



**Beam Type  
Portable Chair Scale  
Models 475/4751  
Owner's Manual**



## INTRODUCTION

The Detecto Model 475/4751 Beam Type Portable Chair Scale is ideal for use in hospitals, clinics, and medical practices for weight measurement of disabled patients, dialysis patients, and elderly patients. The scale is durable, having a heavy-duty understructure that is designed for optimal strength and patient safety. The Model 475/4751 scales are conveniently portable with built-in rear wheels and transport handles, so they may be moved to wherever your weighing needs are located. Lift-away armrests on both sides of the scale allow patients to access the chair laterally from either direction, and the fold-up footrest provides additional patient support while weighing and retracts when not in use.

This manual is provided to guide you through the assembly and operation of your scale. Please read it thoroughly before attempting to assemble or operate your scale and keep it available for future reference.

This manual is for use with the following Beam Type Portable Chair Scale models:

475 and 4751

	<b>WARNING! This scale is NOT intended for patient transport. It is to be used ONLY for patient weighing. Failure to observe this warning may result in serious injury to the patient and/or the scale operator.</b>	
---	--	---

## COPYRIGHT

All rights reserved. Reproduction or use, without expressed written permission, of editorial or pictorial content, in any manner, is prohibited. No patent liability is assumed concerning the use of the information contained herein.

## DISCLAIMER

While every precaution has been taken in the preparation of this manual, the Seller assumes no responsibility for errors or omissions. Neither is any liability assumed for damages resulting from the use of the information contained herein. All instructions and diagrams have been checked for accuracy and ease of application; however, success and safety in working with tools depend to a great extent upon individual accuracy, skill, and caution. For this reason, the Seller is not able to guarantee the result of any procedure contained herein. Nor can they assume responsibility for any damage to property or injury to persons occasioned from the procedures. Persons engaging in the procedures do so entirely at their own risk.

## SPECIFICATIONS

Capacity (475) .....	450 lb x 4 oz
Capacity (4751) .....	440 lb X 4 oz / 200 kg X 100 g
Shipping Weight .....	78 lb (35.3 kg)
Scale Dimensions .....	40.88 in H x 22.5 in W x 34.0 in D (103.8 cm H x 57.2 cm W x 86.4 cm D)

# UNPACKING INSTRUCTIONS

Remove the scale from its packing and inspect it for signs of shipping damage, such as exterior dents and scratches. *Keep and use the original carton and packing material for return shipment if it should become necessary.* Note that it is the responsibility of the purchaser to file all claims for any damage or loss incurred during transit.



## SCALE SETUP

The Detecto Model 475/4751 Beam Type Portable Chair Scale comes fully assembled from the factory, and only requires removing the straps between the base and platform, a shipping cable tie on the underside of the scale, and a shipping plug installed under the weigh beam headpiece to ensure the shelf lever assembly stays aligned before using the scale.

1. Set the scale in an area free from traffic and obstructions, and then remove the straps between the base and platform.
2. Turn the scale over and remove and discard the shipping cable tie on the underside of the scale base as shown in Figure 1.

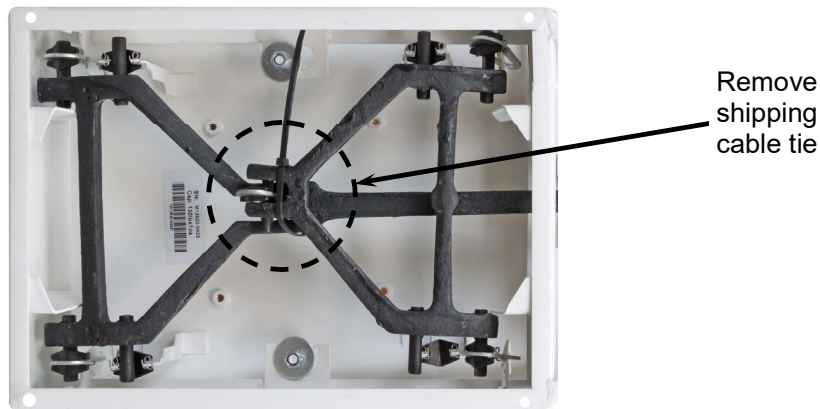


Figure 1. – Turn scale over to access bottom of the scale base

3. Turn the scale back upright and slightly tip it to one side. Locate and remove the shipping linkage alignment plug, and then visually ensure that the shelf lever assembly linkage is centered and properly aligned. The linkage must be free-floating for the scale to weigh properly. **NOTE:** The linkage can be seen by looking up underneath the weigh beam headpiece while the scale is slightly tipped to one side.



