



## OPERATION MANUAL

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- Note: Please read and understand this Manual before attempting setup or use the Crowd Barrier.
- Note: If you need additional information about your Crowd Barrier, write, email, or telephone SICO America Inc. at the number or address below.
- Note: SICO Crowd Barrier components only function correctly when used with other SICO Crowd Barrier components.
- Note: Always provide the serial number when ordering parts or requesting technical assistance.

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## Safety

### Crowd Barrier Use



**Warning!** *The Crowd Barrier is not a substitute for security personnel. Crowd pressure can create a dangerous pinch point at the barrier vertical panel that can result in serious injury or death. Security personnel must be vigilant and prepared to rescue persons trapped against the barrier vertical panels. Failure to observe this warning can result in serious injury or death!*



**Caution!** *A barrier gate is not capable of withstanding extreme crowd pressure. Barrier gates must be located where there will be no crowd pressure or replaced with a crowd barrier before crowd presence. Failure to observe this warning can result in damage to property or serious injury.*



**Caution!** *Care must be exercised when planning to place an inside angle in the barrier layout. Inside angles create traps that prevent people from escaping extreme crowd pressure. If more than one inside angle is used, it is recommended that at least one four-foot or six-foot barrier be placed between each pair of inside angles.*

### Crowd Barrier Setup



**Warning !** *When unloading or loading the caddy, two persons should work together. Some Crowd Barrier components are very heavy and are difficult to handle. Carefully follow these instructions. Failure to observe this warning can result in serious injury!*



**Caution!** *Always wear safety shoes when moving or setting up Crowd Barrier components. Failure to observe this warning can result in serious injury!*



**Caution!** *Dangerous pinch points develop when placing Crowd Barrier components onto the floor or onto the caddy. Take care to not drop or place components onto feet, hands, or fingers to avoid serious injury.*



**Caution!** *All personnel including temporary workers must read and understand this instruction manual before setting up the Crowd Barrier.*



**Caution!** *Many steps require that two persons work together in the setup. Some Crowd Barrier components are very heavy and are difficult to handle. Carefully follow instructions. Failure to observe this warning can result in serious injury!*



**Caution!** *People using the Crowd Barrier must always observe and comply with warnings and cautions posted on the equipment and in this manual. Failure to observe this warning can result in damage to property or serious injury.*



**Caution!** *See layout recommendations regarding inside angles on page 9.*

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## Crowd Barrier Caddy Use

See instructions on pages 11 to 13 and page 19.



**Caution!** *Only load Crowd Barrier components onto the Crowd Barrier caddy and never create off-center loads which may cause the Crowd Barrier caddy to tip over. Failure to observe this warning can result in serious injury!*



**Caution!** *Avoid moving a loaded caddy on ramps with a greater than a one-foot rise in a 12-foot horizontal distance. On ramps, always have one person at each end of the caddy and always move the caddy with the narrow end in the direction of travel.*



**Caution!** *Never ride on or allow anyone else to ride on the caddy.*

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## Important User Information

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In no event will SICO America Inc. be liable for technical or editorial omissions made herein, nor for direct, indirect, special, incidental, or consequential damages resulting from the use or defect of this manual.

The information in this document is not intended to cover all possible conditions and situations that might occur. The end user must exercise caution and common sense when installing, using, or maintaining SICO America Inc. products. If any questions or problems arise, call SICO America Inc. at 1-952-941-1700.

### Installation

- The SICO Crowd Barrier setup and use must comply with local building regulations and codes.
- All personnel (including all temporary workers) setting up or working with the SICO Crowd Barrier must read and understand this entire manual.



**Caution!**

***Care must be exercised when planning to place an inside angle in the barrier layout. Inside angles create traps that prevent people from escaping extreme crowd pressure. If more than one inside angle is used, it is recommended that at least one four-foot or six-foot barrier be placed between each pair of inside angles.***

### Intended Use

- The Crowd Barrier is intended to be setup and used on level surfaces as described in this manual.
- Crowd Barrier components are not intended to be permanently setup or stored in outdoor weather conditions or in areas with high humidity.
- Crowd Barrier gates are intended to be used to allow easy movement of security personnel through the barrier. It is not intended to be setup and used to allow crowds to pass through. It must be placed where there will be no crowd pressure.
- Crowd Barrier inside angles are not intended to withstand crowd pressure because people can be trapped in the angle and crushed.

### Support

The Crowd Barrier is manufactured by SICO America Inc. If problems arise and information or assistance is needed, contact customer service at one of the addresses or numbers listed below.

**Note:** *Always provide the serial number when ordering parts or requesting technical assistance.*

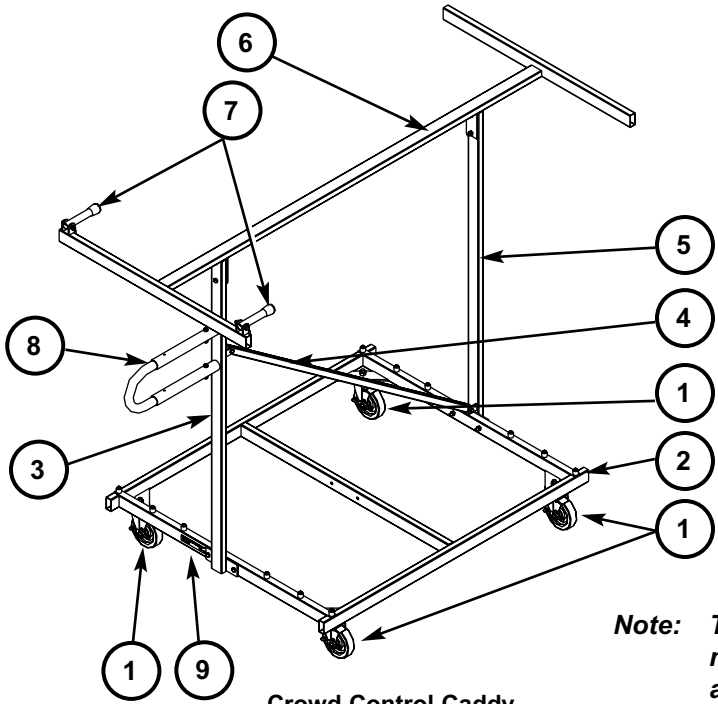
SICO America Inc.  
1725 Cahill Road  
Edina, MN 55439-2745  
1-(952) 941-1700  
www.sicoinc.com

### Tools Required

The Crowd Barrier does not require any tools for setup.

# Crowd Barrier Components

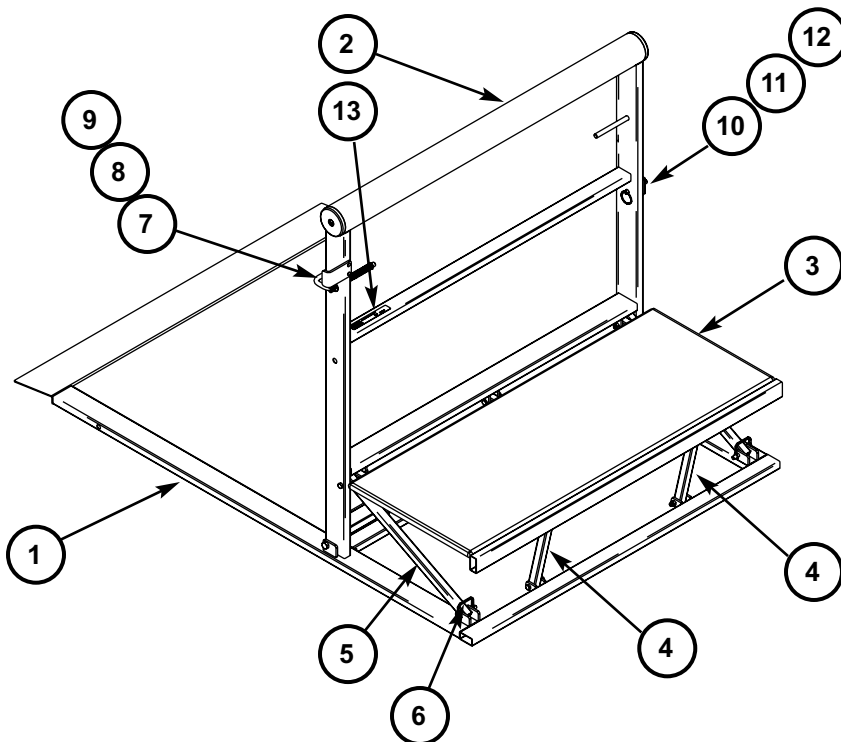
## Crowd Barrier Caddy



- | Item | Description                           |
|------|---------------------------------------|
| 1    | Swiveling Locking Caster              |
| 2    | Barrier Caddy Base                    |
| 3    | Barrier Caddy Front Vertical          |
| 4    | Caddy Diagonal                        |
| 5    | Barrier Caddy Rear Vertical           |
| 6    | Barrier Caddy Top Frame               |
| 7    | Lock Lever (shown in locked position) |
| 8    | Caddy Pull Handle                     |
| 9    | Serial Number Plate                   |

