

OWNER'S MANUAL



# T-REX

***AMERICANA (8')***

***INTERNATIONAL (10'8")***

**PORTABLE BASKETBALL GOALS**



## **Tools Required for Installation:**

### **Portable Goal:**

SAE Socket Set  
9/16" Box End & Open End Wrench  
3/4" Open End Wrench  
15/16" Speedwrench  
SAE Allen Wrench Set  
8-Foot Ladder  
Two (2) Plumb Bobs  
Channel Locks  
Tape Measure (12' min.)  
Standard and Phillips Screwdriver  
24" (min.) Bubble Level  
Felt Marker  
Utility Knife

### **Anchoring:**

Corded Drill  
7/8" Paddle Bit  
9/64" drill bit  
Hammer Drill  
5/8" Masonry Bit  
2" Hole Saw or 2" Forstner Bit  
4-1/2" Hole Saw  
2-5/8" Hole Saw  
Plunge Router



603 L STREET • LINCOLN, NE 68508 | 800-247-7668 | WWW.BISONINC.COM

## T-REX AMERICANA(8') AND INTERNATIONAL(10'8")

PARTS LIST					
Item	Qty	Description	Item	Qty	Description
A	1	Portable Base Assembly	P	2	Hitch Pin for Rod/Deadlock
B	1	Front Stabilizing Pads	Q	1	Rear Anchor Cover Plate
C	1	Backboard	R	1	Backboard Padding (2 ea.)
D	4	3/8" x 1" Hex Bolt	S	1	Beam Pad
E	2	3/8" x 4" Hex Bolt	T	2	Base Side Pad
F	4	3/8" Flat Washer	U	8	Pad Bracket
G	2	3/8" Nut	V	24	1/4"-20 Flathead Screw
H	2	3/8" Lock Washer	W	1	Lower Front Pad
I	2	Rod End/Mount for "V" Arm	X	1	Upper Front Pad
J	2	1/2" Lock Washer	Y	4	Front Pad Hinge w/ 1/2" x 4 1/2" Bolt
K	2	1/2" Nut	Z	1	180° Breakaway Rim
L	2	Front Locator Pin	AA	1	Spring Cover
M	2	Brass Floor Guide	BB	2	1/4"-20 x 2" Hex Bolt/Washer/Nut
N	2	"V" Arm	CC	1	Adjustment Wrench
O	1	Foot Release Pedal	DD	1	Anchor/Turnbuckle/Quicklink

**Warning!!!**  
**Do not remove the safety strap until the backboard and goal installation is complete.**  
**This unit is under extreme spring tension and severe injury and damage will result.**

- Inspect all contents prior to installation. Report any missing parts to Bison immediately.
- Carefully read all instructions before proceeding. Pay special attention to all safety instructions.
- Save these instructions in case Bison needs to be contacted for future maintenance.

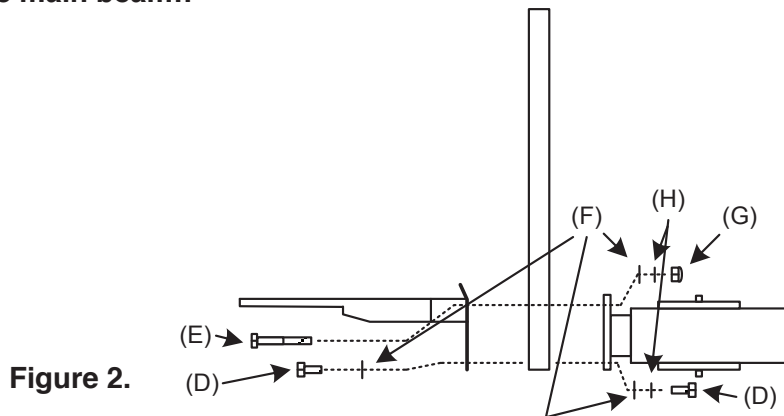
**1. Prepare for Backboard Mounting:** The goals arrive in a partially-collapsed state, and are held in that position with a flatbar tie-down. In order to mount the backboard, however, the goals need to be fully-collapsed. This can be achieved using a fork truck or people. If using a fork truck, loop a strap over the front snout of the main beam, pull down slightly using the forks, use 9/16" wrenches/sockets to remove the tie-down bar, and collapse the beam until the Foot Release Pedal (O) latches at the rear. If people, have two drape across beam and another collapse. **See Figure 1.**



**Figure 1.**

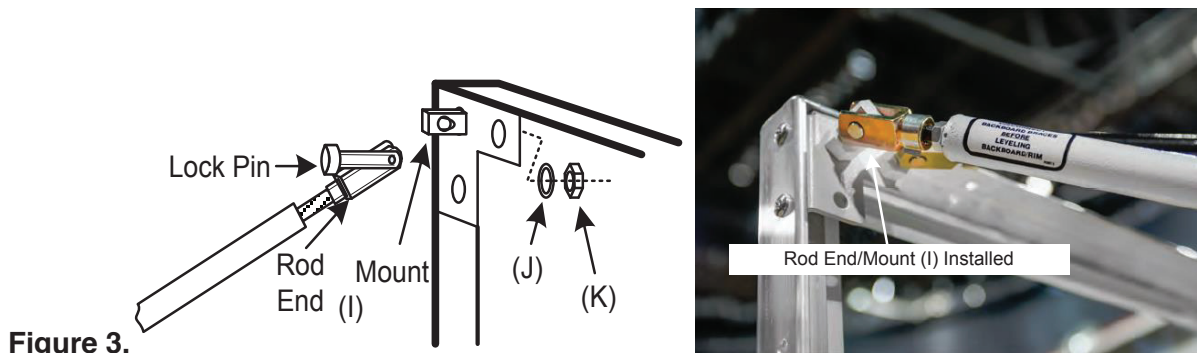
2. **Open** the backboard box, and remove the backboard (C). It is recommended to have 2 people lift and position the board for installation while one person bolts everything together. If a fork truck is available, the backboard can be placed onto the forks and lifted into position, but have hands available to stabilize it.

