
MCKELOR™
TECHNOLOGIES, LTD.



1800™

1850™

PHOENIX™
KNBB CPM

www.mckelortech.com

Operators Manual

keeping CPM simple...
MCKELOR™
TECHNOLOGIES, LTD.

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Table of Contents

Page 1	Table of Contents
Page 2	Introduction
Page 3	Safety Precautions
Page 4	Unpacking the Device Features
Page 5	SET UP (Step by Step) Attaching the Softgoods (Pads)
Page 6	SET UP Continued Adjusting the Leg Cradle
Page 7	Operating the Phoenix Knee CPM Turning the unit Off/On Operating the Phoenix 1800 Control Pendant
Page 8	Operating the Phoenix 1850 Control Pendant
Page 9	Changing the Foot Cradle for Pediatrics or Short Legs
Page 10	CARE & MAINTENANCE
Page 11	Care and Cleaning of the Phoenix CPM
Page 12	A Simple Procedure to Clear the Carbon from the Phoenix Motor
Page 13	Calibration & Pause Procedure (Phoenix 1800)
Page 14	Calibration & Pause Procedure (Phoenix 1850)
Page 15	Parts List and Ordering Information
Page 16	Packing Instructions
Page 17	Product Specifications
Page 18	Warranty Information
Page 1	

Lifts and Bends



Comfortable Accurate Motion

Axis to Axis Motion provides tracking of the leg through a full range of motion.

The unique motion no longer pushes from the foot. The Phoenix lifts the leg at the thigh and bends the knee from the calf. This motion reduces load to the knee and provides greater comfort for the patient.

Congratulations on your purchase of the **Phoenix™ Knee CPM by McKel™ Technologies**. The Phoenix™ Knee is designed to provide years of reliable use in both the hospital and home environment. The Phoenix™ is used for the rehabilitation of the injured or post operative knee and provides both flexion and extension. No longer using motion that pushes from the foot, the Phoenix™ lifts from the thigh while bending the knee from the calf. This method of motion results in greater comfort for the patient, while providing an accurate range of motion. The easy to use hand-held controller and adjustable leg cradle allow the physician or therapist the ability to customize therapy programs that meet the needs of the individual patient.

Read Before Adjusting or Operating Unit

It is recommended that all clinicians and support personnel responsible for the proper operation of the Phoenix Knee CPM become thoroughly familiar with its capabilities and proper operating procedures prior to actual patient use. Skill at setting up the Phoenix™ Knee will come with experience and practice.

SAFETY PRECAUTIONS

1. Read and understand all instructions.
2. Follow all warnings and instructions marked on the product.
3. Never install the wall transformer in wet locations.
4. Never touch any exposed or uninsulated wires or terminals unless the transformer has been unplugged.
5. Unplug this product from the wall outlet before cleaning. Do not use liquid or aerosol cleaners. Use only a damp cloth.
6. Do not use this product near water.
7. This product should be operated only from the type of power source indicated on the label.
8. Do not allow anything to rest on the power cord. Do not place the power cord in a location where a person may trip, abuse or move equipment over or near it.
9. Do not over load or use extension cords as this may result in the risk of fire or electric shock.
10. *If at any time during the therapy the patient experiences extreme pain or discomfort, stop therapy and consult their physician.*
11. Unplug the unit from the wall outlet and refer servicing to qualified personnel under the following conditions:

- If the power cord is damaged
- If liquid is spilled into the product
- If the unit is exposed to rain or water
- If the unit has been dropped or the casing has been damaged
- If a change in performance is noted
- If the unit does not operate normally by following the operating instructions

12. Adjust only the controls that are covered by the operating instructions.

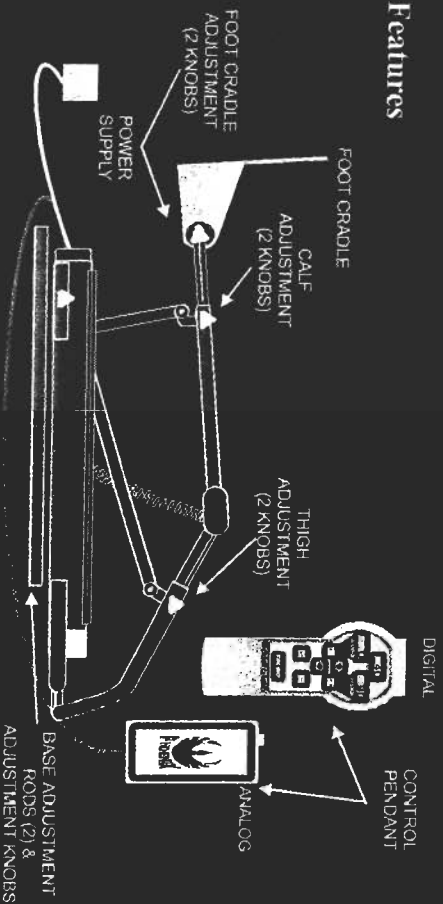
UNPACKING THE DEVICE

Before unpacking, check the carton for damage. Report any substantial damage to the shipper. *Save the packaging, it provides all the protection that is required under warranty, if the unit is ever returned for servicing.*

Contents of the container

1. CPM Cradle Assembly with control pendant
 2. Foot Cradle Assembly
 3. 1 Set of Softgoods (Pads)
 4. Instruction Manual
 5. 2 Adjustment Rods
- Remove the Phoenix™ Knee CPM assembly from the box.
 - Remove the Foot Cradle Assembly.
 - Slide the two tubes of the Foot Cradle into the two tubes of the calf section of the CPM. Secure by tightening the two knobs.
 - Plug the transformer into a standard wall outlet.