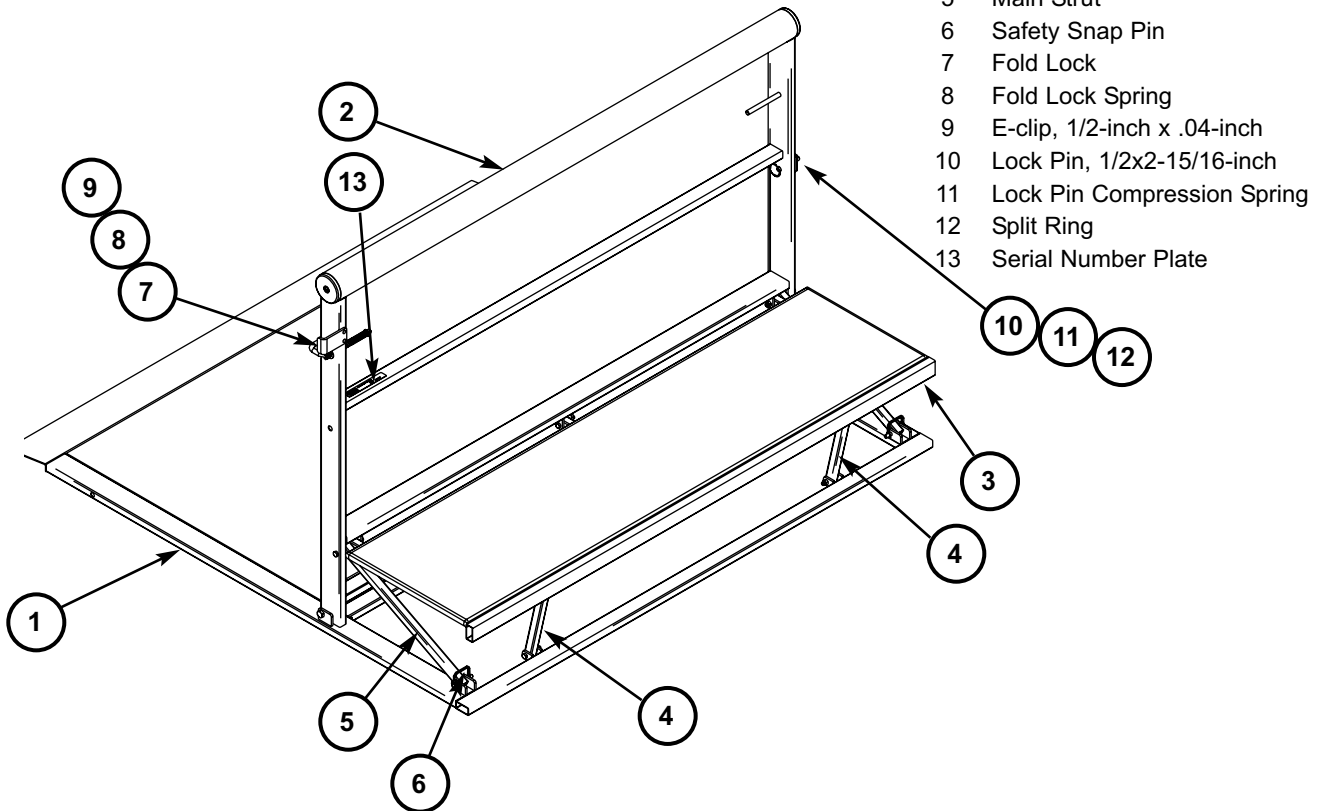
**Note:** The Crowd Barrier Caddy is available as a four-foot model and a six-foot model. When ordering parts, always specify the model and serial number.

## Four-foot Barrier



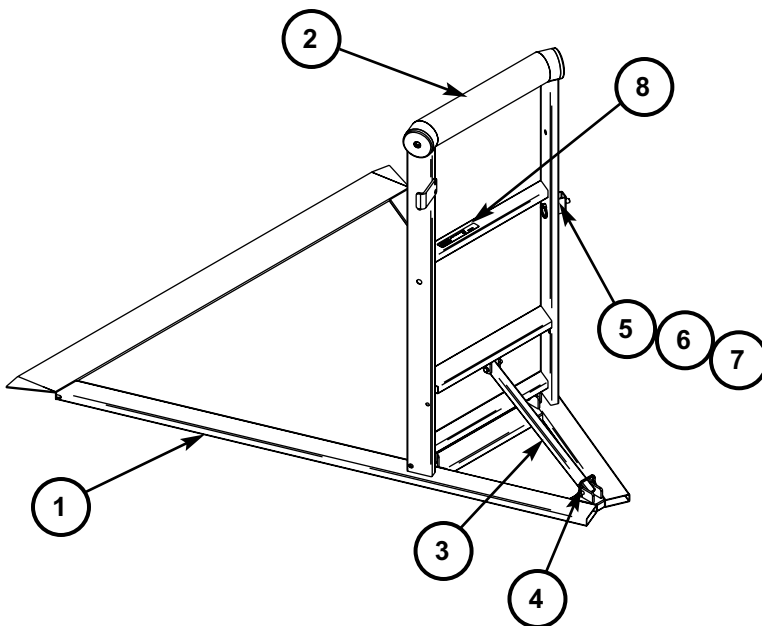
- | Item | Description                       |
|------|-----------------------------------|
| 1    | Barrier Base, four-foot           |
| 2    | Barrier Vertical Panel, four-foot |
| 3    | Barrier Safety Step, four-foot    |
| 4    | Safety Step Support               |
| 5    | Main Strut                        |
| 6    | Safety Snap Pin                   |
| 7    | Fold Lock                         |
| 8    | Fold Lock Spring                  |
| 9    | E-clip, 1/2-inch x .04-inch       |
| 10   | Lock Pin, 1/2x2-15/16-inch        |
| 11   | Lock Pin Compression Spring       |
| 12   | Split Ring                        |
| 13   | Serial Number Plate               |