3. **Backboard/Rim Mounting:** Locate the Breakaway Goal Hardware (D, E, F, G, H) inside the base hardware box to use to install the backboard. Begin by mounting the backboard to the main beam using two 3/8" x 1 Hex Bolts (D), two lock washers (G), and two 3/8" washers (F). The bolts go into the bottom (2) holes on the main beam snout, and bolt into the lower (2) holes on the **BACKSIDE** of the board. **See Figure 2.** Tighten the bolts firmly. The backboard is now attached to the beam. **NOTE: Never remove these bolts without first tying down the main beam and supporting the board! These are the only bolts holding the backboard to the main beam!!**

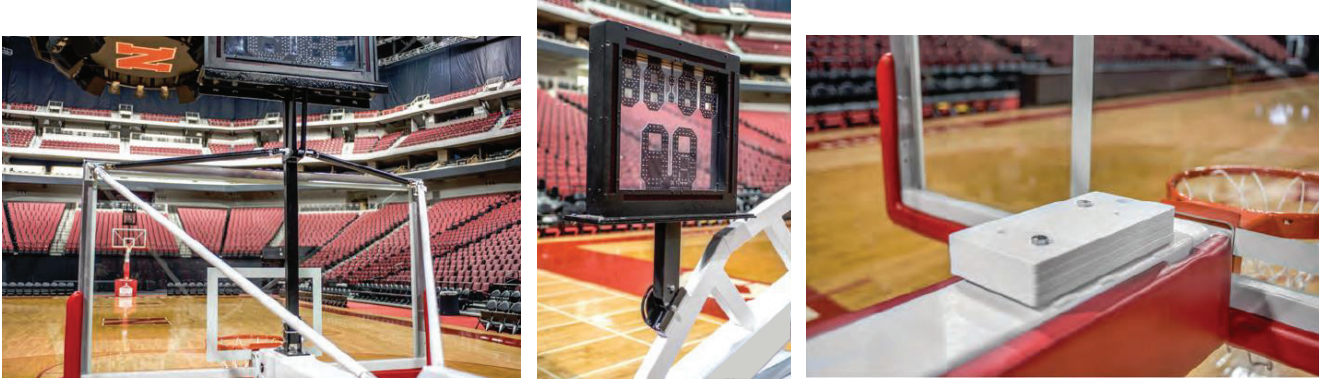


**Next,** locate the two longer 3/8" x 4 bolts (E), flat washers (F), lock washers (H), and nuts (G). Place the long bolts through the top holes in the backboard mounting plate, and snout. Leave the hex heads sticking out of the face of the backboard slightly to allow for hanging the rim, and loosely place the washers (F), lock washers (H), and nuts (G) on the bolt. Remove the Rim (X) from its box (discard any bolt kits found in the rim box!), remove the access plate, and hang it on the bolt heads sticking out of the board face. Use the remaining 3/8" x 1" (D) bolts and flat washers (F) for the bottom (2) holes in the rim plate. Use level to check the side-to-side level of both the backboard and rim, adjust as needed, and tighten the bolts, washers and lock nuts. It is easiest to tighten in the bottom bolts to secure the level of the rim, then go back and tighten top long bolts. Replace rim access plate. **See Figure 2.**

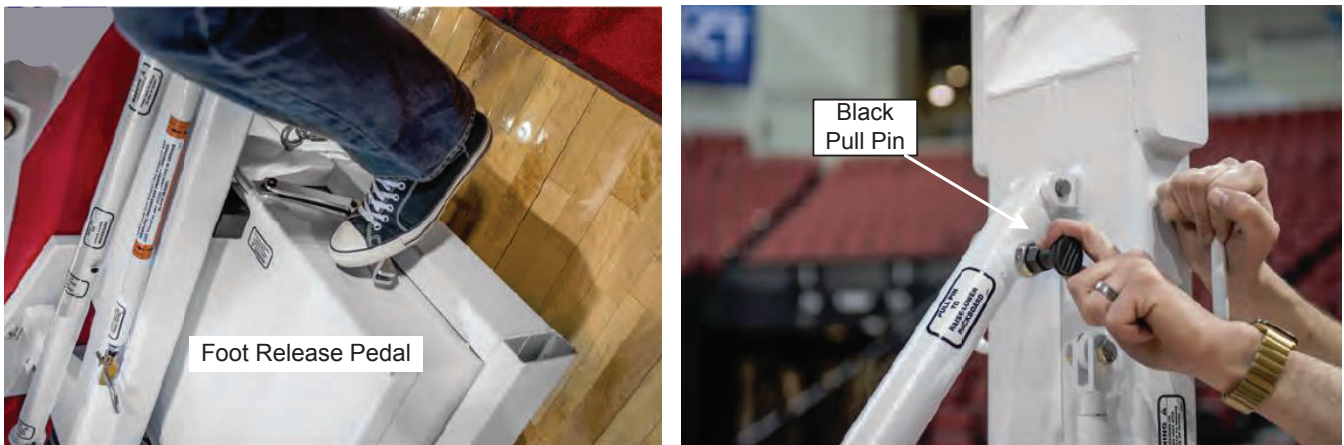
4. **V-Arms:** Locate the 1/2" rod end/mounts (I), lock washers (J), and nuts (K) in the base hardware box. Undo the lock pin to separate the rod ends from the mounts, and screw rod end portions (I) into the "V" Arms (N). Place the mount portions (I) through the top outer corner holes of the backboard so they stick out toward the rear of the unit. Secure loosely from the inside with the lock washers (J) and nuts (K), as the mounts (I) will have to be oriented properly in a later step. Leave the V Arms disconnected and resting on the top center of the backboard frame. **See Figure 3.**