Figure 2. - View of linkage underneath weigh beam headpiece

## BALANCING THE SCALE

After removing the shipping cable tie on the underside of the scale, and the shipping plug that is installed under the weigh beam headpiece, the scale must be balanced before using it.

1. Ensure the scale is sitting on a level surface, and slide both the small and large poise to zero (far-left position on the weigh beam).
2. Gently hold the beam pointer with your finger so it is centered within the trig loop area. Release the beam pointer and let it rise freely up or down.
3. If the beam pointer doesn't remain centered, turn the balance screw (shown in Figure 3) to the right or left using a flathead screwdriver until the beam pointer remains centered within the trig loop.

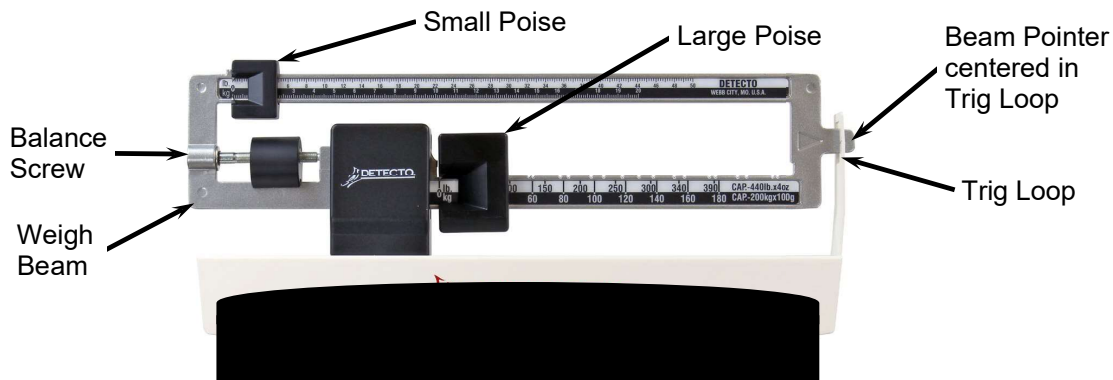


Figure 3 - View showing components for balancing scale before normal operation.

## OPERATION



**ALWAYS** assist the patient onto the scale chair. **NEVER** leave a patient unattended while they are on the scale chair. Failure to maintain control of the patient at all times can result in serious injury to the patient and/or you.

1. Place the chair scale on any hard, level, flat surface, or low-cut carpet.
2. Move both poise to the Zero position. Be sure the Beam Pointer is in the center of the opening in the Trig Loop. Refer to Figure 3.
3. Slide the Large Poise to the approximate patient weight. For example, if the patient weighs approximately 125 pounds, slide the Large Poise to 100 pounds.
4. Raise the armrests and footrest if needed, and then assist the patient in a sitting position. Lower the armrests (for patient comfort during weighing). Lower the footrest and have the patient place their feet on the footrest before weighing.

**IMPORTANT! The patient's feet must be on the footrest during weighing operation.**

5. With the patient on the scale, slide the Small Poise to 20 pounds.
6. Continue sliding the Small Poise until the Beam Pointer is centered in Trig Loop opening.
7. Read the Small Poise at the pointer and add to the 100 pounds from the Large Poise. For example, if the pointer is at 23 pounds, the patient weighs 123 pounds.
8. Raise the armrests and footrest out of the way, and then assist the patient out of the chair.



**IMPORTANT!**  
**ALWAYS** lower the footrest after the patient is seated.  
**ALWAYS** raise the footrest before the patient stands up.  
**NEVER STAND UPRIGHT ON THE FOOTREST!**