## Six-foot Barrier



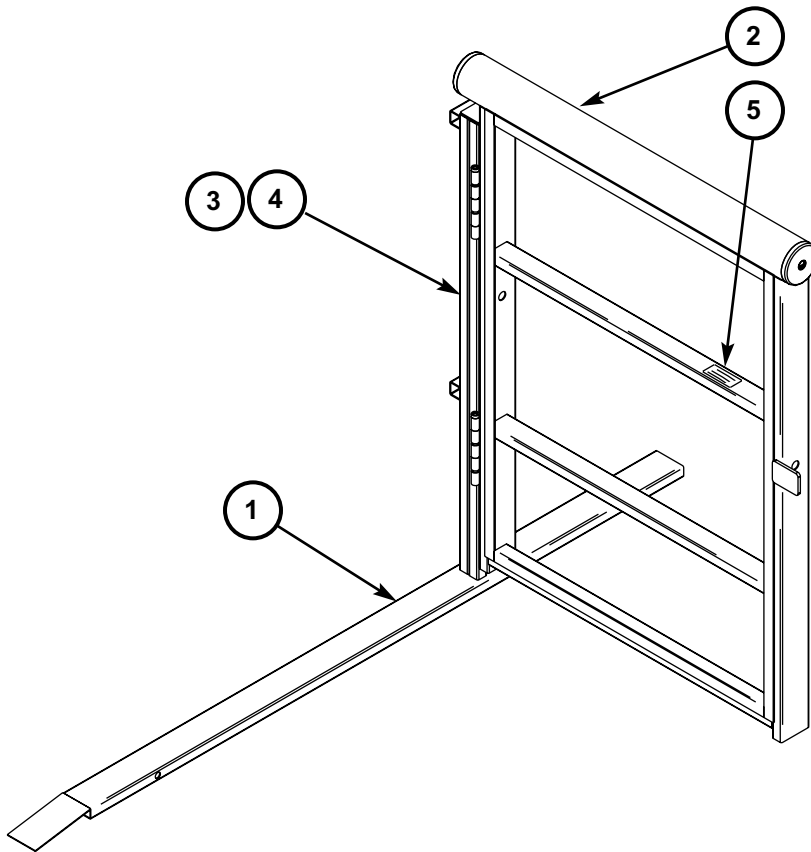
Item	Description
1	Barrier Base, six-foot
2	Barrier Vertical Panel, six-foot
3	Barrier Safety Step, six-foot
4	Safety Step Support
5	Main Strut
6	Safety Snap Pin
7	Fold Lock
8	Fold Lock Spring
9	E-clip, 1/2-inch x .04-inch
10	Lock Pin, 1/2x2-15/16-inch
11	Lock Pin Compression Spring
12	Split Ring
13	Serial Number Plate

## Barrier Outside Angle



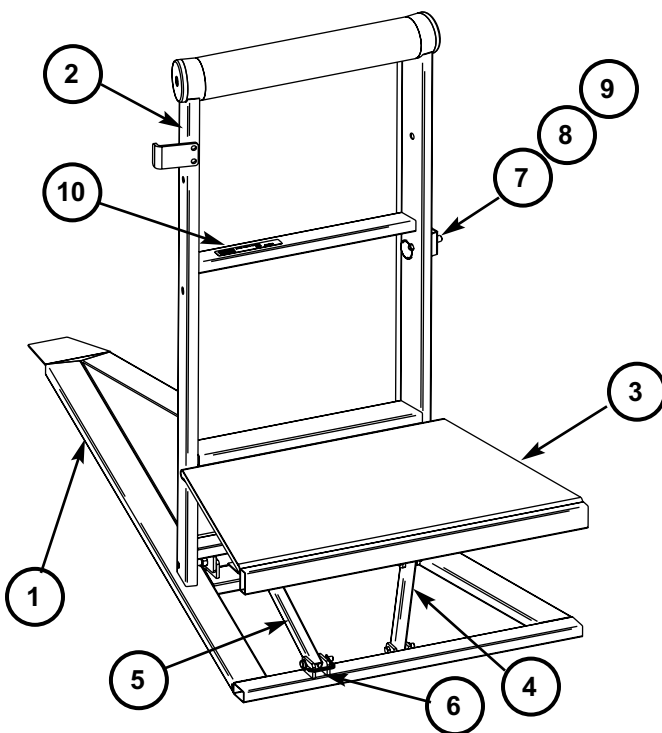
Item	Description
1	Barrier Base, Outside Angle
2	Vertical Panel, Outside Angle
3	Main Strut
4	Safety Snap Pin
5	Lock Pin, 1/2x2-15/16-inch
6	Lock Pin Compression Spring
7	Split Ring
8	Serial Number Plate

## Barrier Gate



Item	Description
1	Barrier Base, Gate
2	Barrier Gate Panel
3	Hex Head Screw
4	Hex Head Nut
5	Serial Number Plate

## Barrier Inside Angle



Item	Description
1	Barrier Base, Inside Angle
2	Barrier Vertical Panel, Inside Angle
3	Barrier Safety Step, Inside Angle
4	Safety Step Support
5	Main Strut
6	Safety Snap Pin
7	Lock Pin, 1/2x2-15/16-inch
8	Lock Pin Compression Spring
9	Split Ring
10	Serial Number Plate

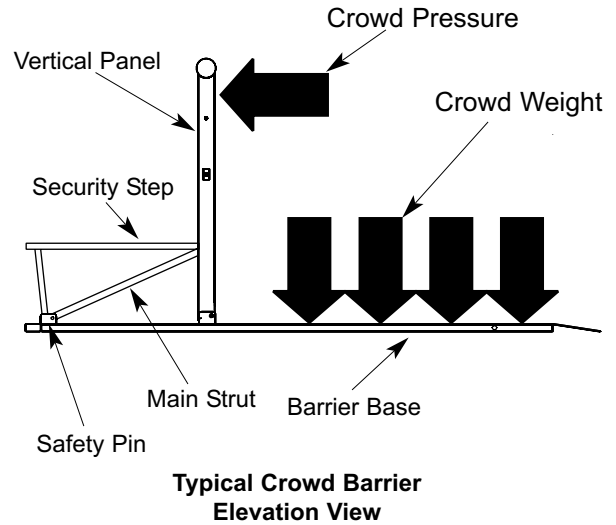
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## Crowd Control Barrier Operation

### How the Barrier Works

The Crowd Barrier is a fence that assists security personnel in maintaining order in a variety of applications.

- The Crowd Barrier withstands high horizontal loads of 600-pounds-per-section.
- The barrier base isolates the crowd standing next to the barrier wall. These people cannot move the wall because they would need to move themselves.
- The weight of the crowd standing on the barrier base makes the barrier very heavy and resistant to crowd pressure.



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## Security Personnel



**Warning!** *The Crowd Barrier is not a substitute for security personnel. Crowd pressure can create a hazard at the barrier fence that can result in serious injury or death. Security personnel must be vigilant and prepared to rescue persons trapped against the barrier fence. Failure to observe this warning can result in serious injury or death!*

The role of security personnel:

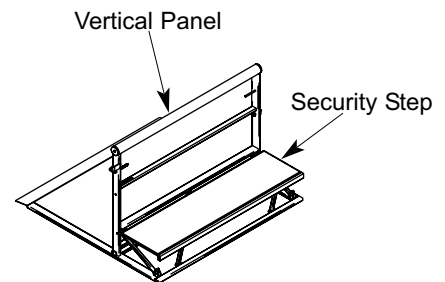
- Crowd pressure great enough to damage the barrier or move the barrier is a hazard to those standing on the barrier base. It is important that security personnel maintain order and prevent crowd pressure from reaching dangerous levels.
- Like any fence, people can climb over the Crowd Barrier. Security personnel must prevent people from climbing the barrier vertical panels.

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## Security Step

The security step is an elevated platform:

- Allows security personnel to stand higher than the people on the crowd side of the barrier.
- Allows security personnel to lean over the barrier and lift trapped people over the barrier.
- The additional height provides additional leverage for security personnel when lifting people over the vertical panel.