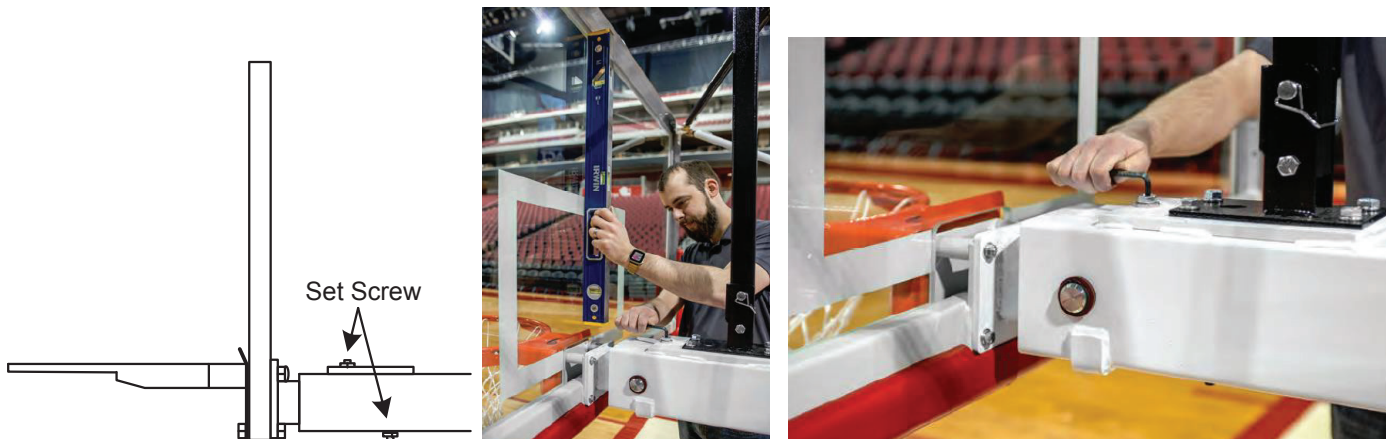
**5. Shot Clocks and/or Ballast:** If there are shot clocks and brackets being added (front and/or rear), they should be assembled and installed now. The main springs on the portable are calibrated with the assumption that a shot clock bracket and clock will be present. If they are not going to be used, there are ballast plates which should be added to the main beam where the shot clock bracket would mount. **See photos.**



**6. Board Level Adjustment:** Check the side-to-side level of the Base Assembly (A), and compare it to the level of the backboard. If they are not in the same plane, loosen the backboard attachment bolts from Step 3 and bring the board into level. Retighten all hardware **FIRMLY!** Next, go to the rear of the goal and step on the Foot Release Pedal to guide the goal up into the game position. A pull pin will pop into place on the Telescopic Rod to temporarily hold it. Compress levers if Manual.



**7. Leveling:** Attach a tape measure to the front of the rim to gauge height, and set a level front-to-back across the rim to gauge level. If adjustment is needed, begin by detaching the Rod Ends from the Mounts(I) if connected so the "V" Arms (N) aren't holding the top corners of the board. Next, loosen the 3/4" jam nuts on the set screws on top and bottom of the main beam. Check the vertical level of the backboard. If it tilts forward at the top (and the rim's nose dives down), drive the top set screw IN. If the top is pulled back (and the rim noses upward), loosen the top set screw.



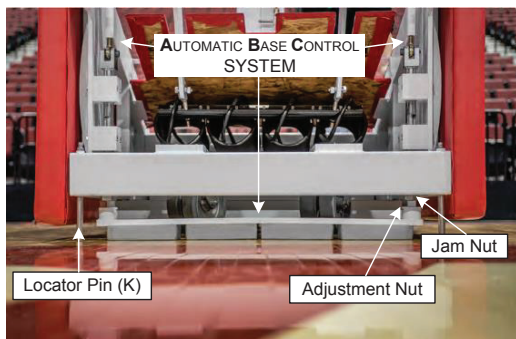
When the vertical of the backboard and level of the rim are accurate, screw the bottom set screw in to secure the adjustable snout, and tighten the jam nuts to prevent movement.

8. **“V” Arm Finalization:** Locate the two “V” Arms (N) with the installed Rod Ends (I). These arms are attached to the main beam and top corners of the backboard to prevent the board from flexing –which can cause glass breakage. Bring the Rod End toward the Mount (I) at the top corner of the board, and twist the V Arm (N) or Rod End (I) to adjust the total V Arm length. Orient the rod end (H) properly to allow it into the space between the forks of the clevis, insert the lock pin to the Rod End (I), and tighten the ½” nut (K) behind the bracket to tighten the Mount and prevent movement. Refer to Step 4 if needed. We recommend making the V Arms a bit longer than needed to prevent rattling. Repeat for the opposite side. **NOTE: The “V” Arm is NOT a turnbuckle design! The threads on both the clevis and non-clevis end are right-hand threads. This is to prevent undue stress being placed on the backboard by “driving” the board forward or backward using a turnbuckle. See photos.**

