

# Post and Rail

## INSTALLATION INSTRUCTIONS



TRIPLE  
CROWN™  
FENCE

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## INSTALLATION INSTRUCTIONS

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## DEAR VALUED CUSTOMER:

This installation manual is designed to help you build an attractive, professional-looking Triple Crown™ Fence. Simply follow the simple steps outlined on these pages. If you run into a problem you cannot handle, contact the Dealer from whom you purchased your TRIPLE CROWN Fence. They will be happy to assist you.

*Royal Crown Limited*

## GENERAL INFORMATION

*It is critical that you carefully read all applicable installation instructions before beginning.* This manual is designed to help you successfully install your Triple Crown™ Fence. However, there may be variables with your project that are beyond the scope of this installation guide. The success of your installation depends upon the complexity of the project, the type of fence to be installed, your site requirements and your personal skill level.

If you discover upon reading this manual that your project requires a professional installation, please contact your authorized TRIPLE CROWN Fence dealer for assistance.

This manual details the installation tools you'll need, the components that comprise a TRIPLE CROWN Fence and general installation steps. Details on specific fence styles are found *after* the general installation section. Please refer to your chosen TRIPLE CROWN Fence style *before* attempting to install your fence.

### Measurements

All measurements are in English and should be maintained.

Please remember that unlike wood, TRIPLE CROWN Fence vinyl components are pre-cut and installed based on exact measurements. Be certain to measure and lay out your project carefully before beginning to assemble the fence components.

### Gates

Please refer to the detailed TRIPLE CROWN Fence Residential Gate manual for information on assembling and installing your fence gate(s). These instructions are included with your gate materials.

### Damage

Check components and parts for damage or shortages resulting from delivery or shipment. Any claims must be reported promptly to the Dealer from whom you purchased your TRIPLE CROWN Fence.

### NOTE



Wear eye protection when sawing or gluing.

**DANGER** - Check for power and gas line locations before digging. Contact your local utility companies.

# post and rail

## TOOLS REQUIRED

### PLANNING



When you see this Planning symbol, decisions must be made regarding your particular installation.

### FENCING

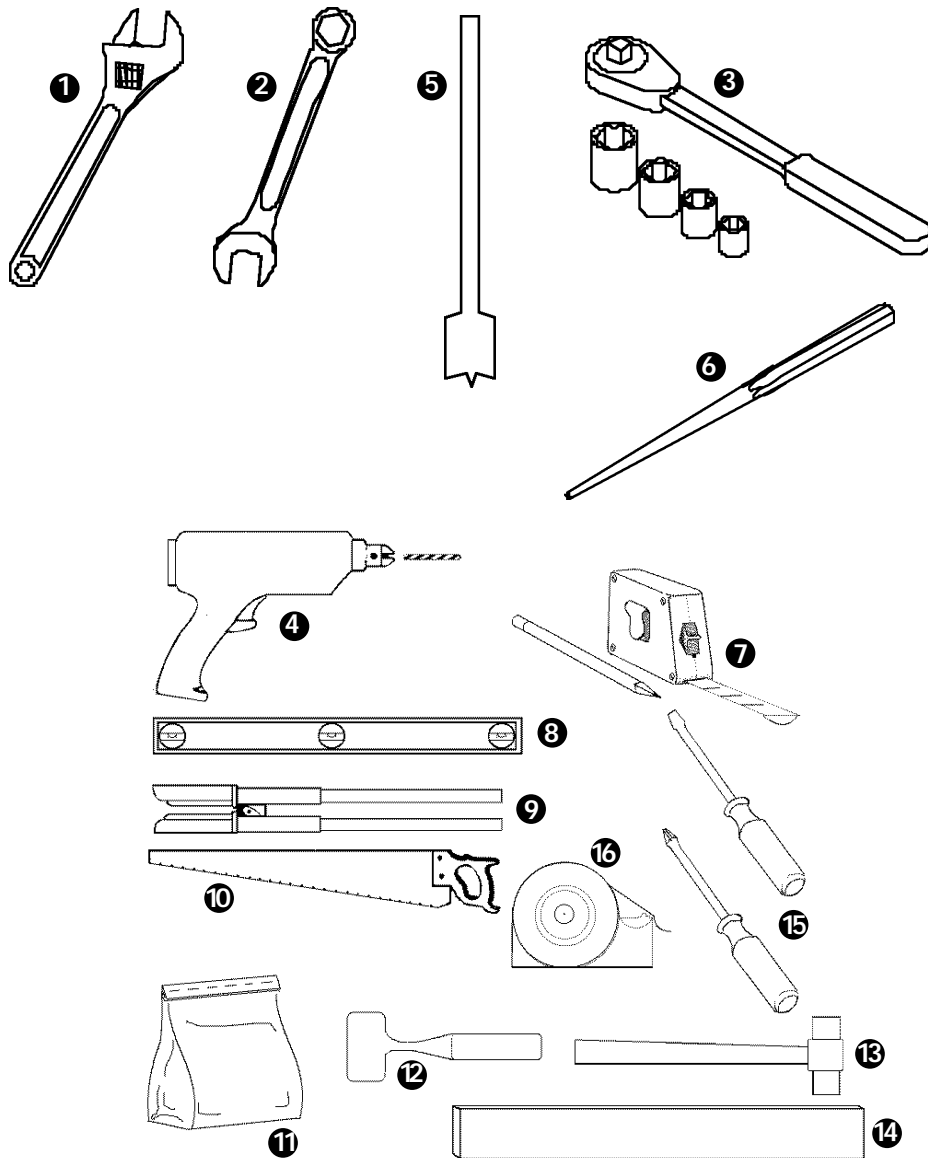
#### LIVESTOCK

#### Triple Crown™

Fence is recommended for most applications where livestock is to be confined. Three or four Rail styles are recommended for most livestock applications. Five Rail styles should be used when separating stallions, bulls, etc. from other livestock.

#### TRIPLE CROWN

Fence is a versatile, easily installed fencing system. Careful planning before beginning the installation will result in an installation that will have a neat, clean, eye-pleasing appearance.



### TOOLS LIST\*

- 1 ADJUSTABLE WRENCH up to 1 1/8"
- 2 BOX WRENCH
- 3 SOCKET WRENCH
- 4 POWER DRILL 3/8" and BITS (various sizes including 11/32" depending on hardware you provide)
- 5 SPADE DRILL BITS 7/8" and 11/16"
- 6 DRIFT PUNCH 6"
- 7 TAPE MEASURE and MARKING DEVICE
- 8 LEVEL
- 9 POST HOLE DIGGER
- 10 HAND or POWER SAW (Saw blade for PVC material or fine tungsten blade)

- 11 CONCRETE MIX
- 12 DEAD BLOW HAMMER (preferred) or RUBBER MALLETT
- 13 SLEDGE HAMMER
- 14 PIECES OF 2" x 4" BOARDS and STAKES
- 15 SCREWDRIVERS, Flat and Phillips Blades
- 16 ADHESIVE TAPE