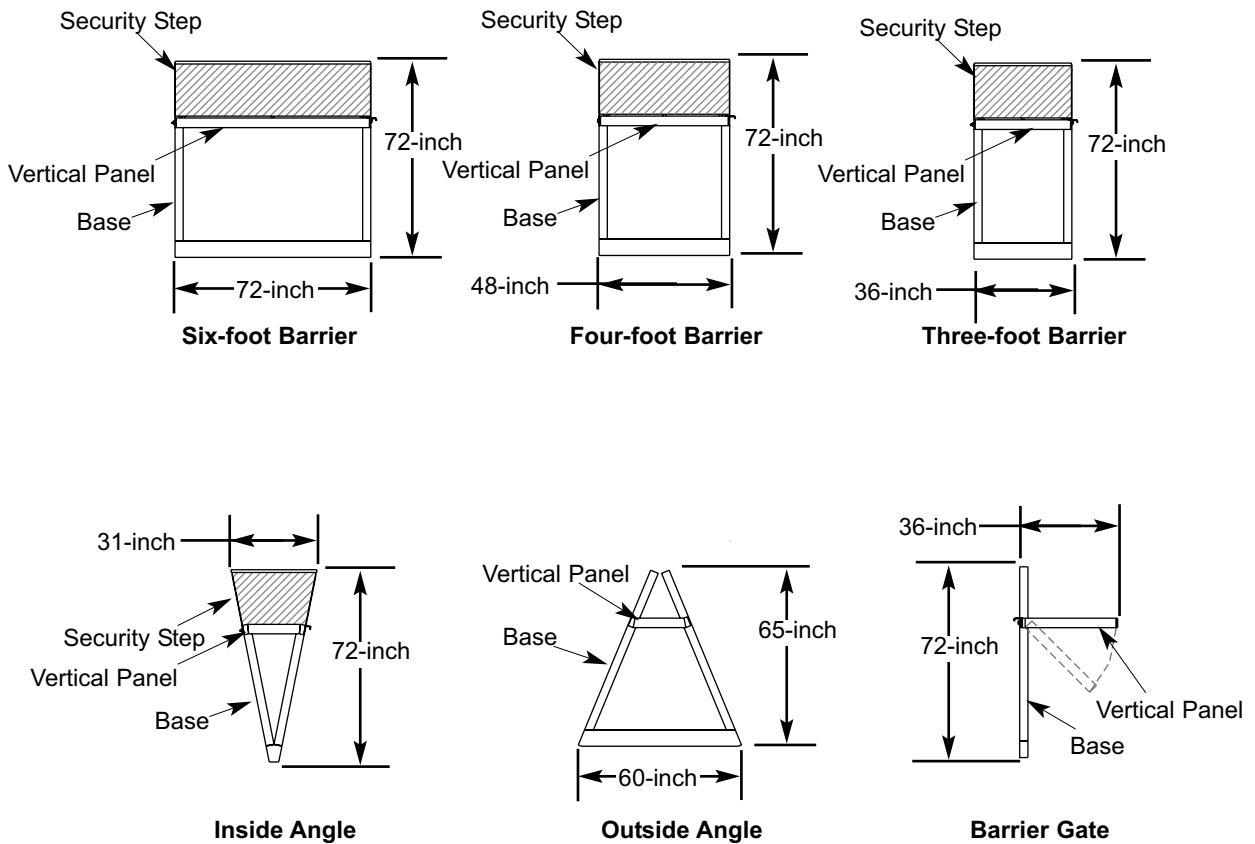


**Six-foot Crowd Barrier**



## Plan the Layout

The size, length and width, of each Crowd Barrier component is shown below. Use these dimensions when planning a Crowd Barrier installation.



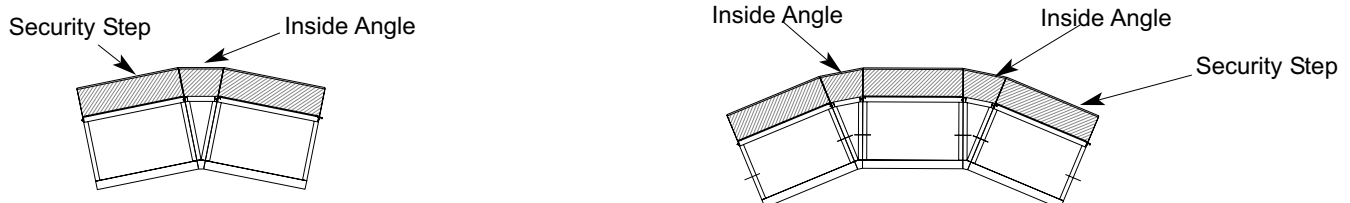
## Barrier Inside Angle



**Caution!** Care must be exercised when planning to place an inside angle in the barrier layout. Inside angles create traps that prevent people from escaping extreme crowd pressure. If more than one inside angle is used, it is recommended that at least one four-foot or six-foot barrier be placed between each pair of inside angles.

Always do the following when planning the layout:

- A single inside angle will redirect the barriers 22.5-degrees.
- Two inside angles redirect 45-degrees, three 67.5-degrees, and four inside angles redirect 90-degrees.
- Place the inside angle where there will be a very low level of crowd pressure. Refer to the recommendation above.
- The use of a single inside angle reduces the possibility of persons being trapped by crowd pressure compared to using two or more inside angles side-by-side.
- Always station sufficient security personnel at inside angles to rescue people that become trapped.



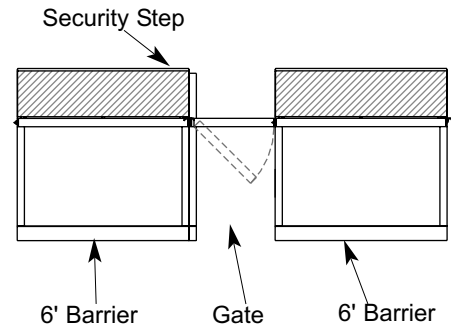
## Barrier Gates



### Caution!

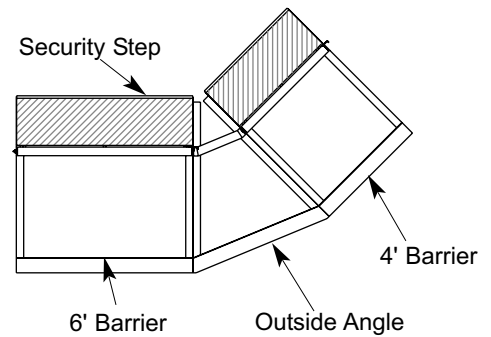
*A barrier gate is not capable of withstanding extreme crowd pressure. Barrier gates must be located where there will be no crowd pressure or replaced with a crowd barrier before crowd presence. Failure to observe this warning can result in damage to property or serious injury.*

- Exercise extreme caution when locating barrier gates. The barrier gate is intended to allow security personnel to cross through the barrier.
- The barrier gate is not intended withstand crowd pressure or to funnel crowds. If the barrier gate will be exposed to crowd pressure, replace the gate with a barrier.



## Outside Angle

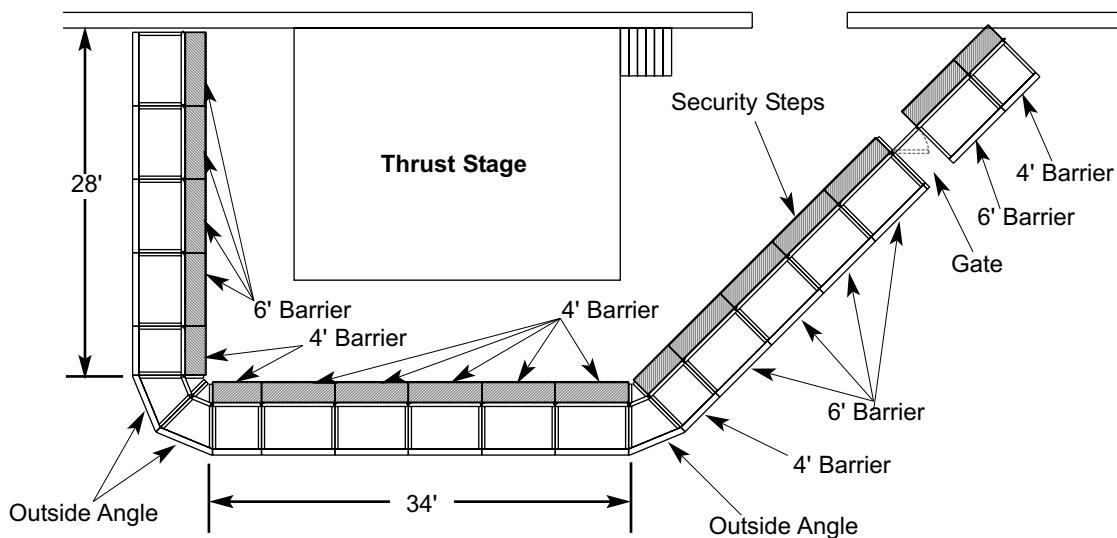
- Outside angles perform as well as four-foot and six-foot barriers, that is, outside angles can withstand the same level of crowd pressure.
- One outside angle will redirect the barriers 45-degrees.
- Two outside angles side-by-side will redirect the barriers 90-degrees.