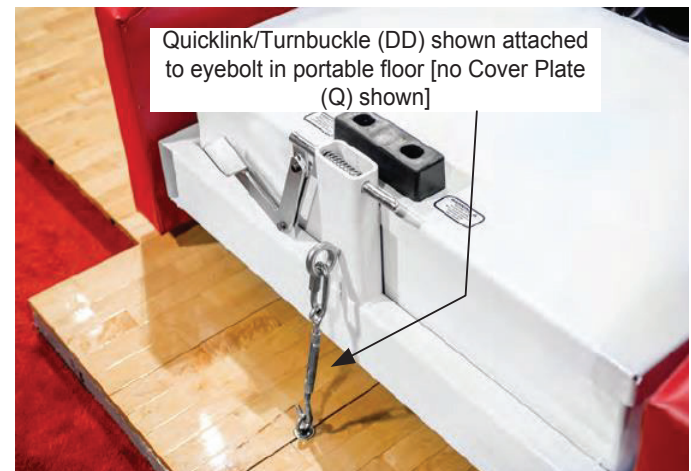
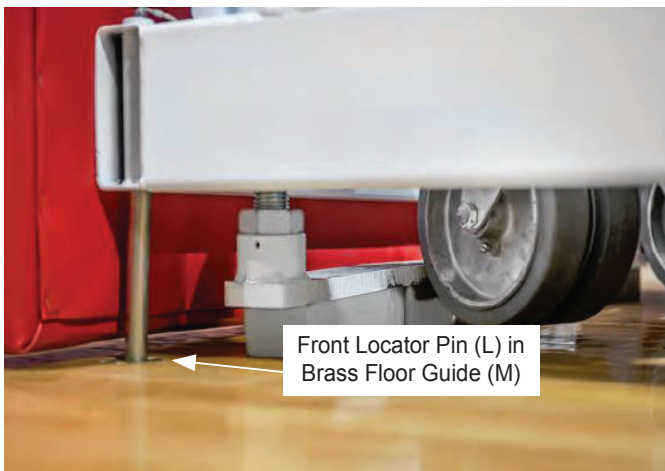


9. **Double Check:** At this point, collapse the goal and lock it down. Double check that all bolts, nuts, etc. used up to now are tight and secure, confirm that the goal is at 10’ and level, and confirm that the Portable Base Assembly (A) is oriented in the correct place. Replace rim access plate.

10. **Goal Location/Height:** Remove the Front Locator Pins (L) from the base hardware box, and place them in the pin cylinders on the inner frame. Roll the goal into its final location behind the key. For a T-Rex International (10’8”), the pins should be approximately 86” from the inside of the baseline; and with a T-Rex Americana (8’) they should be about 54”. Place the goal into the playing position (compress levers if manual version), and hang plumb bobs from the outer front corners of the backboard. The face of the glass needs to be 48” in from the inside of the baseline, and square to the court. If isn’t correct, collapse the goal (or release levers on Manual) and move it slightly. This can take a little patience. Once both corner faces are 48” in and square, place a tape measure on the front of the rim to measure for height. If adjustment is needed, use the provided Adjustment Wrench (CC) to turn the adjustment nuts (clockwise to gain height) equally on both sides. When at 10’ and level, turn the jam nuts down to meet the adjustment nuts to lock the height in. **See photos.**

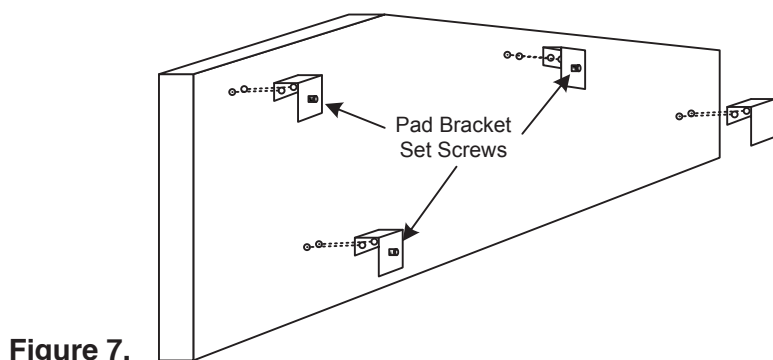


- 11. Floor Marking:** Remove the détente pins so the Locator Pins sit on the floor, and trace around them to mark the locations for the Brass Floor Guides (L). **Optional:** If anchoring the rear of the unit as well, mark the location for the rear anchor directly beneath the eyebolt at the rear of the frame with a small X. Raise the Front Locator Pins (K), and replace the détente pins so the locators stay off the floor surface. Reach in and orient the front swivel casters straight, and lower the goal to disengage the Front Stabilizing Pads (manual lever users, disengage levers) – placing the goal back on its wheels. Roll the goal straight back (or forward if space is limited behind) to make room for setting the Brass Floor Guides (M), Cover Plate (Q), and Anchor (DD) into the floor.
- 12. Brass Floor Guides:** Use a 2" hole saw or Forstner Bit (bottom of paragraph) to define the outer circumference of the Brass Floor Guides (M) to a depth of 1/8". Make sure the pilot guide bit on the hole saw is in the center of the Front Locator Pin (L) circles drawn in Step 10. Use a 7/8" paddle bit to widen the pilot hole in the center. Next, use the Brass Floor Guide (M) thickness to set the depth of the router blade, and rout the floor to accept the floor guides. (They should sit flush with the playing surface when installed.) Place the Floor Guides (M) into the floor, mark the locations of the screw holes, and drill pilot holes with a 9/64" bit. Mount the Brass Floor Guides (M) with the provided brass screws. If using a 2" Forstner Bit, drill the 2" hole to depth using the bit, then use the 7/8" paddle bit to make the center hole.
- 13. Rear Cover/Anchor/Turnbuckle:** If anchoring the rear of the unit, use a 4 1/2" hole saw to define the outer circumference of the Rear Anchor Cover Plate (Q) to a depth of 9/16". Next, use a 2 5/8" hole saw into the same pilot hole to core completely through the playing surface. Use a router to rout the floor to accept the cover plate ring by using the cover plate as a depth template (~ 9/16"). Use a 5/8" masonry bit to make a hole in the concrete slab to accept the expansion anchor. Insert the anchor into the floor, and turn the eye-bolt clockwise to expand the anchor into the hole. Place a large screwdriver into the eyebolt hole, and continue turning to completely expand anchor. Attach the provided Quicklink/Turnbuckle (DD) to the eyebolt at the rear of the goal, and attach the cover plate to the floor using the provided wood screws so it opens away from the court.
- 14. Reposition Goal:** Roll the goal back into position behind the key, remove the détente pins from the Front Locator Pins (L), and drop them into the Brass Floor Guide (M) holes. Be certain that both pins drop into the floor guide holes to insure proper goal location. Raise the unit into the playing position to engage the Front Stabilizing Pads (or compress the manual levers and secure them). **After** the Front Stabilizing Pads (B) are fully engaged and the locator pins are in the holes, use the Turnbuckle (DD) to securely anchor the rear of the unit to the eyebolt in the floor. Do **NOT** over-tighten the turnbuckle, but make sure there is no slop between the eyebolt and Portable Base Assembly (A). **See photos.**