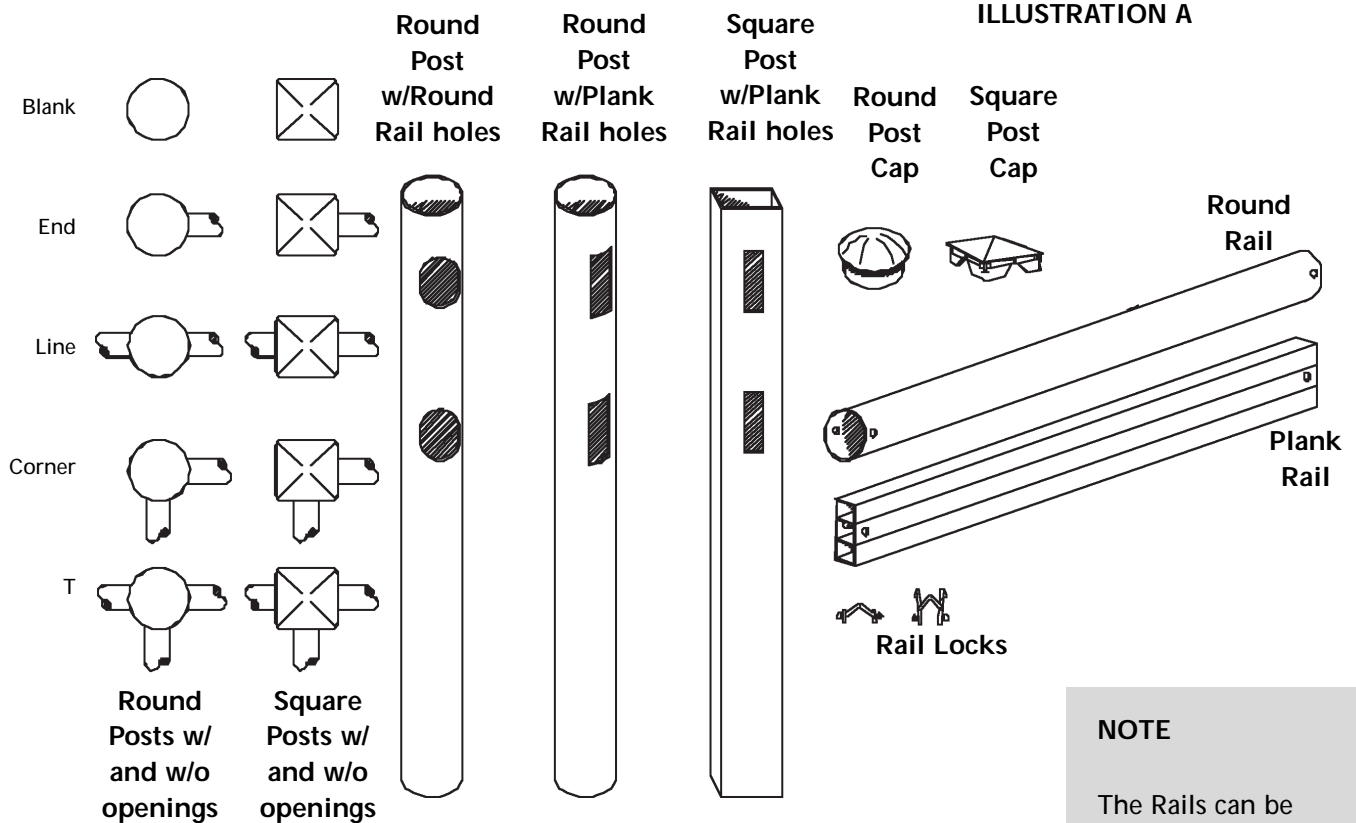
Not all tools may be required. Some tools listed are used to install Post & Rail gates.

# post and rail

## PARTS IDENTIFICATION

### Fence Posts

Fence Posts are available in 4', 5-1/2', 6-1/2', 7', 7-1/2', 8' and 9' lengths with holes punched to accept one to five Rails in the configurations shown in Illustration A. The Posts are available in 5' round or 5' square.



### Round Rails

Round Rails are available in 16' lengths for Posts set on 8' centers. The Round Rails are 3" diameter.

### Plank Rails

Plank Rails are available in 8' and 16' lengths for Posts set on 8' centers. Plank Rails are 1-1/2" x 5-1/2".

### Posts

Round and Square Posts are 5" in diameter and 5" square.

### NOTE

The Rails can be easily shortened to allow for closer post spacing if necessary. See Page 12 for Installation and Shortening of Rails.

# post and rail

## INSTALLATION INSTRUCTIONS

### IMPORTANT

While you can reduce the center-to-center length, never increase it over 8'. Doing so will weaken the strength of the fence and waste rail material, since the Rails are provided in 16' lengths.

### PLANNING THE FENCE LAYOUT



Plan the layout of key Post positions very carefully. Do not start digging until all Post positions are determined. The appearance and structural strength of the entire fence depends on how well you plan its layout.

#### Standard Post Spacing

Triple Crown™ Fence is designed for the Posts to be set on 8' centers. Ideally, the length of any straight run should be equally divisible by eight. But it does not have to be. You can adjust the spacing for less-than-8' centers to create an equal-spacing appearance.

Eight foot centers means from the center of one 5" Post to the center of the next Post.

#### Draw the Plan

Start by drawing a plan on paper so your Posts (except gate Posts) will be on 8' centers. If the distance of each fence run does not allow this, it is easier to shorten the distance of the run than to cut all the Rails to achieve an equal-spacing appearance between each Post.

#### Make decisions on Post spacing based on the following:

Illustration 1 is for a straight run between two End Posts.

Illustration 2 is for a straight run between End Posts with an 8' TRIPLE CROWN Fence Gate.

Illustration 3 is for a straight run between two End Posts with a 6' TRIPLE CROWN Fence Gate.