## Typical Layout

Shown below is a simple, typical Crowd Barrier layout protecting a small thrust stage.

Setup of the Crowd Barrier should start at one end, in this case, with the barrier that is perpendicular with the wall.



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## Crowd Barrier Setup

### Before Starting



**Caution!** *All personnel including temporary workers must read and understand the Safety Section on pages 2 and 3 before setting up the Crowd Barrier.*



**Caution!** *Two or more persons should work together in the setup. Some Crowd Barrier components are very heavy and are difficult to handle. Failure to observe this warning can result in serious injury!*

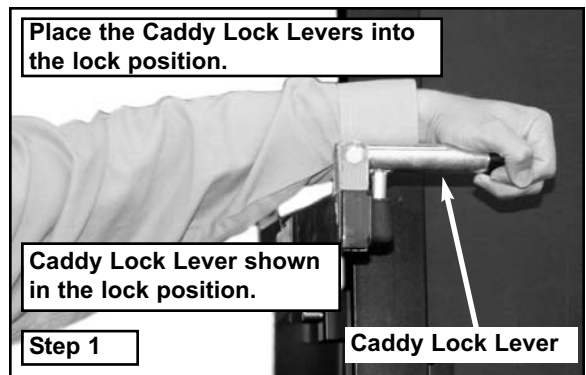
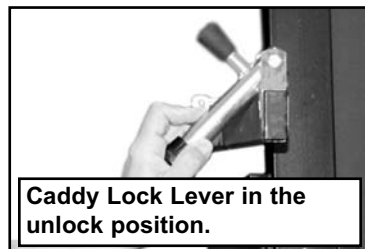
1. Plan the Crowd Barrier layout.
  - a. Decide where the outside boundaries will be located. Refer to pages 9 and 10.
  - b. Decide where the corners will be located.
  - c. Begin setting up the layout at one end or at one corner and build outward.
  - d. Locate gates where it is necessary to pass through the barriers. Take care to locate the gates where there will be very little crowd pressure or replace a gate with with a three-foot barrier before crowd presence.
2. Move the Crowd Barrier caddies to the layout area.

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### Moving the Caddy

To move a loaded caddy, do as follows.

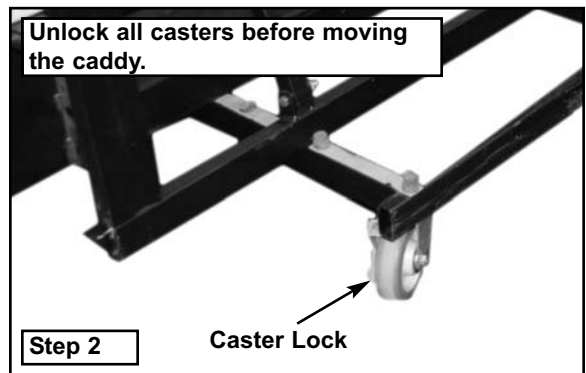
1. Make sure that the two caddy lock levers are in the lock position to prevent barriers from tipping off the caddy during transport.



2. Unlock the four swiveling casters.



**Caution!** *Never ride on or allow anyone to ride on the caddy.*



3. To move a loaded caddy:
  - a. Grasp the caddy pull handle and pull the caddy in the movement direction.
  - b. Take care to avoid objects and people in the path of movement.



**Caution!** *Avoid moving a loaded caddy on ramps with a greater than a one-foot rise in a 12-foot horizontal distance. On ramps, always have one person at each end of the caddy and always move the caddy with the narrow end in the direction of travel.*



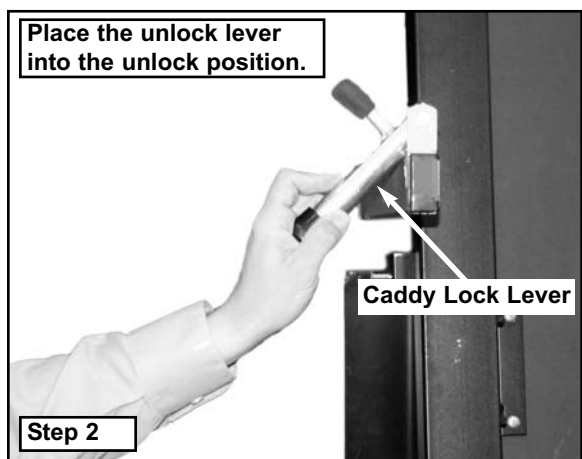
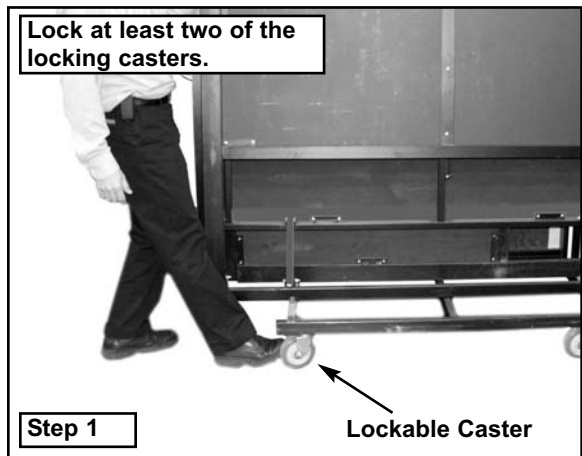
## Unload the Caddy

This procedure is the same for four-foot and six-foot barriers.



**Caution!** *When unloading the caddy, two persons work together. Some Crowd Barrier components are very heavy and are difficult to handle. Carefully follow these instructions. Failure to observe this warning can result in serious injury!*

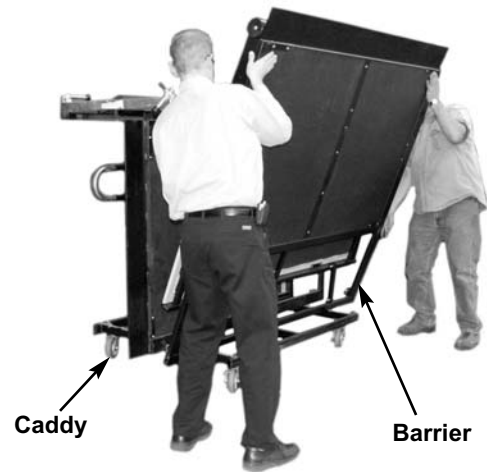
1. Place the caddy where barriers will be unloaded, close to the first barrier position. **Lock at least two of the four locking casters.**
2. Place the caddy lock lever into the unlock position on the side of the caddy to be unloaded.



3. With two people working together, tilt a barrier away from the caddy as shown at the right.

- Always tilt a barrier away from the caddy as shown until the barrier clears the caddy lock lever.
- Continue holding the barrier in a position clear of the lock lever and place the lock lever into the lock position.
- Do this to prevent remaining barriers from tipping off the caddy.