**15. Backboard Padding:** Pull the spring pin on the telescopic rod of the Portable Base Assembly (A), and lower the unit down into the storage position until the Foot Release Pedal (O) engages. Locate the Backboard Padding (R) and the associated hardware in the padding box. Install the Backboard Padding (R) so the cut-out section faces the court just under the rim. Use the shorter padding hardware to thru-bolt the vertical portion of the padding to the backboard frame. The bolts for the underside of the Backboard Padding (R) are already in the bottom frame of the backboard, and must be removed and reinserted through the padding. There are two steel rods which will join the 2 halves of the padding together.

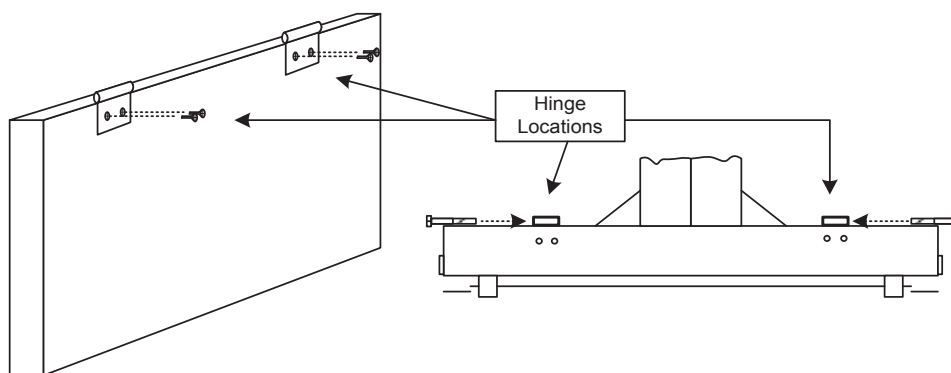
**16. Unit Padding:** Locate the Beam Pad (S) in one of the padding boxes (34" x 10" x 10" with Velcro closures), and install it on the main beam just behind the backboard. Raise the goal back into its playing position. Next, locate the Pad Brackets (U) in the base hardware box, and attach them to the Base Side Pads (T) with the provided 1/4"-20 Flathead Screws (V). **See Figure 7.**



**Figure 7.**

Set Side Pads (T) onto the side bars of the Portable Base Assembly (A) so the lead edge of the pad lines up with the front of the Base Assembly (A), and tighten the Pad Bracket Set Screws to hold the pad in place. **NOTE: The rear Pad Bracket will not have a set screw due to limited space at the rear of the base.**

Next, locate the Lower Front Pad (W), and the Front Pad Hinges and Bolts (Y). Attach two of the hinges to the Lower Front Pad (W) using the 1/4"-20 Flathead Screws (V), and two of them directly to the back side of the upper front cross bar of the Portable Base Assembly (A). Lift the Lower Front Pad (W) into position, and line the hinges on the pad up to those on the frame, slide 1/2" x 4 1/2" bolts through, and secure with 1/2" nuts. When properly installed, the Lower Front Pad (U) should be able to pivot upward when lifted forward from the bottom. **See Figure 8.**