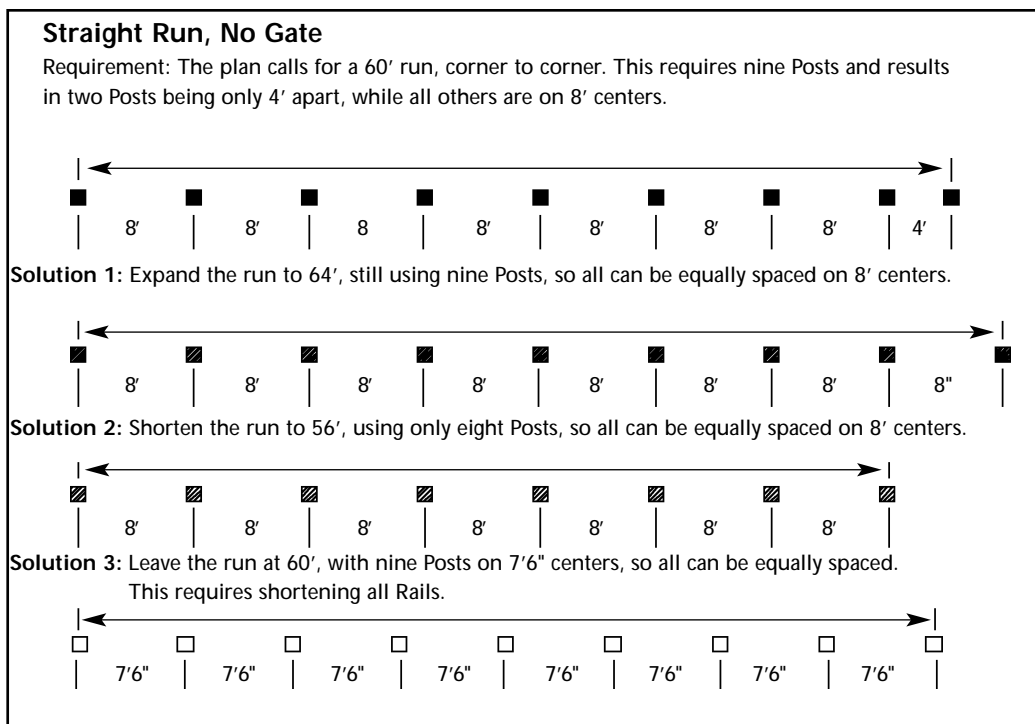
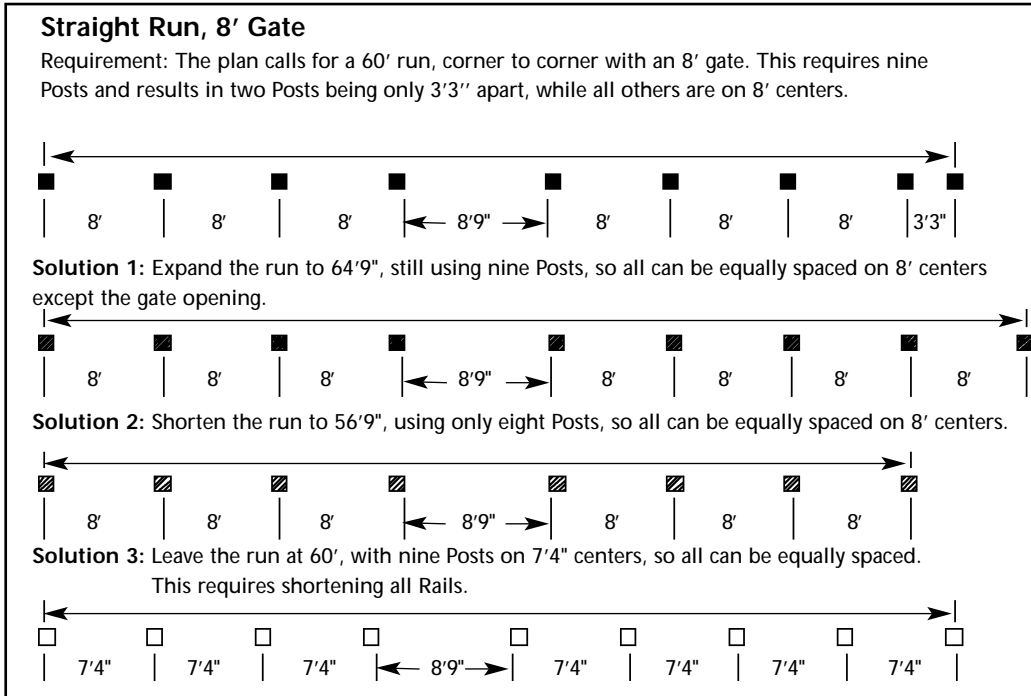
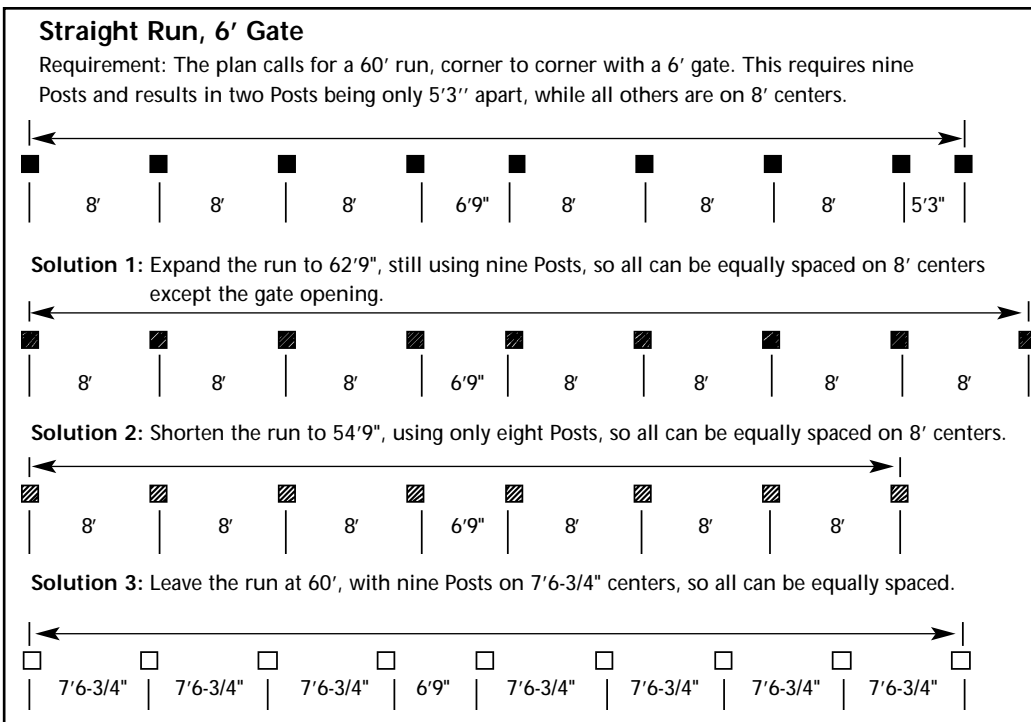


ILLUSTRATION 1





**ILLUSTRATION 2**



**ILLUSTRATION 3**

# post and rail

## INSTALLATION INSTRUCTIONS



### DANGER

Check for power and gas line locations before digging. Contact your local utility companies.

### STAKE OUT THE PLAN

On your property, stake out the corner of your written plan.

Run a line from corner to corner. Be sure corners are square and lines are straight.

Stake the location of the End or Corner Posts based on your plan. Check the spacing carefully.

You are ready to begin digging.

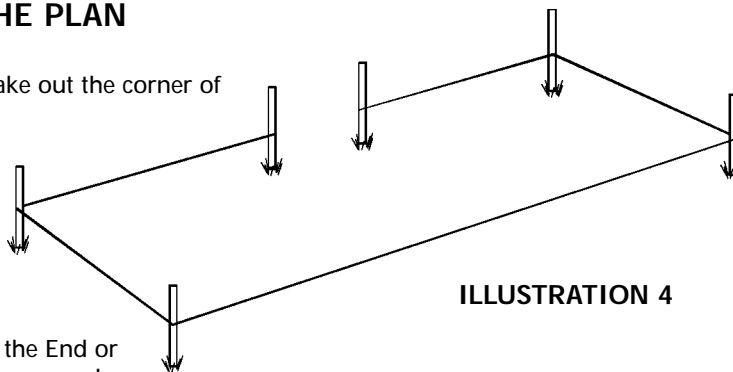
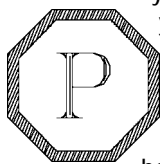


ILLUSTRATION 4

### Planning for Gates



If your plan calls for a gate, you will need to adjust Post spacing as shown in Illustrations 2 and 3. Triple Crown™ Fence Gates require an opening between two End Posts that is more than 8' centers.

The 8' Gate requires 8'9" between End Posts.

The 6' Gate requires 6'9" between End Posts. Between Posts means exactly that, not between centers.