Features



SET UP (STEP BY STEP)

Attaching the Softgoods (Pads)

Secure the calf and thigh pads to the calf and thigh sections of the CPM using the Velero™ straps.

Note: The thigh and calf pads form a trough that allows you to align the knee axis with the knee axis of the CPM.

Foot Piece

Slide the pocket of the foot piece over the end of the foot assembly and secure to the Velero™.



Straps may be used to secure the thigh or calf.

Softgoods (Pads) are intended for single patient use only. The pads may be cleaned by hand using a mild detergent and warm water.

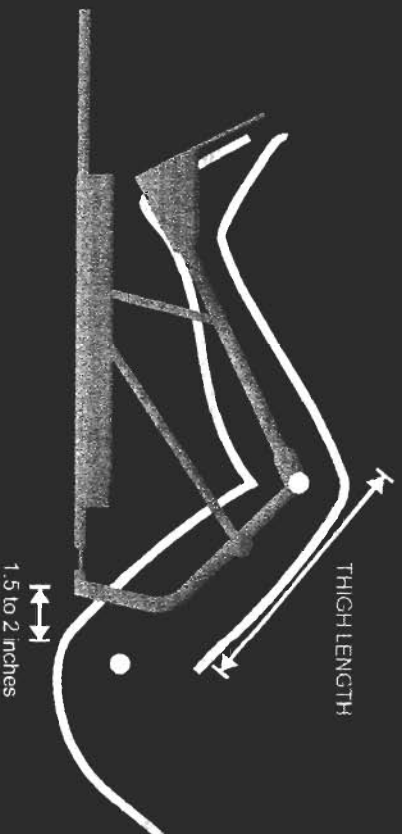
Velero is a trademark of Velero USA

SET UP (Continued)

Adjusting the Leg Cradle

Correct measurement and adjustments to the Leg Cradle are essential to assuring patient comfort and proper range of motion.

- Step 1** Adjusting the Thigh Cradle - Measure the distance from the greater trochanter to the femoral condyle. Adjust the thigh cradle by loosening the adjustment knobs, sliding the thigh cradle to the proper length and securing the two knobs. *Using your measurement, adjust the length of the thigh cradle by placing the tape measure about 2 to inches from the hip pivot assembly and measuring to the knee pivot.*
- Step 2** Position the CPM so that the hip assembly is 1.5 to 2 inches from the patient's buttocks. The knee axis should align with the axis of the knee pivot assembly.
- Step 3** Adjusting the Calf Cradle - Adjust the calf cradle by moving the foot plate so that it meets the sole of the foot. To adjust the calf cradle loosen the adjustment knobs and slide the foot assembly to the proper length and secure the two knobs. *It is not necessary to have the sole of the foot pressing against the foot plate. Leave a fingers width (1/2 inch) between the sole of the foot and the foot plate.*
- Step 4** Adjusting the Foot Plate Angle - The foot assembly can be adjusted to patient comfort. Loosen the adjustment knobs, position the foot and secure the knobs.



Turning the unit ON/OFF

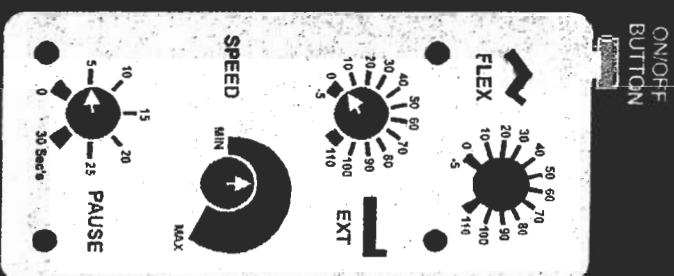
The ON/OFF switch is located at the base of the black control box. When the unit is turned ON it will beep 3 times.

The Control Pendant

The control pendant consists of four (4) control knobs:

- Flexion:** 10° to 110°
- Extension:** -5° to 95°
- Speed:** - 1° to 3° per second
- Pause:** - 0 to 30 seconds

The ON/OFF button, located at the top of the control pendant, allows the patient the ability to turn the unit off if he or she experiences any unusual pain or discomfort. When the unit is turned back on, it reverses direction.



1. Set FLEXION/EXTENSION angles by turning the control knobs to the desired angles.

NOTE: A 15 degree difference between FLEX/EXT settings is required for normal operation.

2. Set Speed and Pause.
3. Press the RED Start/Stop button at the top of Pendant.
4. Close Pendant cover and secure with the Velcro™ strap.