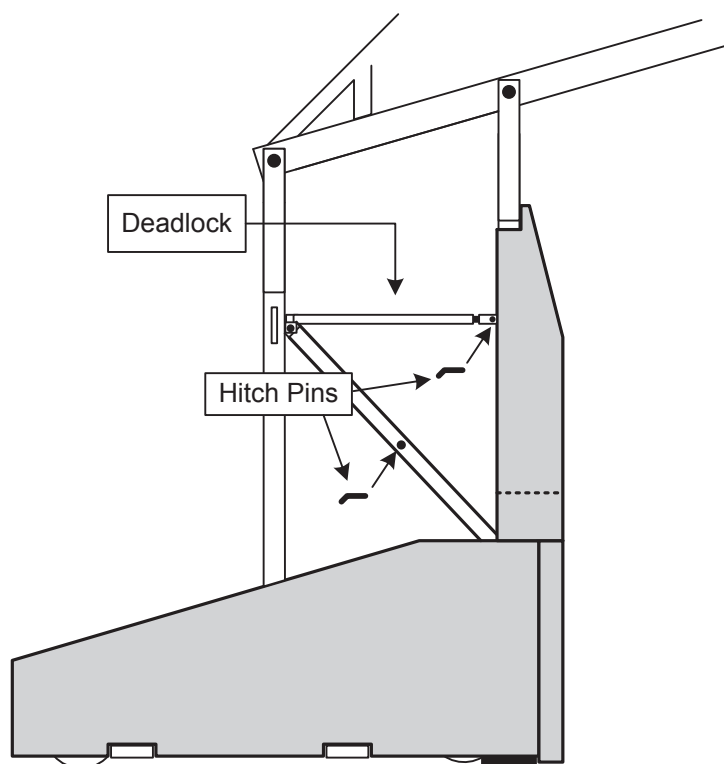
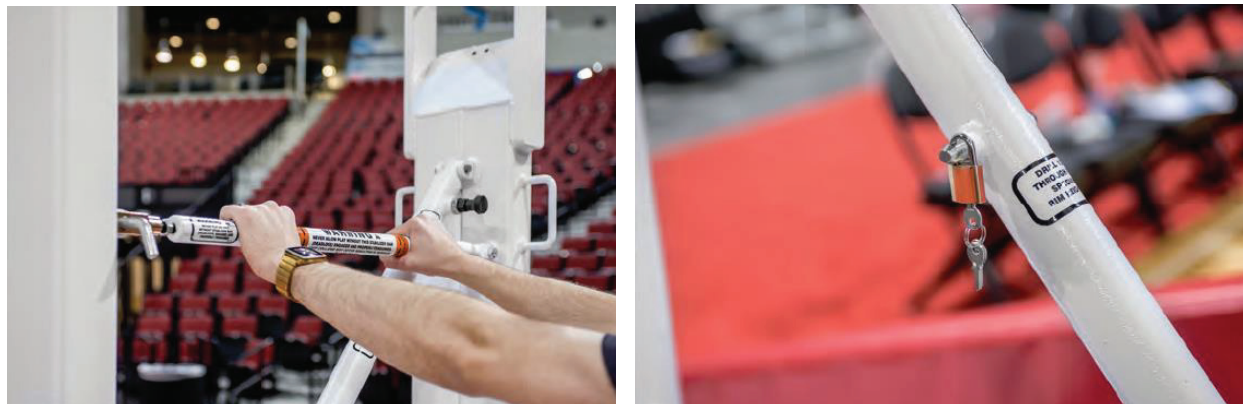


**Figure 8.**

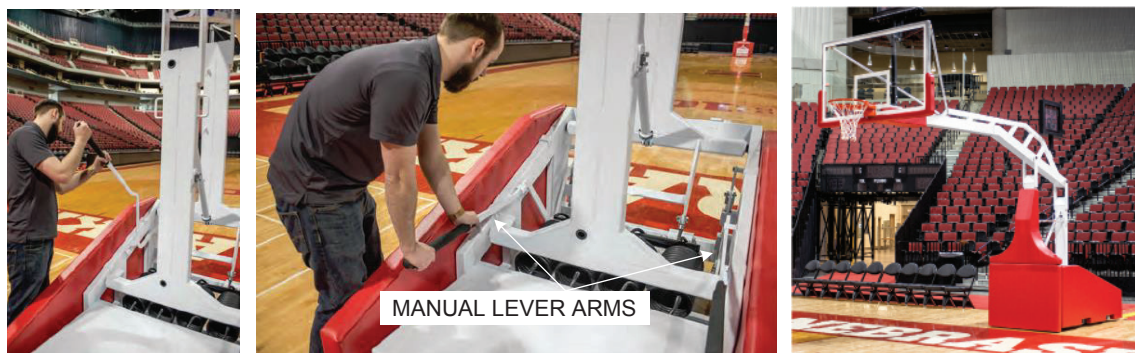
Locate the Upper Front Pad (X) which is an upside-down Y-shape, set it against the front yoke just above the Lower Front Pad (W), and use the Velcro attachment straps to affix it to the yoke. Lastly, locate the rectangular vinyl Spring Cover (AA), and 1/4"-20 x 2" Hex Head Bolts, Washers, and Nuts (BB) in the base hardware box. Set the Spring Cover (Y) onto the ledges just inside of the Base Assembly (A), and secure with the 1/4"-20 bolts and hardware (BB) through the grommets in the Spring Cover (AA).



**17. Deadlock/Hitch Pin:** To complete the installation of the goal when in its playing position (levers compressed and latched if Manual), remove the lower pin from the deadlock which sits against the rear yoke, raise it to its horizontal position, and insert a hitch pin into the clevis to pin it to the front yoke. After pinned securely, insert a hitch pin into the center hole of the telescopic rod, and rotate the turnbuckle on the deadlock to tighten it between the two (2) yokes. There should be a sticker to identify direction, but the idea is to pull the two vertical supports together. This feature not only stabilizes the unit in general, but also provides a safety feature by not allowing the goal to collapse while in its proper position. When the goal is collapsed, the deadlock can be attached to the secondary position on the front yoke and locked to prevent unauthorized use. **See Figure 9 and photos.**