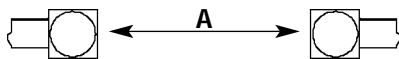
Double Gate installations require a latch gate and a drop pipe gate.

### Opening For Single Gates

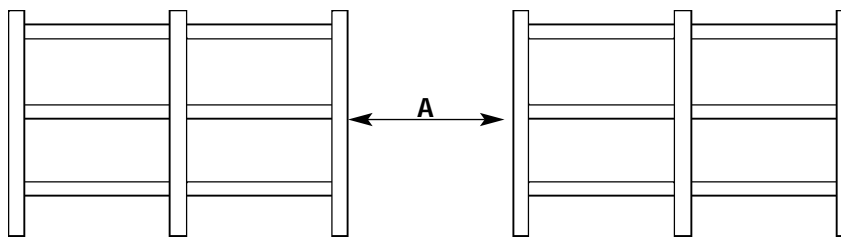
Gate Size	Opening (A) Size
4'	57"
6'	81"
8'	105"
10'	129"

### Opening For Double Gates

Gate 1 Size	Gate 2 Size	Opening (A) Size
6'	6'	160"
8'	8'	208"
10'	10'	256"
6'	8'	184"
6'	10'	208"
8'	10'	232"
4'	6'	136"
4'	8'	160"
4'	10'	184"



Top View  
ILLUSTRATION 5

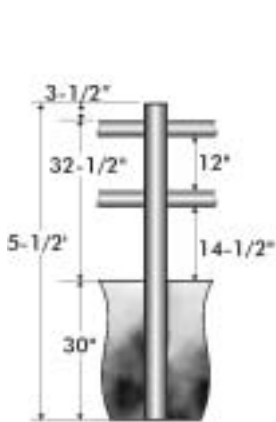


Side View  
ILLUSTRATION 6

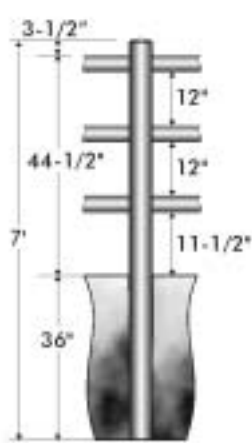
# post and rail INSTALLATION INSTRUCTIONS

## ROUND POST AND RAIL SPACINGS

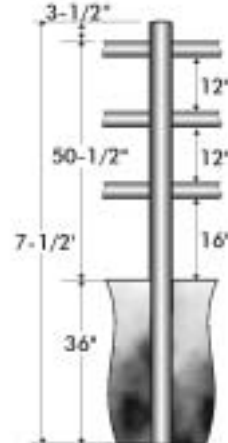
Round Rail Fence with Round Posts.



