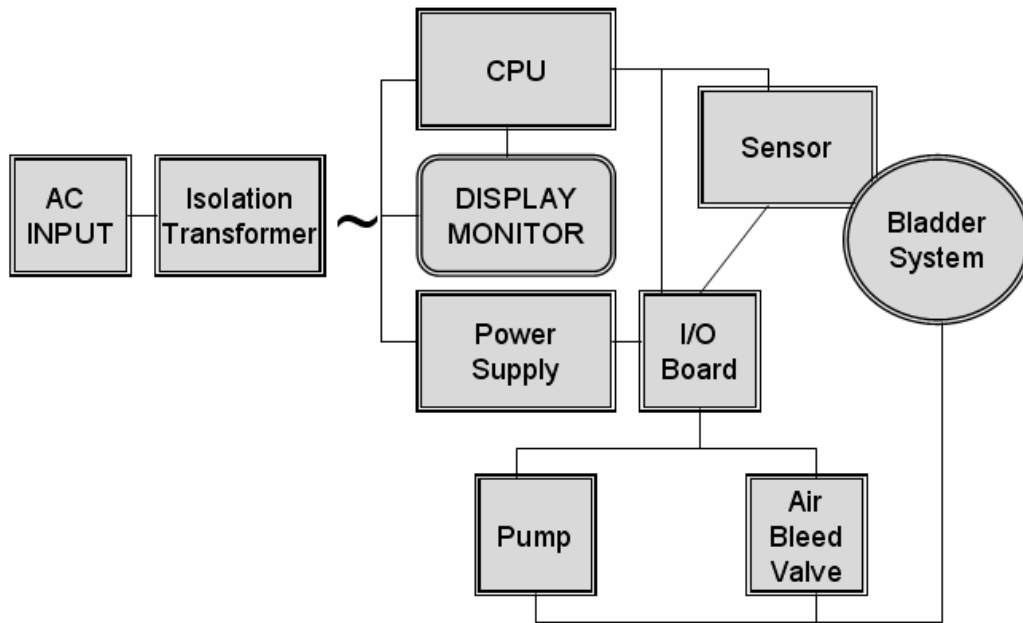
## Korebalance – Vertical Rails Weldment