**Figure 9.**



## **IMPORTANT!!**

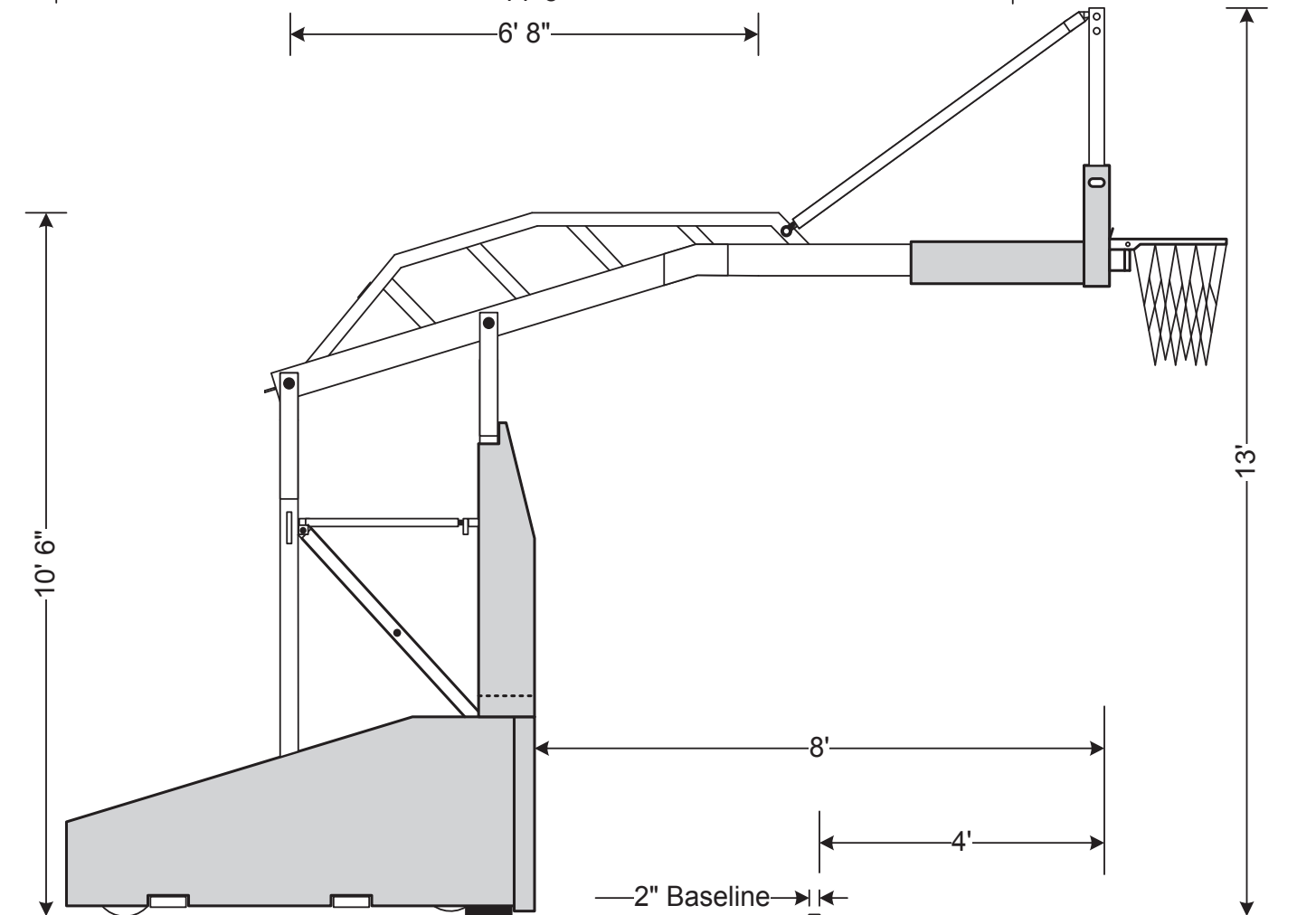
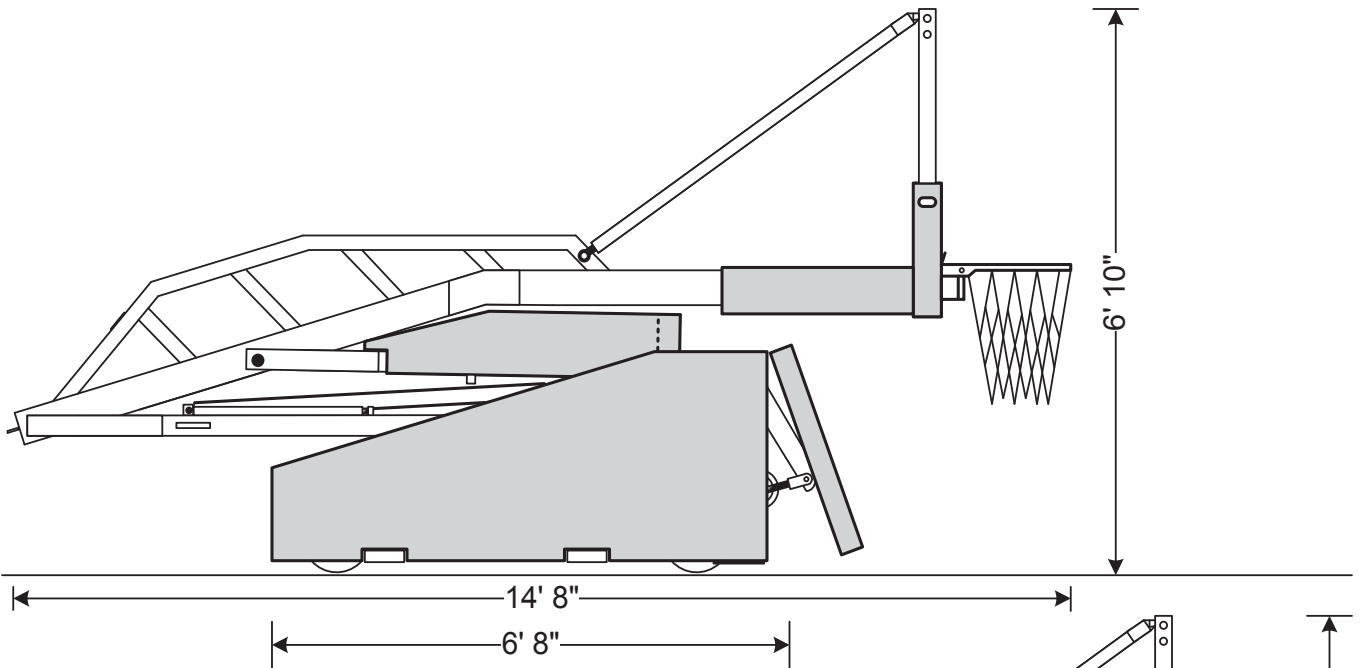
**Never use the backboard to push or pull the portable unit, as unwarranted glass breakage will likely occur!!**