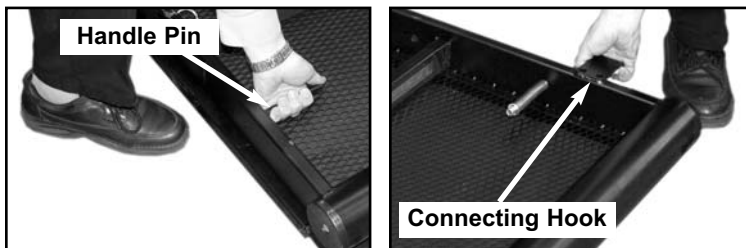
**Tilt the barrier toward the floor.**



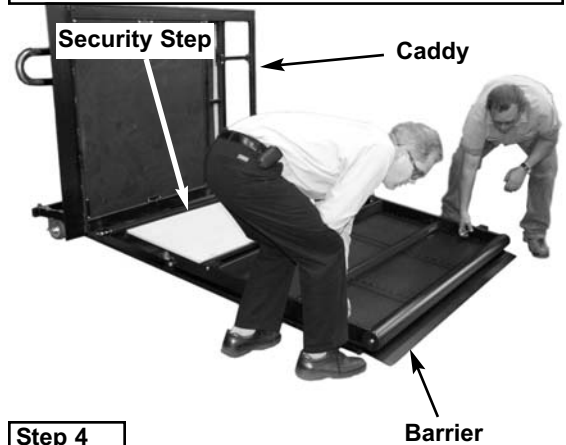
**Step 3**

4. Keep the barrier bottom edge on the caddy base and lower the barrier top edge to the floor.

- When lowering the barrier, always grasp the barrier with the handle pin and the connecting hook.
- Make sure that the security step is facing upward. If not, the barrier must be turned over.



**Keep the barrier bottom edge on the caddy base and lower the barrier to the floor.**



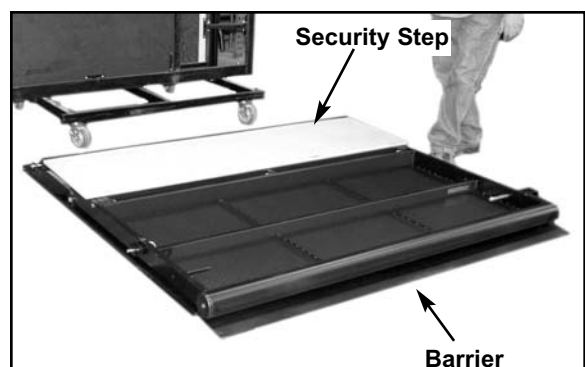
**Step 4**

5. With two people working together, move the barrier to its setup position as follows.

- Grasp the barrier at the tube on the back edge of the security step
- Lift the barrier from the caddy as shown below.
- Slide the barrier into position (refer to the photograph at the right).



**Step 5a-b**



**Lift the barrier and slide the barrier into position.**

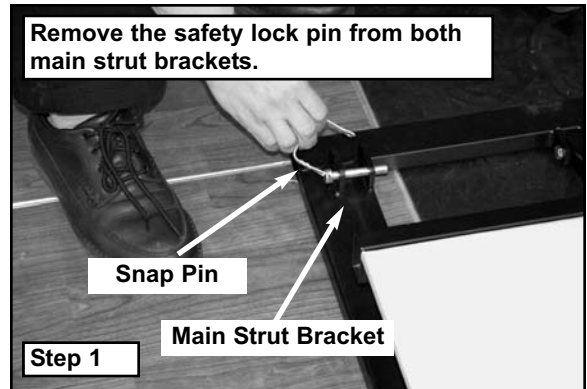
**Step 5c**

## Setup the Crowd Barrier

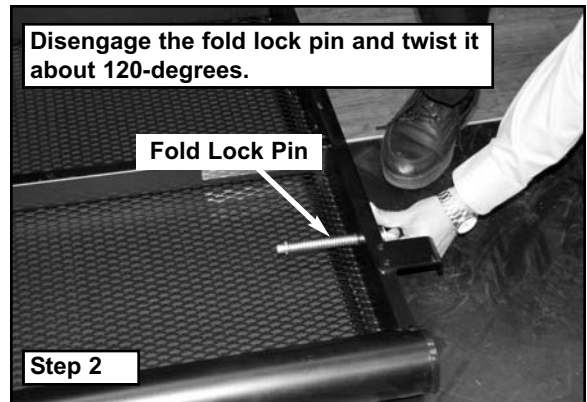
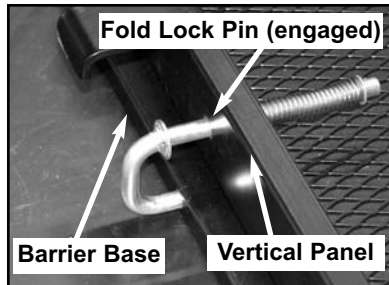
- Setup is the same for four-foot and six-foot barriers.
- No tools are required for Crowd Barrier setup.

To setup a barrier, do as follows.

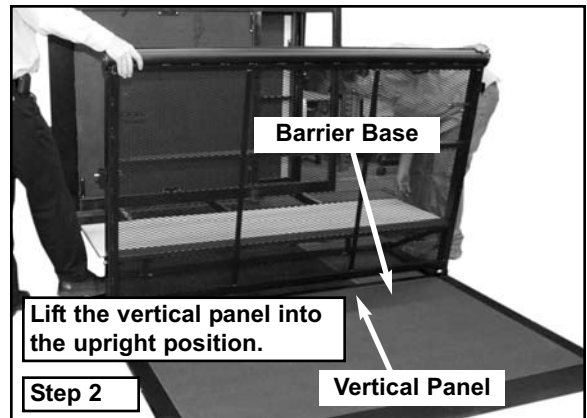
1. Remove the two safety snap pins from the main strut brackets. Set the pins aside and save.



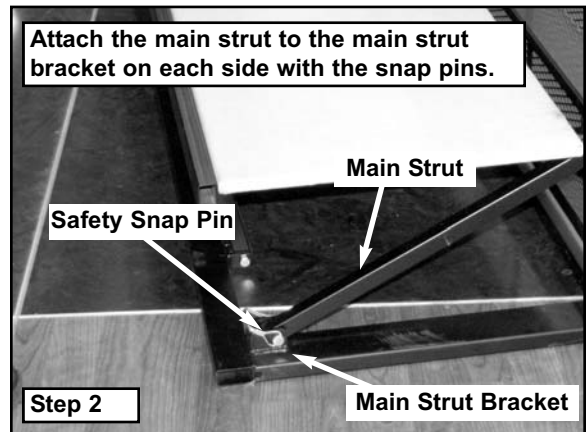
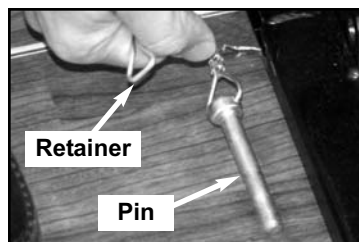
2. Disengage the fold lock pin. The fold lock pin holds the vertical panel against the crowd barrier base.
  - a. Grasp the fold lock pin as shown in the photograph at the right and pull outward.
  - b. Twist the pin about 120° and release the pin.
  - c. The pin should clear the frame and rest against the stop.