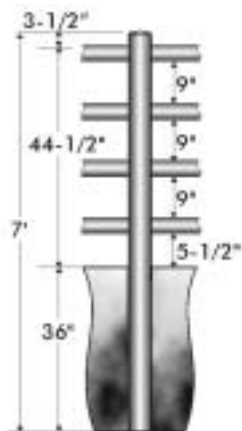
2-Rail w/5-1/2 ft. post



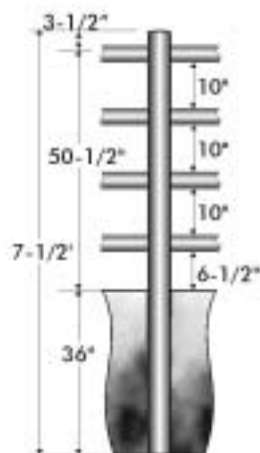
3-Rail w/7 ft. post



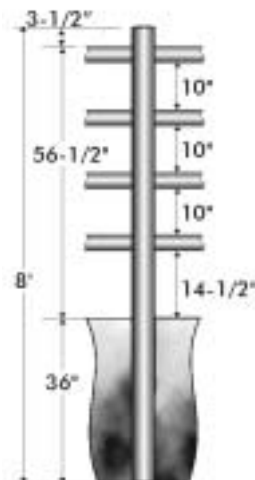
3-Rail w/7-1/2 ft. post



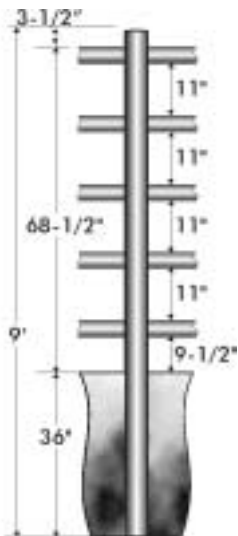
4-Rail w/7 ft. post



4-Rail w/7-1/2 ft. post



4-Rail w/8 ft. post



5-Rail w/9 ft. post

ILLUSTRATION 7

# post and rail

## INSTALLATION INSTRUCTIONS

### POST AND RAIL SPACINGS

Plank Rail Fence with Round or Square Posts

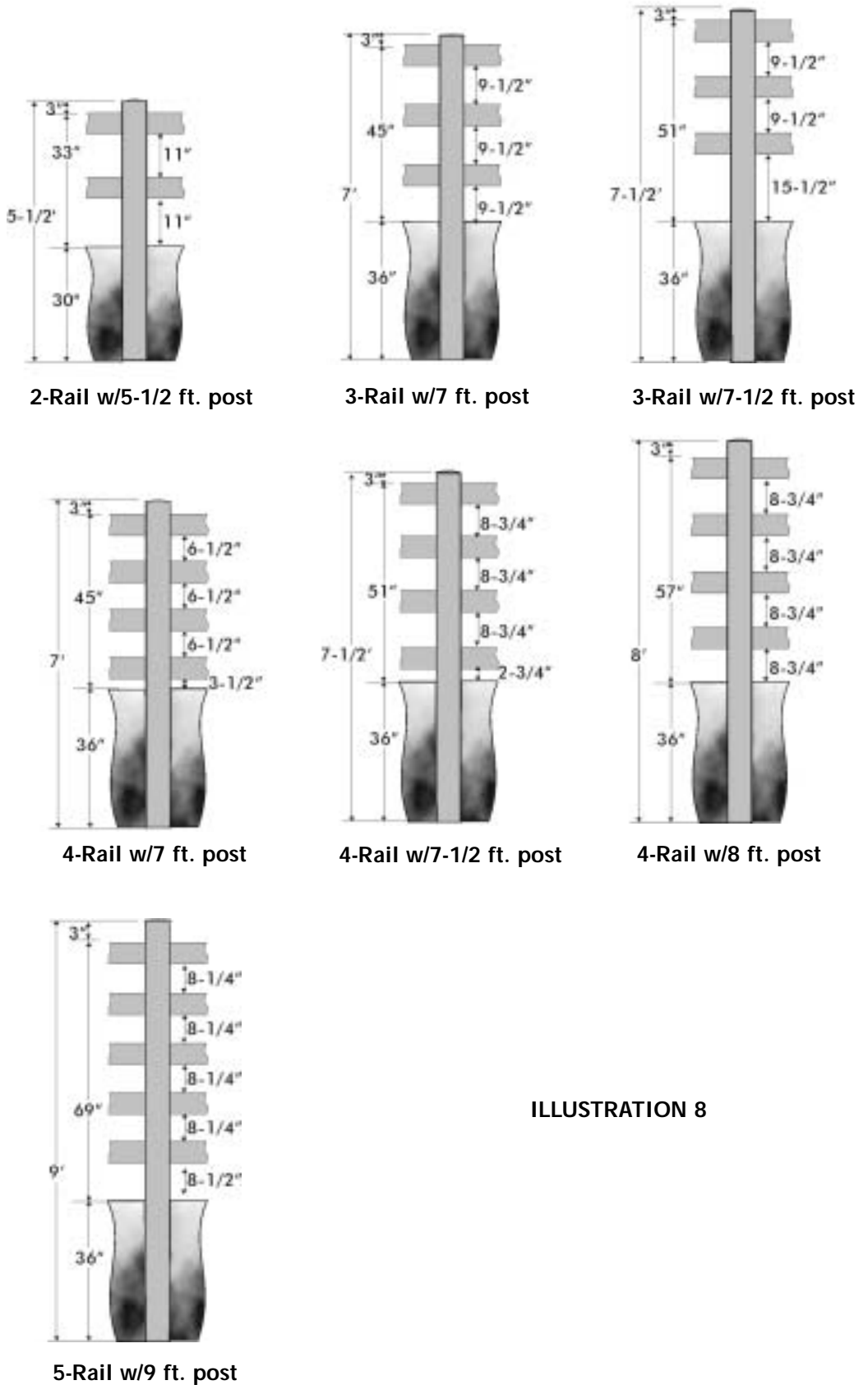


ILLUSTRATION 8

# post and rail INSTALLATION INSTRUCTIONS

## INSTALLING POSTS

### Determine Post Placement

Handle Posts and Rails with care when unloading and moving around the installation. Dragging over dry, rough ground will scratch the surfaces of the Posts and Rails, marring their appearance.

- 1) Determine the locations for Corner Posts and End Posts.
- 2) String a chalk line between each End Post and/or Corner Posts location to make sure that all of the Posts in between will be in a straight line.

### Digging the Holes



Check for power and gas line locations before digging. Contact your local utility companies.

Dig the Post hole straight and in the proper location. The Posts can be set more securely if the Post hole is dug large enough to allow the Post to be set in line with the other Posts and still have clearance on all sides to pack fill dirt.

Observe ground conditions. This fence is designed for its Posts to be set in dirt. However Posts should be set in concrete if any of these conditions exist: areas where the ground remains wet, is extremely sandy, will not provide adequate support, or if the specific installation should require it.

The depth of holes is determined by the style of fence you are installing 2-Rail, 3-Rail, 4-Rail or 5-Rail.

The diameter of each hole should be approximately 9 to 12 inches.

Start digging at a corner. Pull the stake and dig the hole.

After the Post is set, attach a line to the Post so you can maintain a straight fence line from corner to corner. To dig subsequent holes, push the line aside.

**NOTE:** Set the farthest End Post and stretch a line between it and the next Corner Post. To keep your Post Heights consistent, run a second line between them through the top Rail holes.

### Setting the Post

- 1) Before setting the Posts, restring the chalk line to keep the Posts in line as they are set.
- 2) Place the Post in the hole. The Rail holes should be lined up in the direction the Rail is to run.
- 3) Level the Post in all direction using a level held against the sides of the Post. (See Illustration 9.) Begin filling and packing dirt around the Post\*. Only fill and pack a few inches at a time to set the Post most securely. Keep checking the Post for alignment and level as the Post hole is filled and packed.

\*Suggested alternate filling material for packing around fence Posts: crushed stone, combination of dry concrete mix and crushed stone, pea gravel or ready-mixed concrete.

**NOTE:** Three or four Posts can be set at a time and then install Rails, or all the Posts may be set first.

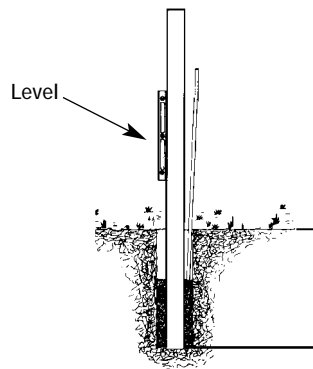


ILLUSTRATION 9

## SPECIAL INSTALLATIONS

The Posts should be set in concrete in installations where the ground remains wet, in extremely sandy ground, or if for other reason the ground will not supply adequate support. Consult a local soil engineer for your soil conditions.

## IMPORTANT

The appearance and structural strength of the entire fence depends on accurate positioning of the Posts. Take time to measure, locate and dig the post holes carefully and accurately.

## NOTE

To increase the strength of the fence where soil conditions permit, dig the holes 6" less than the required depth. Lay a 2" x 4" or 2" x 6" block on top of the Post and drive it in the final 6" using a sledge hammer.

# post and rail

## INSTALLATION INSTRUCTIONS

### ELEVATION CHANGES

When crossing a sharp dip where a Post or Posts must be set lower than those on either side, the lower Posts should be anchored to prevent them from being pulled up and out. This is easily accomplished by drilling a hole through the Post approximately 2" from the bottom and inserting a steel rod or pipe through the Post. The rod should be approximately 18" long. It may be necessary to use concrete also.

When installing TRIPLE CROWN Fence on a hill, it may be necessary to enlarge the holes in the Post by 1/4" and/or use all 8' length Rails, due to the Rails coming in at an angle.

Shortening the Rails can easily be done by using a cross-cut saw, saber saw, or other fine-tooth saw. Refer to Shortening of Rails section. Remember to install Rail Locks.

### SHORTENING FENCE RAILS

The fence Rail can be shortened by cutting it with a carbide-tipped, fine tooth saw blade.

#### Drill Rail Lock Holes

Drill the 1/2" diameter hole 3/4" from the end of the Rail. On Plank Rails it is drilled 2-1/2" from the top of the Rail. On Round Rails it is drilled in the center of the Rail. (See Illustration 10.) See Installing Rail Locks for more information.

#### Shortening of Rails

Rails can be cut with a hand saw, saber saw or rotary saw. With electric saws, use low speed to avoid heat from melting material and bonding to blade. A carbide blade is excellent.

Cut the Rail 2" shorter than the center line distance between the Posts. (See Illustration 11.)