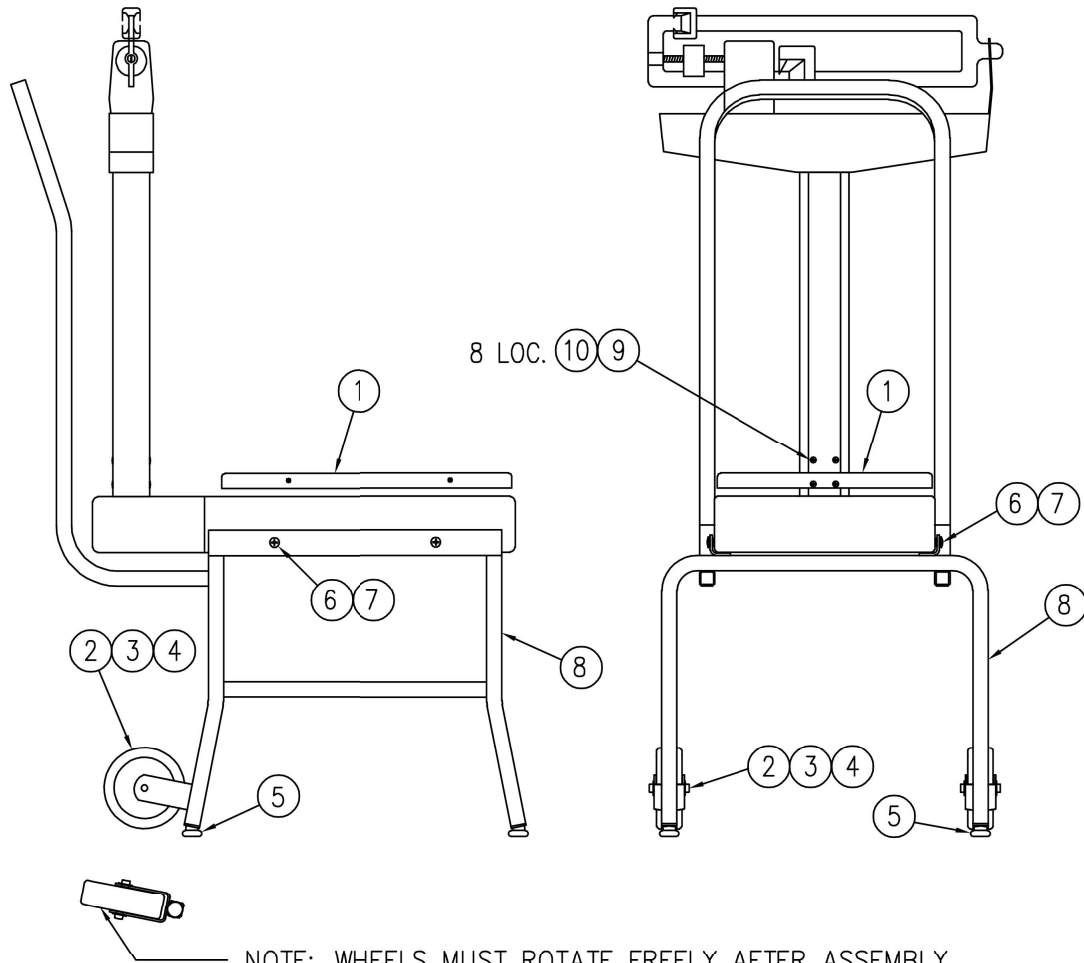
## TROUBLESHOOTING

The Detecto Model 475/4751 Beam Type Portable Chair Scale is factory-calibrated to within plus or minus 1/4 pound (0.1 kg) accuracy. For the most accurate readings, always use the scale on a hard, level surface and stand in the center of the scale platform with the weight evenly distributed. If an error occurs or seems excessive, check the following:

Problem	Possible Solution
Zero balance out of adjustment	<ul style="list-style-type: none"><li>The weighing beam must be balanced so the beam pointer comes to rest in the center of the trig loop when both the small and large poise is set at zero (far-left position). Refer to Figure 3 and BALANCING THE SCALE instructions.</li></ul>
Beam does not move freely	<ul style="list-style-type: none"><li>Make sure the beam pointer is not touching the side of the trig loop, impeding its range of travel.</li><li>Visually ensure that the linkage is centered and properly aligned. Occasionally during shipping, the alignment will become skewed. The linkage must be free-floating for the scale to weigh properly. If the scale is slightly tipped to one side, the linkage can be seen by looking up under the weigh beam headpiece.</li></ul>
Scale rocks excessively	<ul style="list-style-type: none"><li>Ensure the scale is sitting on a level surface. When you push down on any corner of the platform, you should not feel any significant rocking.</li></ul>
Beam does not move at all during weighing	<ul style="list-style-type: none"><li>Small and large poise is set higher than the person's actual weight. Reset both poise to a lower or zero weight.</li></ul>
The scale is out of calibration	<ul style="list-style-type: none"><li>Recalibrate the scale by placing a known weight on the scale, adjusting the poise to the weight, and turning the balance screw until the pointer remains centered within the trig loop.</li></ul>