## **WARNING!!**

**DO NOT** hang on the rim or any part of the system including the backboard, “V” arms, or net. **DO NOT** slide, climb, or play on system. When adjusting height, keep hands and fingers away from moving parts. **DO NOT** allow young children to adjust or move system. **DO NOT** wear jewelry (rings, watches, necklaces, etc.) during play. **DO NOT** operate without the proper factory ballast. **DO NOT** attempt to set up or move the system on uneven surfaces. Check system before each use for loose hardware, excessive wear, and general instability, then perform any repairs **BEFORE** play is allowed. **NEVER** play on damaged equipment!

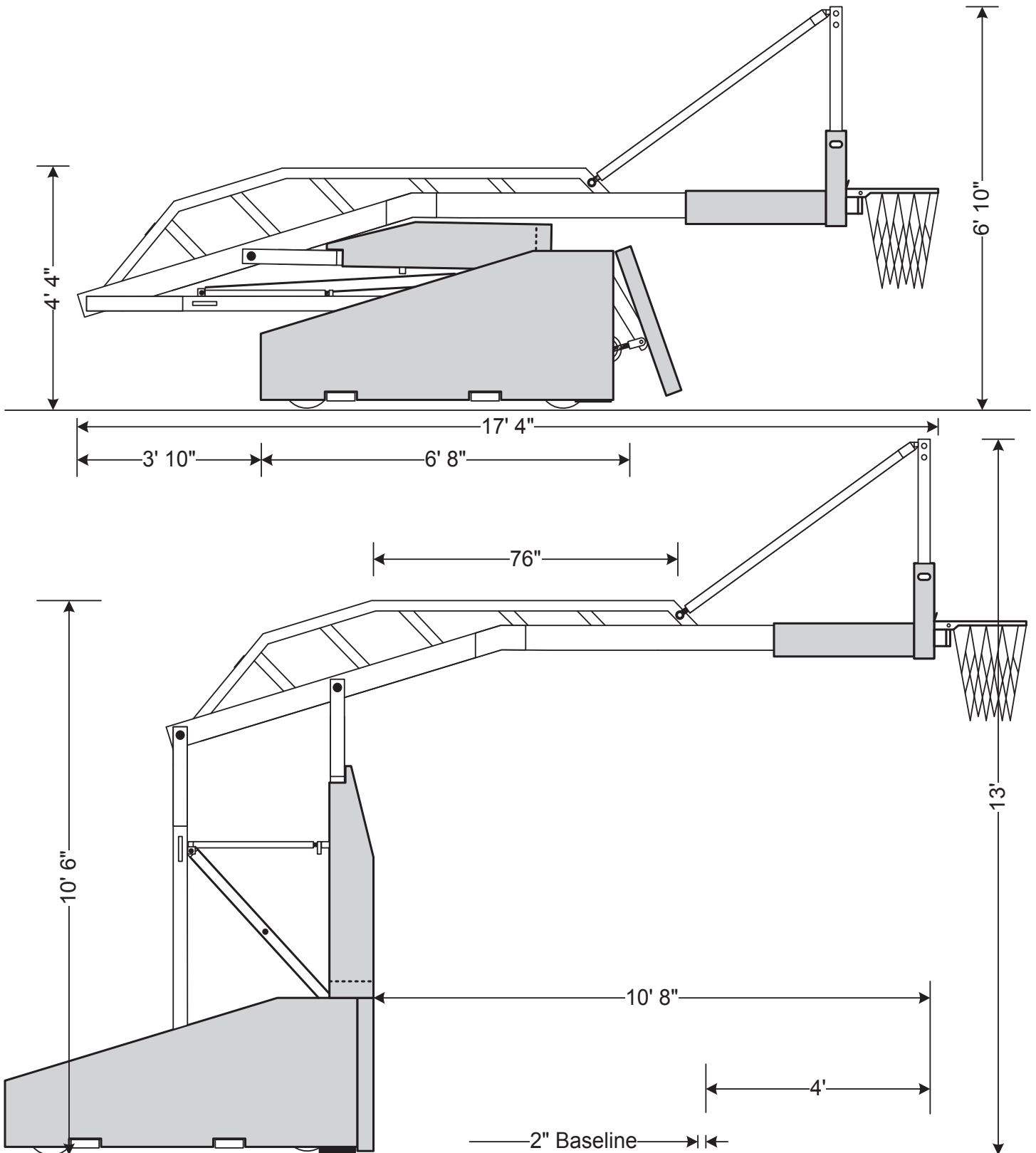
# T-REX AMERICANA

## PORTABLE BASKETBALL GOAL



# T-REX INTERNATIONAL

## PORTABLE BASKETBALL GOAL



# **T-REX** *AMERICANA & INTERNATIONAL*

## PORTABLE BASKETBALL GOAL