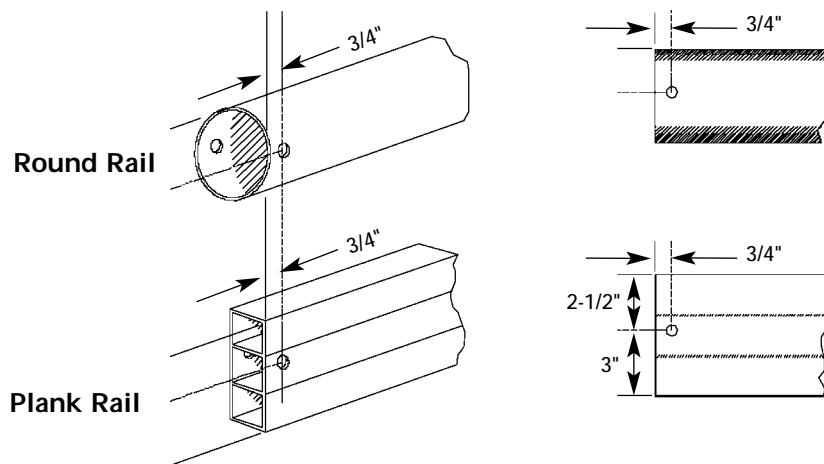


ILLUSTRATION 10

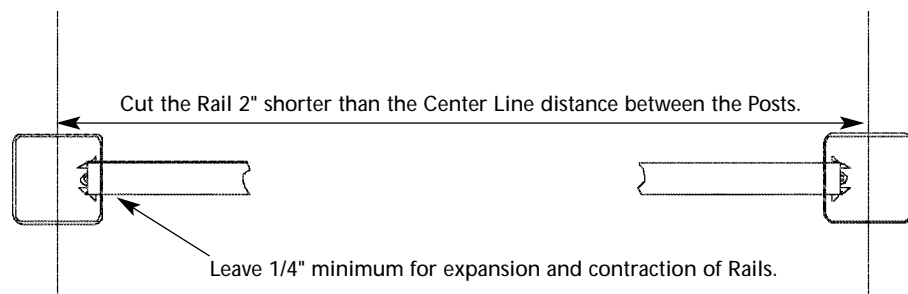


ILLUSTRATION 11

# post and rail

## INSTALLATION INSTRUCTIONS

### INSTALLING RAIL LOCKS

- 1) The open end of the Rail Lock goes in Rail for proper locking. Place Rail Lock in Rail end at an angle.

Press Rail Lock down so locking tab goes through one hole.

Press up on Rail Lock, guiding other locking tab into opposite hole. (See Illustration 12.)

- 2) Slide the end of the Rail in the Corner or End Post. Depress the ends of the Rail Lock and insert the Rail into the Post.
- 3) Put a Rail Lock in the other end of the Rail and insert the Rail into the Post as before. There is room inside the Posts to allow the Rail to slide back and forth enough to fit between the Posts.

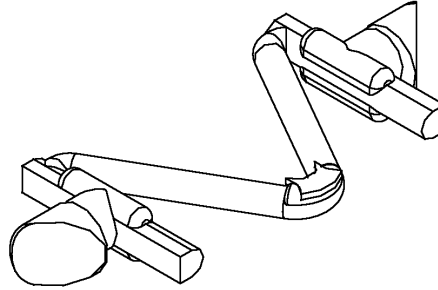


ILLUSTRATION 13

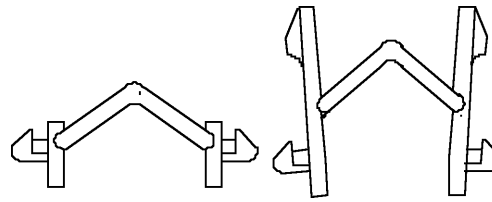
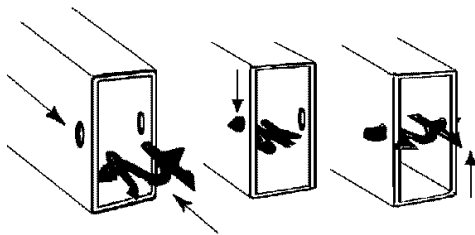
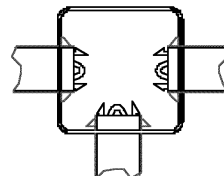
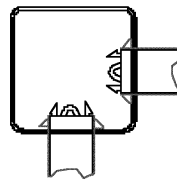
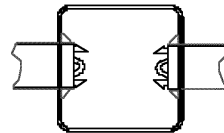
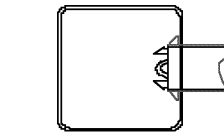


ILLUSTRATION 14



Installing Rail Locks  
ILLUSTRATION 12



Rail Locks - Top View  
ILLUSTRATION 15

### HELPFUL HINT

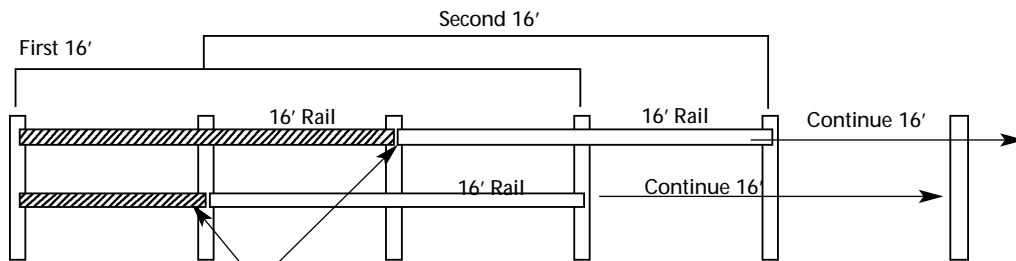
Soapy water applied to the Rails will help them slide through the Posts easier.

### NOTE

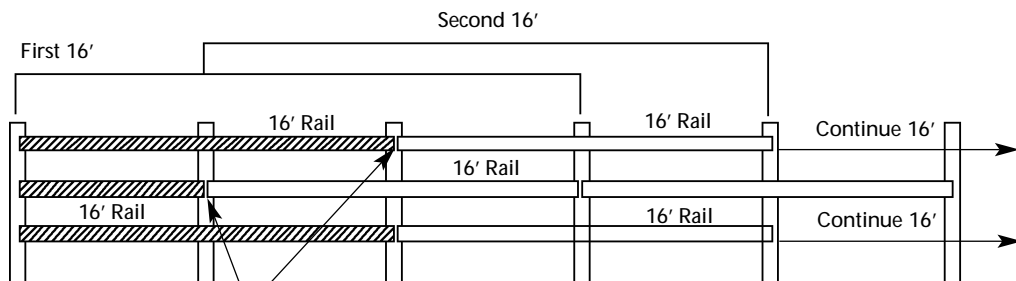
The Rail Locks are designed to allow the Rail to flex and absorb some impacts. Under very heavy impacts, however, the Rail Locks are designed to allow the Rail to pop out of the Post. This pop-out feature helps prevent injury to livestock in panic type situations.

# post and rail

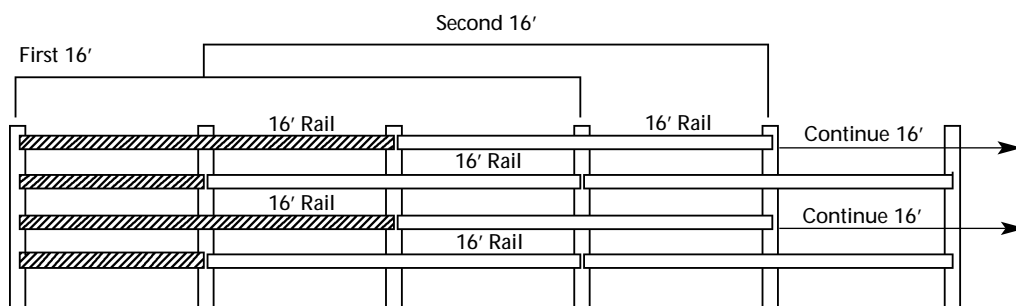
## INSTALLATION INSTRUCTIONS



**2-Rail Stagger** Cut for 8' Centers

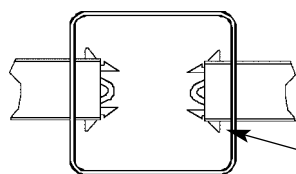


**3-Rail Stagger** Cut for 8' Centers



**4-Rail Stagger**

**Staggering the Rails  
ILLUSTRATION 16**



**Top View  
ILLUSTRATION 17**

Leave 1/4" minimum for expansion and contraction.