## Korebalance – Hand Rails (Medical)

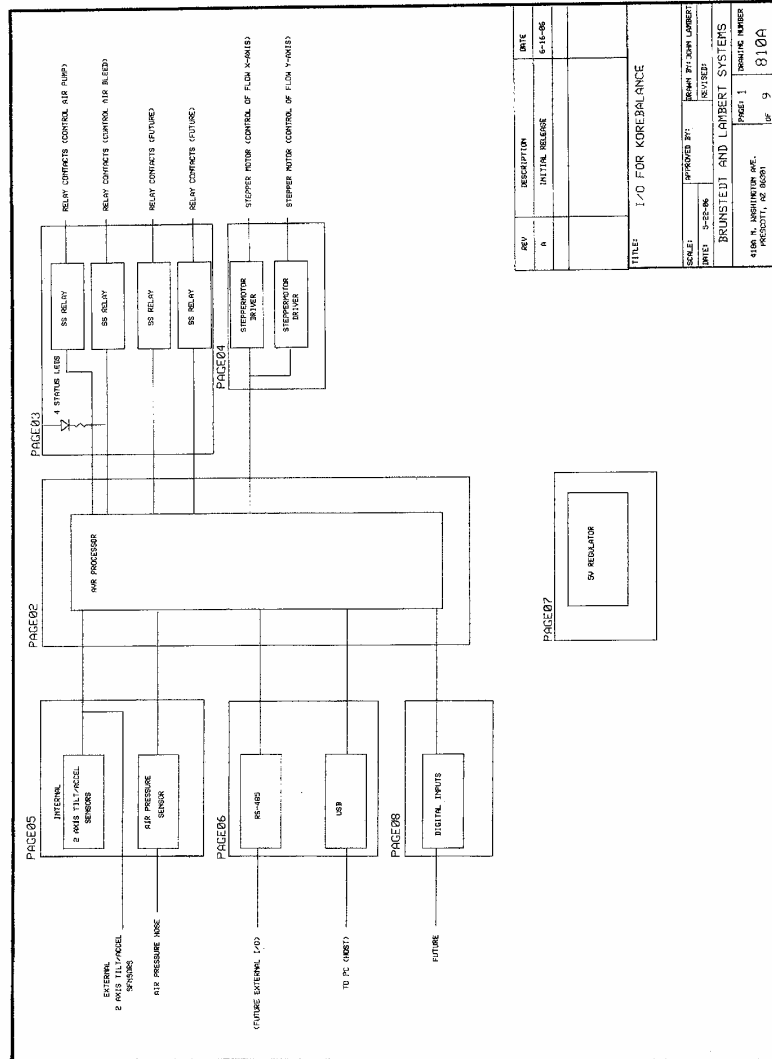


## BLOCK DIAGRAM SYSTEM FOR KOREBALANCE

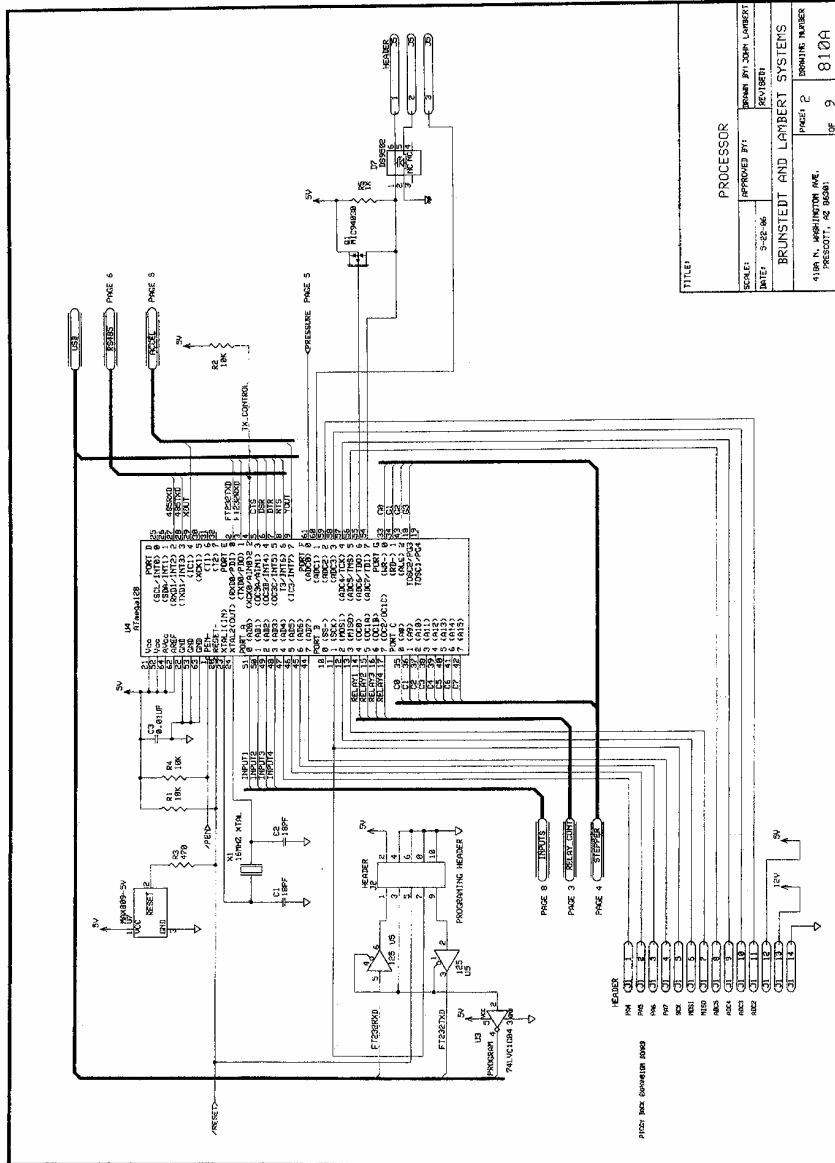




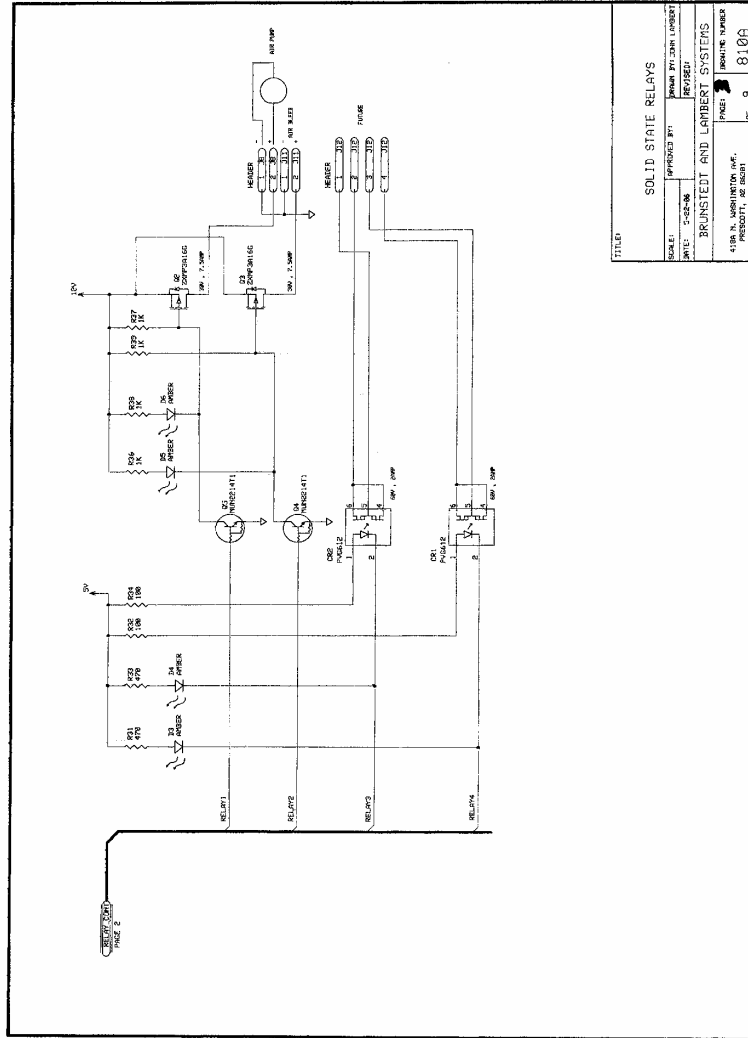
## Korebalance – Inputs and Outputs



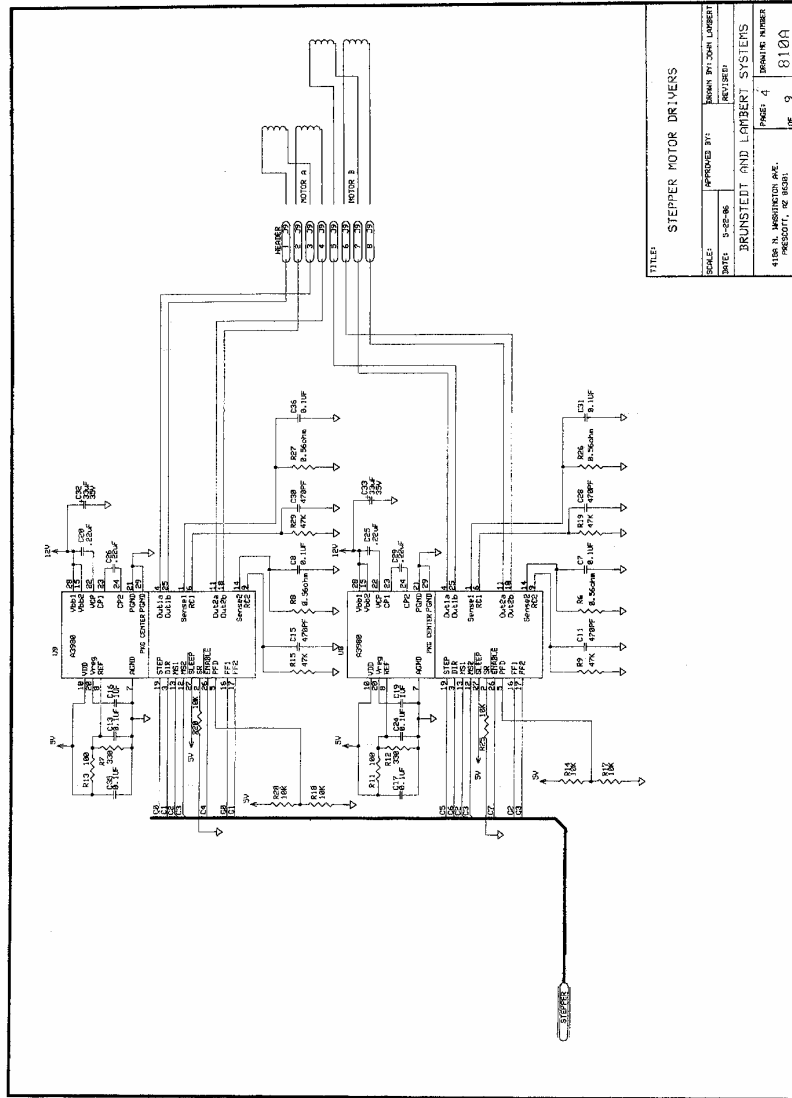
## Korebalance – PROCESSOR



## Korebalance – Solid State Relays



## Korebalance – STEPPER MOTOR DRIVERS



TITLE: STEPPER MOTOR DRIVERS	