## REPLACEMENT PART IDENTIFICATION

### BASE AND FRAME SUPPORT ASSEMBLY (0033-0565-0A)



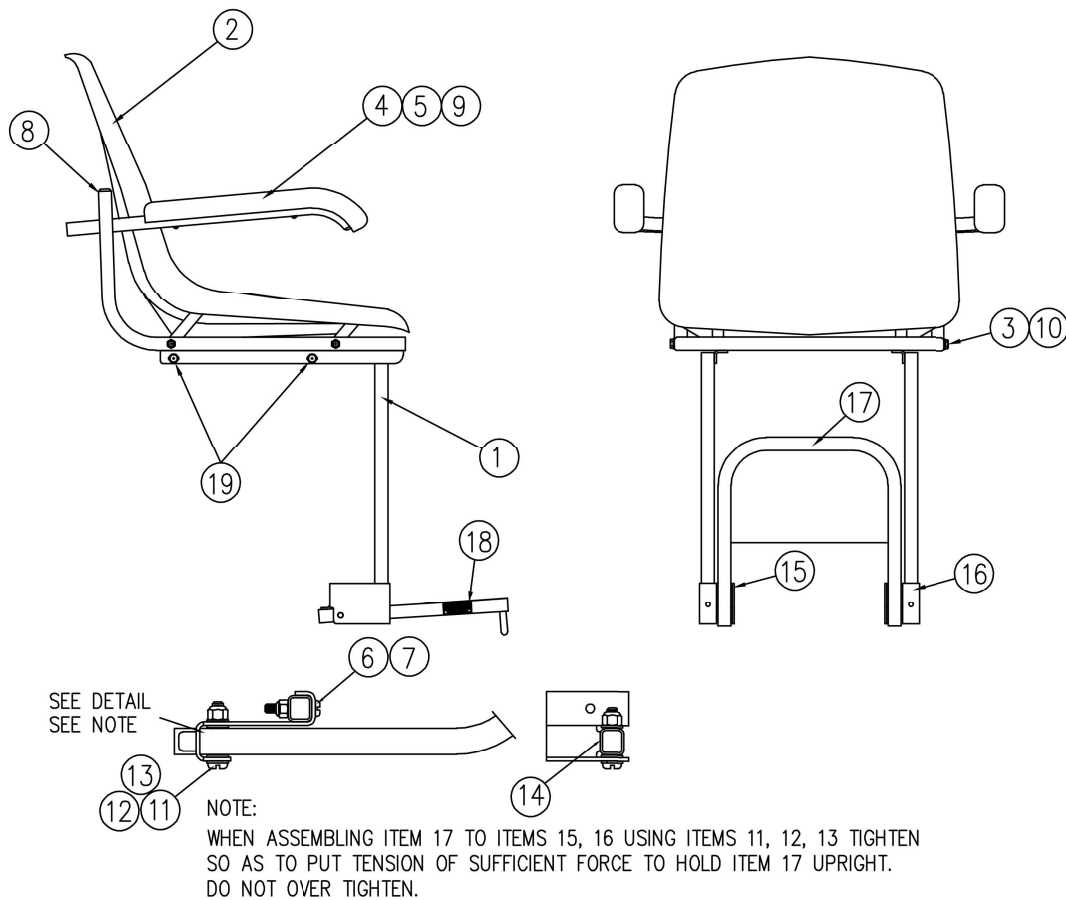
Item	Qty.	Part Number	Description
1	1	0033-0528-0A	440LB SHORT COLUMN MECHANICAL SCALE
2	2	574R918	WHEEL, 4-INCH DIAMETER
3	2	3P2184	SHAFT
4	4	399R1048	PUSH NUT, 5/16 INCH
5	4	3P9190	GLIDE, 3/4 INCH
6	4	6021-1427	PHILIP HEAD SCREW, 1/4-20 X 3/4 INCH
7	A.R.	6024-0003	LOCTITE 242, REMOVABLE, BLUE
8	1	0033-0560-0A	BASE STAND
9	8	*	M5 SCREW, PHILIP DRIVE
10	8	*	M5 LOCK WASHER