### Staggering the Rails

Rails should be staggered as they are installed, so that all Rail joints do not fall at the same Post. This will result in a stronger fence. A few Rails will need to be cut. The staggering sequence for each style of fence is shown in Illustration 16. Shorten the first Rail installed. From there to the end of the line, use full 16' Rails unless the plan is other than 8' Post centers. At the end of the fence line, use the leftover shortened pieces to finish the line.

### Removing Installed Rails

If it becomes necessary to remove a Rail after it has been installed in a Post, pull the Rail out of the Post as far as possible. Insert a key hole saw blade between the Rail and Post and cut the locking tab off. You will need new Rail Locks for re-installing.

Another method is to drill a small hole below the Rail in the Post. This allows a screwdriver to be inserted to reverse the direction of the Rail Lock, then twist and pull sharply on the Rail to remove it from the Post.

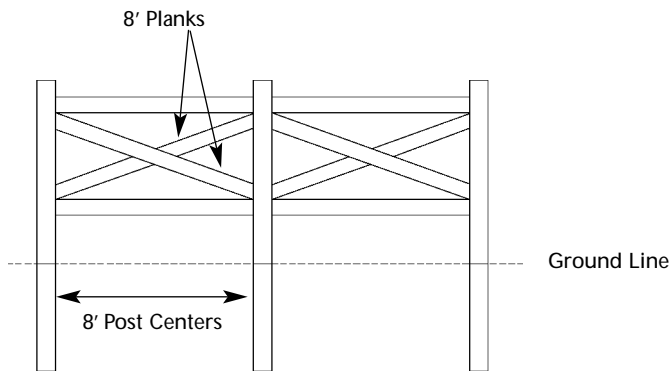
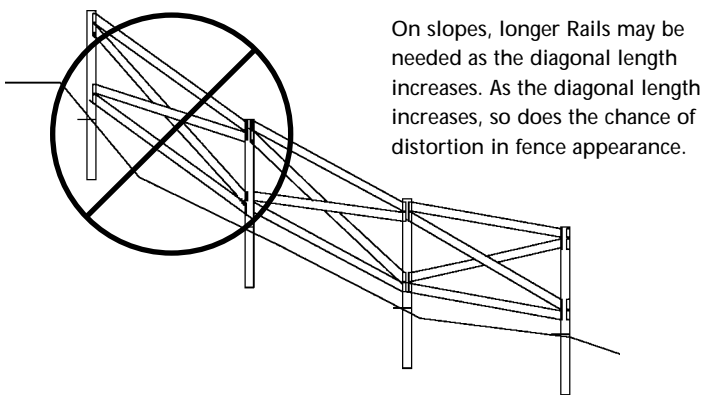
# post and rail INSTALLATION INSTRUCTIONS

## Crossbuck Rail Assembly

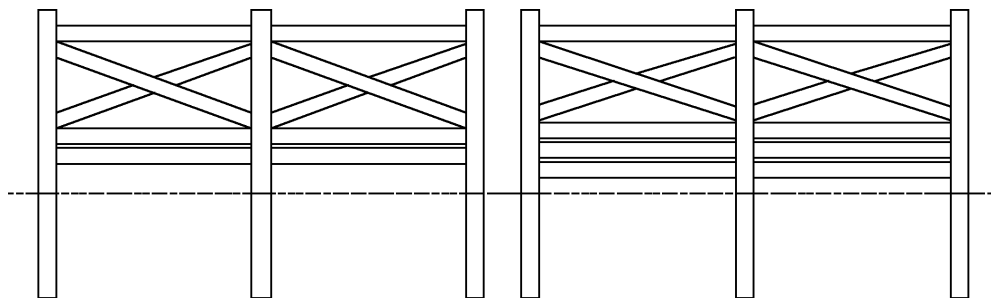
The Crossbuck Fence is custom cut in the field. The 8' plank used for the diagonal.

Avoid using the Crossbuck Fence for slopes steeper than 1-2' drop, as the fence will appear uneven.

This fence uses the standard Rail-Lock system. Refer to page 13 for installing Rail Locks.



**4-Rail Crossbuck**



**5-Rail Crossbuck**

**6-Rail Crossbuck**

# post and rail

## INSTALLATION INSTRUCTIONS

### PVC CEMENT

Follow the manufacturer's instructions when using cement.

### Installing Optional Electric (Hot) Wire

An electric wire may be easily attached to a TRIPLE CROWN Fence. The electric wire may be attached directly to the Post. Use small stainless steel eye screws and run the wire through them. The electric wire may also be threaded through holes drilled in the Posts.

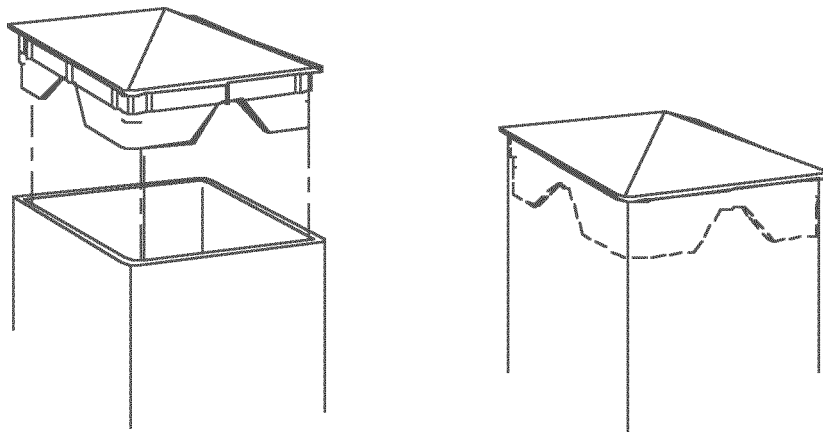
Use appropriate caution in threading the wire and activating it.

### Post Cap Installation

Check the overall installation. If some Posts vary slightly in height causing the Rails to have a less-than-level appearance, tap the taller Posts further into the ground. Then insert the Post Caps on all the Posts.

Post Caps add a finished look to the Posts. They should be glued in place to prevent them from being knocked off.

- 1) Apply a SMALL amount of PVC cement in one spot on the outside of the flange of the Post Cap to prevent theft or loss.
- 2) Insert the Post Cap into the top of the Post.
- 3) Quickly wipe off any excess PVC cement with a clean rag.



Post Caps  
ILLUSTRATION 19

# post and rail

## INSTALLATION INSTRUCTIONS

### CURVED INSTALLATIONS

TRIPLE CROWN Fence can also be installed around curves such as in arenas. We recommend a minimum radius of 35' using 16' Rails.