SCALE: 1:1	APPROVED BY: MARK BY JOHN LAMBERT
DATE: 1-20-06	REVISED:
DRAWN BY: BRUNSTEIT AND LAMBERT SYSTEMS	
4100 N. HANSONWAY, AVE. PRESCOTT, AZ 86301	
PAGE: 4	REVISION NUMBER: 810A
OF: 9	

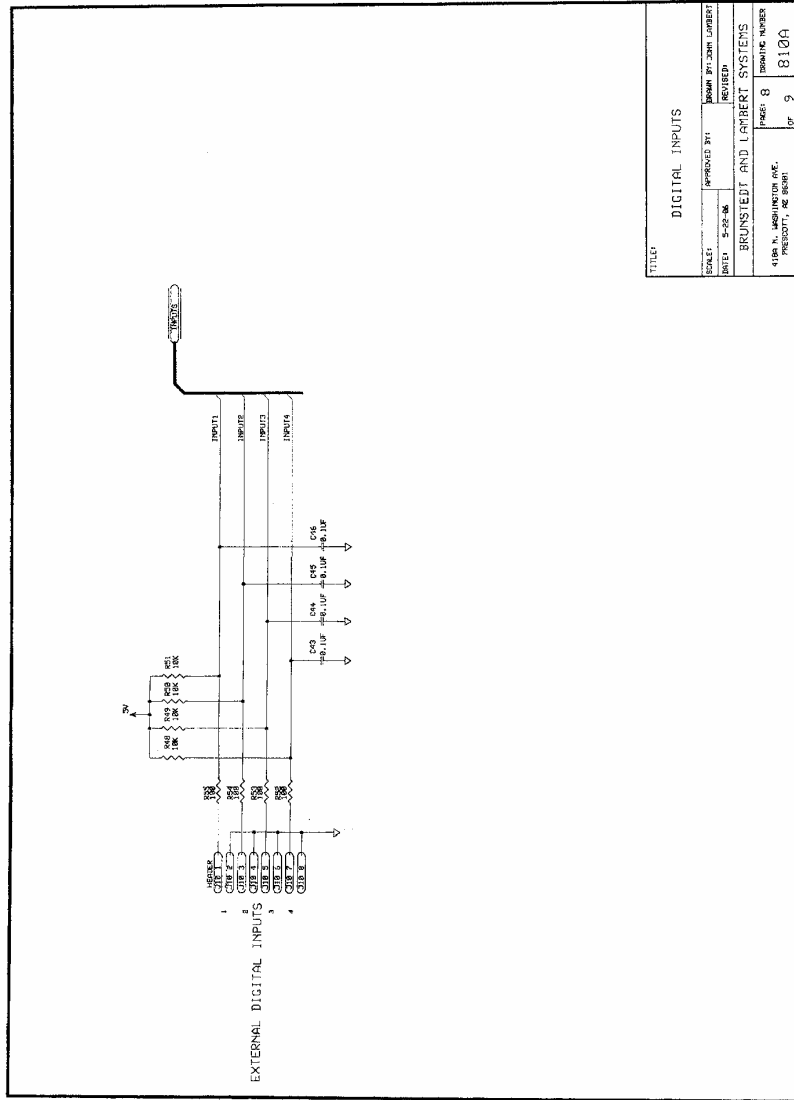








## Korebalance – DIGITAL INPUTS



TITLE: DIGITAL INPUTS	
DESIGNED BY: JAMES W. ZIMM, LABBERT	DATE: 5-22-06
APPROVED BY: [Signature]	REVISION: [Blank]
BRUNSTEDT AND LABBERT SYSTEMS	
1450 S. UNIVERSITY AVE. BRUNSTEDT, MN 55901	ISSUING NUMBER: 8104
PAGE: 8	OF 9



## PERIODIC MAINTENANCE

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Performing a few simple preventative maintenance procedures will extend the life of your Korebalance and reduce the overall cost of ownership.