3. Lift the vertical panel into an upright position.



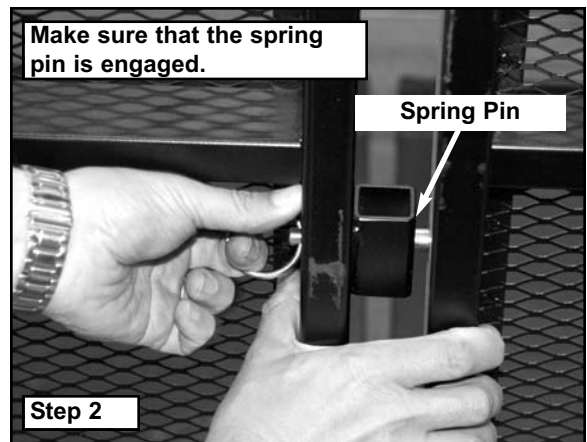
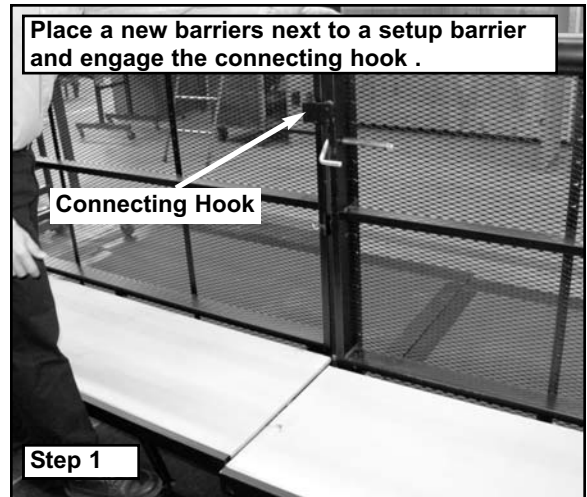
4. Connect the main struts.
  - a. Insert each main strut into a main strut bracket.
  - b. Insert a safety snap pin set aside in step 1 through the main strut clearance holes and the main strut bracket clearance holes.
  - c. Place the retainer onto the pin.
  - d. Repeat steps 4b and 4c on the other main strut.



## Connect Barriers

Four-foot and six-foot barriers can be connected together in any combination.

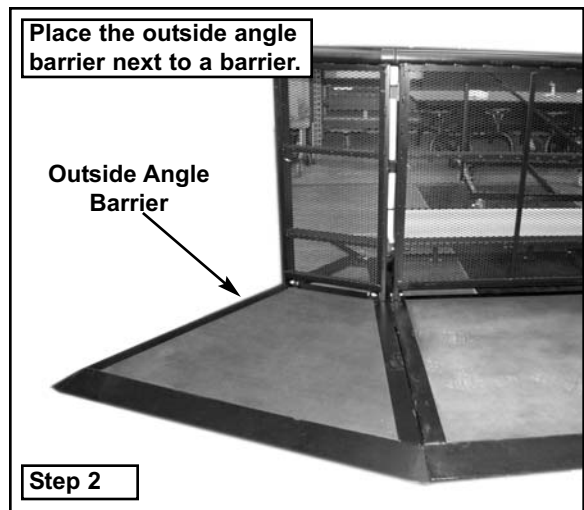
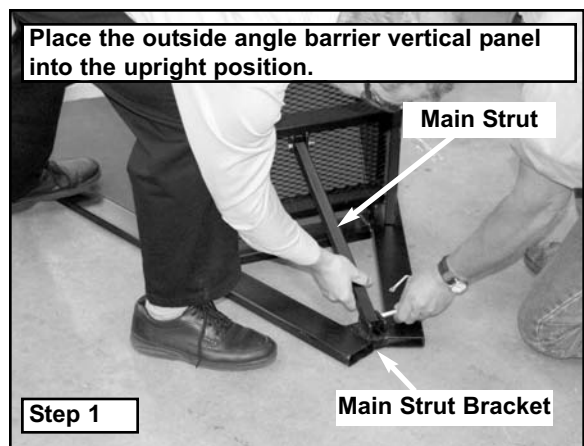
1. The first barrier should be placed at an end or corner of the barrier system.
  - Then setup and connect a second barrier to the first barrier
  - Then connect a third to the second, and so on.
2. Make sure that:
  - The connecting hook engages the adjacent vertical panel frame.
  - The spring pin engages the hole in the vertical panel frame.
3. Continue connecting barriers until the system is complete.



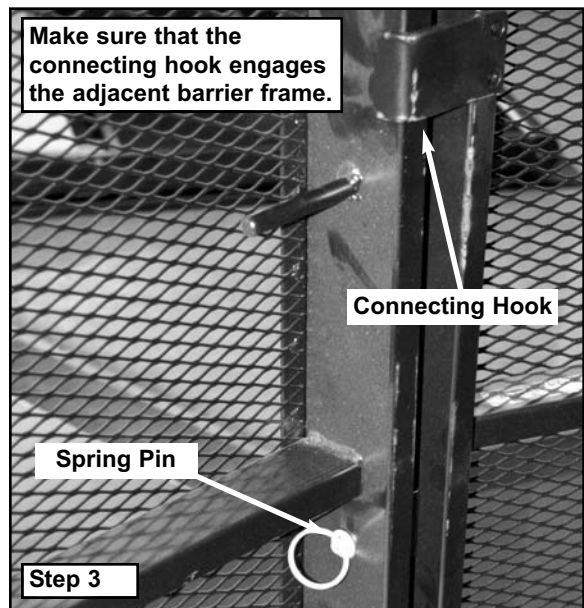
## Setup an Outside Angle

An outside angle barrier can be placed between straight barrier sections, four-foot or six-foot barriers, or between a straight section and another outside angle.

- One outside angle barrier creates a 45-degree angle.
  - Two outside angles placed side-by-side creates a 90-degree angle.
1. Setup the outside angle.
    - a. Remove the safety snap pin from the main strut bracket and save.
    - b. Lift the vertical panel to the upright position.
    - c. Insert the main strut into the main strut bracket.
    - d. Attach the snap pin removed in step 1a above.
  2. Place the outside angle barrier next to a barrier.



3. Make sure that the connecting hook engages the adjacent barrier frame.





## Attach a Gate

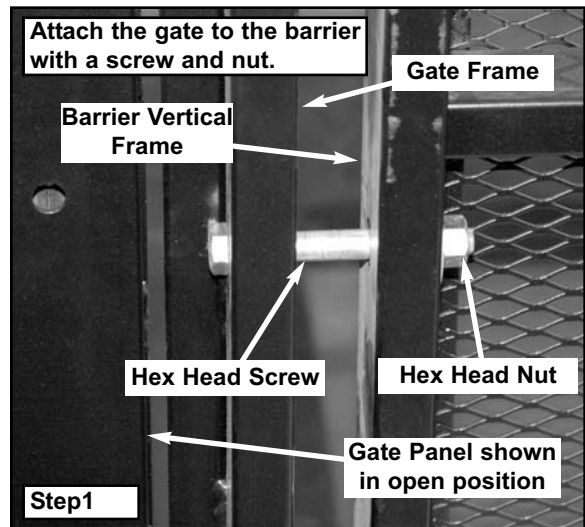
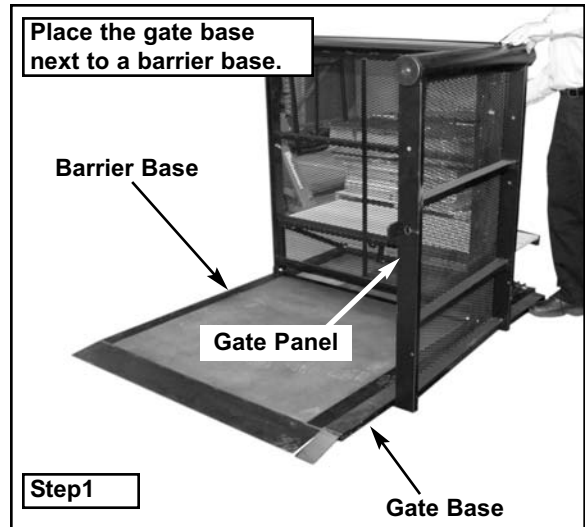


**Caution!** *A barrier gate is not capable of withstanding crowd pressure. Barrier gates must be located where there will be no crowd pressure or replaced with a crowd barrier before the performance. Failure to observe this warning can result in damage to property or serious injury.*

A barrier gate is three-feet in width. The gate is intended to allow security personnel and setup personnel to move through the barriers easily. It should not be used as an exit or a point for crowds to pass through. Always locate gates where there will be no crowd pressure or replace the gate with a three-foot barrier before the performance.

To setup a Crowd Barrier gate, do as follows.

1. Place the gate base next to the barrier as shown in the photograph at the right. Make sure that the barrier connecting hook engages the gate frame.
2. Using the hex head screw and hex head nut supplied with the gate:
  - a. Insert the hex head screw through the clearance holes in the gate frame and barrier vertical frames as shown at the right.
  - b. Attach the nut to the screw. It is not necessary to tighten the nut (can be finger tight).