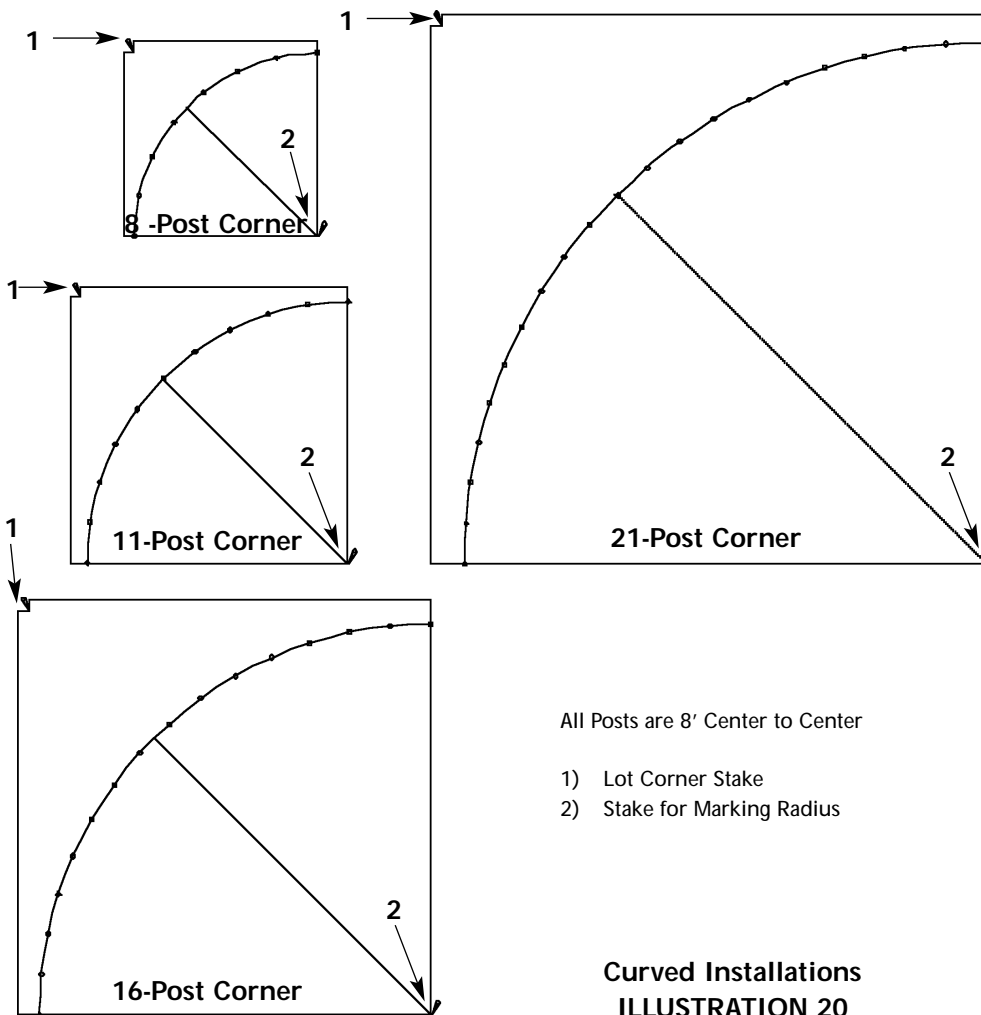
With a radius of less than 35', a distinct kink in the curve appears where two Rails are joined at the Post.

See Illustration 20 below for measurements of four different curves. For curve dimensions other than shown, contact your TRIPLE CROWN Fence dealer.



### HELPFUL HINT

A string or wire with one end looped around a stake and the other around a stick can be used to mark a curved line on the ground for Post location.



All Posts are 8' Center to Center

- 1) Lot Corner Stake
- 2) Stake for Marking Radius

Curved Installations  
ILLUSTRATION 20

# care and maintenance

## INSTALLATION INSTRUCTIONS

### NORMAL MAINTENANCE

Your TRIPLE CROWN Fence is made from stain-resistant vinyl. If you find the rain doesn't keep your fence as clean as you would like, we recommend power washing to remove general dirt and spot conditions. A soft bristle brush and mild detergent can also be used. Stains that are difficult to remove may be treated in accordance with the following recommendations.

Preventing potential vinyl hazards is your best bet in keeping your TRIPLE CROWN Fence pristine over the years. Please carefully read the Potential Hazards section to avoid problems in the future.

### CLEANERS RECOMMENDED FOR STAIN REMOVAL

<u>Stain</u>	<u>Cleaners*</u>
Bubble Gum	30% vinegar and water solution.
Crayon	Lestoil <sup>®</sup> , Simple Green <sup>®</sup> .
Flare Pen	Water based cleaners such as Fantastik <sup>®</sup> .
Lipstick	Murphy's Oil Soap <sup>®</sup> , SIMPLE GREEN.
Lithium Grease	Water-based cleaners such as FANTASTIK or Windex <sup>®</sup> .
Mold & Mildew	Water-based cleaners such as FANTASTIK or WINDEX, 30% vinegar and water solution.
Motor Oil	Water-based cleaners such as FANTASTIK or WINDEX, MURPHY'S OIL SOAP, Lysol <sup>®</sup> .
Oil Stain	Mild abrasive cleanser such as Soft Scrub <sup>®</sup> .
Other	Chlorine-based product such as Tilex <sup>®</sup> and/or white 3M <sup>®</sup> abrasive pad.
Paint	Mild abrasive cleanser such as SOFT SCRUB.
Pencil	Mild abrasive cleanser such as SOFT SCRUB.
Rust	Rust and iron removers such as Iron Out <sup>®</sup> and Snow Bowl <sup>®</sup> .
Sap	Water-based cleaners such as FANTASTIK.
Tar	Mild abrasive cleanser such as SOFT SCRUB, mineral spirits.
Top Soil	Water-based cleaners such as FANTASTIK, MURPHY'S OIL SOAP, LESTOIL.

If you wish to use any cleaner other than those on the recommended list, we suggest that you test it on an inconspicuous area before proceeding. All cleaners should be flushed thoroughly after application.

\* The brand names listed here are for shopping reference only and are not an endorsement for any particular brand over another. All brands listed are the registered marks of their respective companies.

### CLEANING SUPPLIES THAT ARE NOT RECOMMENDED

Acetone-based products such as Nail Polish Remover (damages shine and breaks down vinyl).

OFF<sup>®</sup> Insect Repellent (a plasticiser that breaks down vinyl).

Abrasive Pads and Cleaners (scratches).

### POTENTIAL HAZARDS

TRIPLE CROWN Fence vinyl is very durable but excessive heat, some chemicals and certain environmental conditions can damage it. \*PVC glue will etch the surface chemically. Be very careful when using.

#### Heat

Heat in excess of 200 degrees may cause permanent deformation of vinyl profiles. Common heat hazards are gas or charcoal grills, hot tubs, cigarettes or nearby leaf/trash burning. Allow adequate air space between gas grills or hot tub heating elements. Cigarette burns or charcoal burns may be cut out or sanded lightly to maintain color but will leave a gouged area. The vinyl material will not support combustion but it can be burnt and rendered unusable. Please be careful when burning close to your TRIPLE CROWN Fence.

#### Chemicals & Minerals

Some lawn and agricultural chemicals (fertilizers and pesticides) may cause discoloration when left on the vinyl surface. Be careful when using any chemical products on or around your TRIPLE CROWN Fence. Mineral deposits in your water supply such as iron or rust may also cause staining.

#### Environmental

Severe environmental conditions such as acid rain and other pollutants may have a detrimental affect on vinyl. However, these are rare conditions and should not be an issue for homeowners and businesses.

TRIPLE CROWN Fence has been engineered to provide you with years of lasting beauty and service with little or no care. However should you have cleaning and care related problems, please contact your local TRIPLE CROWN Dealer for additional assistance.



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