WARNING: Make sure your angle settings are greater than 15 degrees between FLEX/EXT knobs. The unit will stop and you will hear a beeping noise if the FLEX/EXT angles overlap.

Operating the Phoenix™ 1850™ Control Pendant

Turning the unit ON/OFF

The ON/OFF switch is located at the base of the black control box. When the unit is turned ON you will here a single audible beep.

The Pendant allows you to control the following functions:

- Flexion:** 10° to 110°
- Extension:** -5° to 95°
- Speed:** - 1° to 3° per second
- Pause:** - 0 to 30 seconds

The **RED STOP/START** button located at the bottom of the control pendant display allows the patient the ability to stop the unit if he or she experiences any unusual pain or discomfort. When the unit is restarted it will reverse direction.

TO SET: EXTENSION **EXT**, FLEXION **FLX**, SPEED **SPD** OR PAUSE **PAUSE** depress the appropriate button and simultaneously depress the UP **UP** or DOWN **DOWN** button to increase or decrease settings

HOW TO LOCK IN SETTING

START/STOP Stop the unit and enter desired changes, then depress the START/STOP button. New settings are now locked.

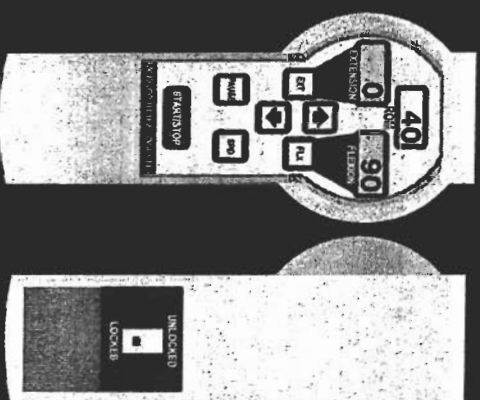
PATIENT COMPLIANCE METER: Patient compliance can be monitored through the pendant by simultaneously pressing the Flexion **FLX** and Speed **SPD** buttons. The meter keeps track in tenth of an hour readings.

Example: 25.4 = (25 hours & 24 minutes)

*To clear the compliance meter for a new patient simply depress the Extend, Flex, Speed and Pause buttons simultaneously.

Patient LOCK OUT Switch:

To lock the patient out of the controls remove the plate located on the back and slide the switch to the "locked" position. Attempting to modify settings in the locked position will cause the display to read "LOC". To make setting changes simply move the switch to the "unlocked" position.



Changing the Foot Cradle for Pediatrics or Short Legs

Remove the FOOT CRADLE.

Step #1

Foot Plate

Loosen the 2 ADJUSTMENT KNOBS,
(Do Not Remove the Adjustment Knobs)

Adjustment Knob (2)



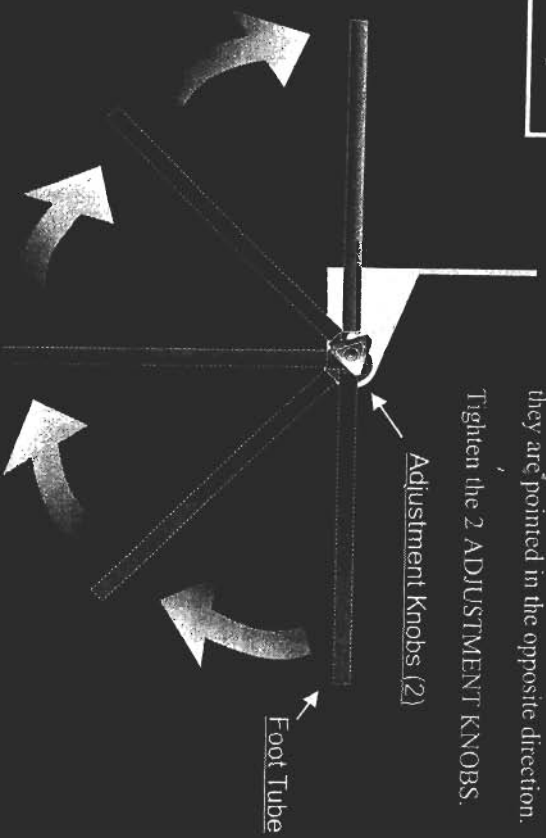
Foot Tube (2)

Step #2

Rotate the both FOOT TUBES 180° so that
they are pointed in the opposite direction.

Tighten the 2 ADJUSTMENT KNOBS.

Adjustment Knobs (2)



Step #3

After both FOOT TUBES are rotated in the
opposite direction, slide the FOOT CRADLE back
into the CPM device and secure.



Side View

Note: When unpacking the Phoenix
the Foot Cradle is in the pediatric position

Care & Maintenance

Care and Cleaning of the Phoenix™ CPM

A Simple Procedure to Clear the Carbon from the
Phoenix™ Motor

Calibration & Pause Procedure (Phoenix™ 1800™)

Calibration & Pause Procedure (Phoenix™ 1850™)

Parts List and Ordering Information

Packing Instructions