## Disassemble and Store the Crowd Barrier



**Caution!** All personnel including temporary workers must read and understand the Safety Section on pages 2 and 3 before storing the Crowd Barrier. Failure to observe this warning can result in serious injury!

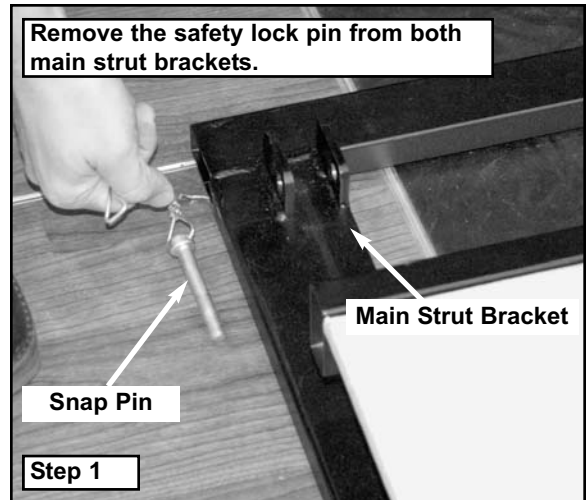


**Warning!** Two or more persons should work together when storing the Crowd Barrier. Some Crowd Barrier components are very heavy and are difficult to handle. Failure to observe this warning can result in serious injury!

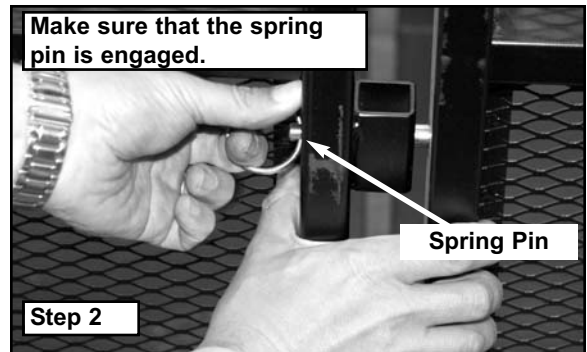
Always start at one end of the barrier system. Move the caddy to the first barrier to be stored.

### Disassemble the Barriers

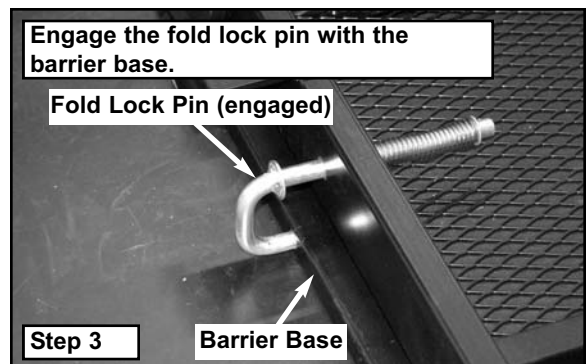
1. Disengage the safety pin and pull the barrier away far enough to clear the connecting hook.



2. Disconnect the two main struts on the first barrier to be stored.
  - a. Remove a safety snap pin from one main strut.
  - b. Remove the other safety snap pin that attaches the main strut to the strut bracket and reattach the snap pin to the strut bracket as done in step b above.
  - c. Fold the barrier vertical panel into the horizontal position.
  - d. Reattach the snap pins (make sure that the retainers are placed onto the pins) to the strut bracket so that the snap pins will not be lost.



3. Engage the fold lock pin.
  - a. Grasp the fold lock pin as shown in the photograph at the right on pull outward.
  - b. Twist the pin to align it to the hole in the barrier base and release the pin.

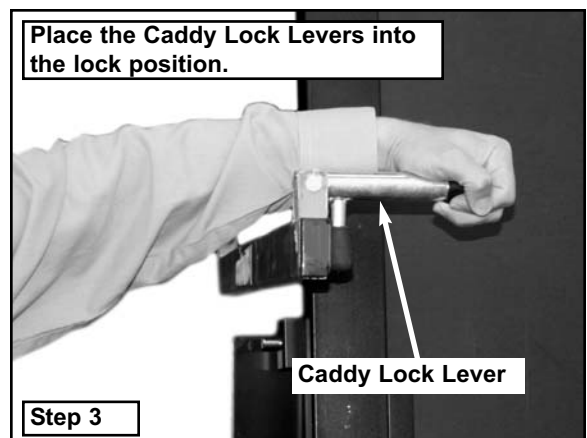
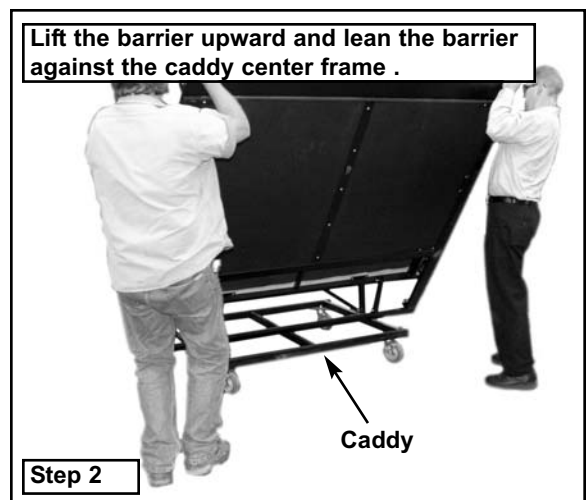
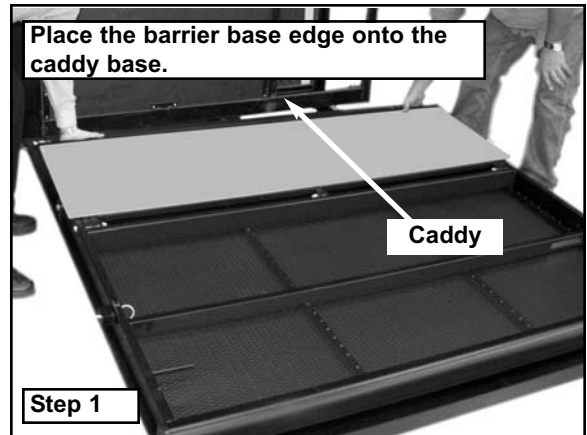


## Load the Caddy

1. Lift the barrier base edge closest to the safety step, with the safety step facing upward, and place it onto the caddy base.
  - Make sure that at least two of the locking casters are locked.
  - Two people must work together, one on each side of the barrier as shown at the right.
  - Grasp the barrier at the rear edge of the security step as shown at the right.
  - Always slide the barrier base to a vacant location on the caddy that is closest to the center frame of the caddy.
2. Keep the barrier bottom edge on the caddy base and lift the barrier upward and lean the barrier against the caddy center frame.
  - a. When lifting the barrier, always grasp the barrier with the handle pin and the connecting hook.
  - b. When the barrier is near the lock lever, hold the barrier and place the lock lever into the unlock position.
  - c. After leaning the barrier against the caddy center frame, place the lock lever into the lock position.
3. Unlock the casters and move the caddy into position behind the next barrier.
4. Repeat steps 1, 2, and 3.



**Caution!** *Never ride on or allow anyone to ride on the caddy.*



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## **Maintenance**

### **Cleaning**

- Clean the Crowd Barrier component surfaces with a mild detergent and soft brush or clean cotton cloth.
- Never use a harsh abrasive or chemicals to clean the Crowd Barrier components.

### **Replacement Parts**

- Always replace damaged or lost parts immediately.
- Call SICO America Inc. customer service for replacement parts. Always supply the serial number when requesting assistance.

### **Caddy Maintenance**

- Clean the caddy surfaces with a mild detergent and soft brush or clean cotton cloth.
- Never use harsh a abrasive or chemicals to clean the caddy.
- Replace damaged casters immediately.