### Preventive Maintenance

Annually, the entire Korebalance product should be checked to ensure all fasteners, stand-offs, and parts are in place and secure. Should the anti-slip pad become worn or detached, order new parts from SportKAT (see Parts List, page 27 for part numbers).

### Cleaning

The Korebalance is essentially maintenance-free. The plastic housing and cables can be disinfected with common disinfectants.



# TROUBLESHOOTING

## Frequently Asked Questions

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### **1. The Korebalance™ is not working**

- *Ensure that the power cord is properly connected to the power inlet*
- *Ensure that the On/Off (I/O) switch is turned to the “ON” (“I”) position*
- *Make sure that the power cable for the monitor is connected to the power inlet and to the back of the monitor*

### **2. The platform is tilted when no one is standing on it.**

- This means that the Bladder has shifted in shipment. It can be fixed by removing the Base Cover, reducing the Stability Pressure to “zero,” and repositioning, by hand, the bladder under the top platform.

### **3. The Top Plate (the disk on which the patient stands) is rubbing the Base Cover.**

- The Base Cover is not properly positioned; make sure the Base Cover is over the metal plate all the way around the base.

### **4. The floor is not level, so the Korebalance is a somewhat wobbly.**

- The Korebalance was designed to accommodate uneven floors. On the under side of the base plate, there are eight (8) leveling feet that can be adjusted to provide better support and improve stability.

### **5. The touchscreen is dirty and needs to be cleaned, what should I use to properly clean the touchscreen?**

- The Korebalance uses an industry standard acoustic touchscreen for the User Interface. This surface can be cleaned with any computer screen cleaner.

### **6. We need to relocate the Korebalance to another area, what needs to be done?**

- First, turn the Korebalance “OFF” (“O”) and unplug the power cord from the wall outlet.
- Second, the Korebalance was designed to offer easy movement from one location to another by incorporating two (2) small caster (wheels) to the base plate. These wheels allow the user to tilt the Korebalance back, find the balance point, and easily move the Korebalance from one location to another.
- Upon arrival at the new location, ensure that the leveling feet are properly positioned to optimize the stability of the system.

Part No.	Part Description
KB-114	Base Plate Leveling Feet
KB-207	Neoprene Cover for Disc
KB-203	Pivot Ball
KB-205	Pivot Ball – Upper Socket
KB-211	Pivot Ball – Cup retainer
KB-211	Pivot Ball – Delrin® Insert
KB-300	Bladder Assembly
KB-301	Foam Ring
KB-411	Thumb Screw (knob)
KB-415	Medical Handrail
KB-601	Computer System
KB-602	Touchscreen Monitor
KB-701	Pump
	Delrin is a registered trademark of E. I. du Pont de Nemours & Company

Inv No.	Description	List Price
	MAINTENANCE AGREEMENT (3yr parts only)	\$ 3,750.00
	The following “On Site” Training and Service are available in the <b>United States only</b> . For all other countries, please contact SportKAT for additional information.	
40550	Korebalance Installation and Initial Training	\$ 1,500.00
53100	Training-re-training with staff	\$ 3,000.00
68560	Training-medical coding with outside consultant	\$ 750.00
53105	Service call (Minimum 4 hours-west coast location) (Minimum 8 hours for east coast )	\$65 per hour

Returned Goods

(a) SportKAT will not accept goods for credit unless such return has been authorized by the SportKAT CEO, and the goods are received by SportKAT in stock condition, with original packaging. SportKAT retains the right at its sole discretion whether to accept the return of the goods.

(b) All items returned to the vendor by prearrangement will be subject to a 25% restocking charge, providing the goods are in original stock condition. Any downward variation of this restocking charge shall be at the sole discretion of SportKAT, LLC.

(c) No credit shall be allowed for goods until they have been received complete and pass complete Quality Control Inspection.



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