A.R. (AS REQUIRED)

\* PART COMES WITH ITEM 1 IN HARDWARE BAG

## REPLACEMENT PART IDENTIFICATION, CONT.

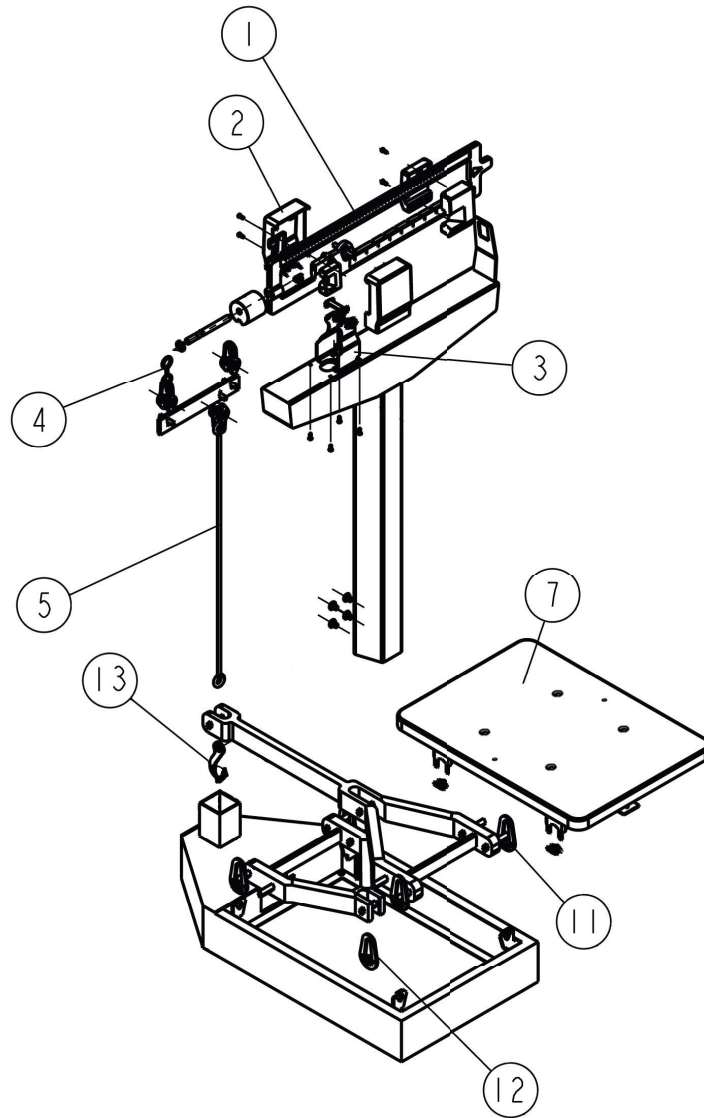
### CHAIR ASSEMBLY (0033-0516-1A)



Item	Qty.	Part Number	Description
1	1	0033-0515-1A	CHAIR WELDMENT
2	1	0033-C178-0A	CHAIR SUB-ASSEMBLY
3	4	6021-1434	SCREW, HEX HEAD, 1/4-20 X 1 1/4 INCH
4	2	6540-0475	HAND REST
5	2	6540-1069	TUBE CAP, 3/4 INCH SQUARE
6	2	391RV204	NUT HEX ELASTIC, 1/4-20 UNC-2B
7	2	6021-1430	SCREW PAN HEAD 1/4-20 UNC-2A X 1 1/2 INCH
8	2	6540-1015	GLIDE, 3/4 INCH X 3/4 INCH
9	4	6021-6475	SCREW, OVAL HEAD, M6 X 1.0 X 30 PHILIP DRIVE Z/P
10	4	6024-0004	WASHER, FLAT 1/4
11	2	6021-1441	SCREW PAN HEAD, 5/16-18 UNC-2A X 1 3/4 PHILIP DRV
12	8	6024-1044	WASHER, FLAT 5/16 NYLON .06 THICK
13	2	6013-0410	NUT ELASTIC STOP, 5/16-18 UNC-2B
14	2	6540-1144	SAFETY MAT, CUT OUT 1/2 INCH SQUARE
15	1	0033-B341-18	HINGE BRACKET, LEFT HAND
16	1	0033-B341-28	HINGE BRACKET, RIGHT HAND
17	1	0033-C343-0A	FOOTREST TUBE ASSEMBLY
18	2	203R908	LABEL, CAUTION
19	4	6021-0002	SCREW, HEX/WASHER, #12 X 3/4 INCH

# REPLACEMENT PART IDENTIFICATION, CONT.

## MECHANICAL SHORT COLUMN SCALE ASSEMBLY (0033-0528-0A)



Item	Qty.	Part Number	Description
1	1	0033-0536-0A	BEAM ASSY, MODEL 475, 450 LB X 4 OZ
	1	0033-0535-0A	BEAM ASSY, MODEL 4751 DUAL READING 440 LB X 4 OZ / 200 KG X 100 G
2	1	0033-0538-08	BEAM YOKE COVER
3	1	0033-0539-0A	BEAM YOKE ASSY
4	1	0033-0540-08	SHELF LEVER HANGER
5	1	0033-0553-0A	DRAFT ROD AND SHELF LEVER SHORT COLUMN
7	1	0033-0544-0A	PLATFORM AND BEARING WITH HOLES
11	1	0033-0547-08	HANGER OUTER
12	1	0033-0548-08	HANGER CENTER
13	1	0033-0549-08	DRAFTROD HOOK

## STATEMENT OF LIMITED WARRANTY

Detecto Scale warrants its equipment to be free from defects in material and workmanship as follows: Detecto warrants to the original purchaser only that it will repair or replace any part of equipment which is defective in material or workmanship for a period of two **(2) years from date of shipment**. Detecto shall be the sole judge of what constitutes a defect.

During the **first ninety (90) days** Detecto may choose to replace the product at no charge to the buyer upon inspection of the returned item.

**After the first ninety (90) days**, upon inspection of the returned item, Detecto will repair or replace it with a remanufactured product. The customer is responsible for paying for the freight both ways.

This warranty does not apply to peripheral equipment not manufactured by Detecto; this equipment will be covered by certain manufacturer's warranty only.

This warranty does not include replacement of expendable or consumable parts. This does not apply to any item which has deteriorated or damaged due to wear, accident, misuse, abuse, improper line voltage, overloading, theft, lightning, fire, water or acts of God, or due to extended storage or exposure while in purchaser's possession. This warranty does not apply to maintenance service. Purchased parts will have a ninety (90) day repair or replacement warranty only.

Detecto may require the suspect product to be returned to the factory; item(s) must be properly packed and shipping charges prepaid. A return authorization number must be obtained for all returns and marked on the outside of all returned packages. Detecto accepts no responsibility for loss or damage in transit.

# STATEMENT OF LIMITED WARRANTY

## Conditions Which Void Limited Warranty

This warranty shall not apply to equipment which:

- A.) Has been tampered with, defaced, mishandled or has had repairs and modifications not authorized by Detecto.
- B.) Has had serial number altered, defaced, or removed.
- C.) Has not been grounded according to Detecto's recommended procedure.

## Freight Carrier Damage

Claims for equipment damaged in transit must be referred to the freight carrier in accordance with freight carrier regulations.

This warranty sets forth the extent of our liability for breach of any warranty or deficiency in connection with the sale or use of the product. Detecto will not be liable for consequential damages of any nature, including but not limited to, loss of profit, delays or expenses, whether based on tort or contract. Detecto reserves the right to incorporate improvements in material and design without notice and is not obligated to incorporate improvements in equipment previously manufactured.

The foregoing is in lieu of all other warranties, express or implied including any warranty that extends beyond the description of the product including any warranty of merchantability or fitness for a particular purpose. This warranty covers only those Detecto products installed in the forty-eight (48) contiguous continental United States.



Ph. (800) 641-2008  
E-mail: [detecto@cardet.com](mailto:detecto@cardet.com)  
203 E. Daugherty  
Webb City, MO 64870

08/27/2014  
Printed in USA  
D268-WARRANTY-DET-A



Cardinal Scale Manufacturing Co.  
102 E. Daugherty, Webb City, MO 64870 USA  
Ph: 417-673-4631 or 1-800-641-2008  
Fax: 417-673-2153

Technical Support: 1-866-254-8261  
E-mail: [tech@cardet.com](mailto:tech@cardet.com)