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MODERN THREE-BOARD RANCH RAIL

INSTALLATION GUIDE (07/25)

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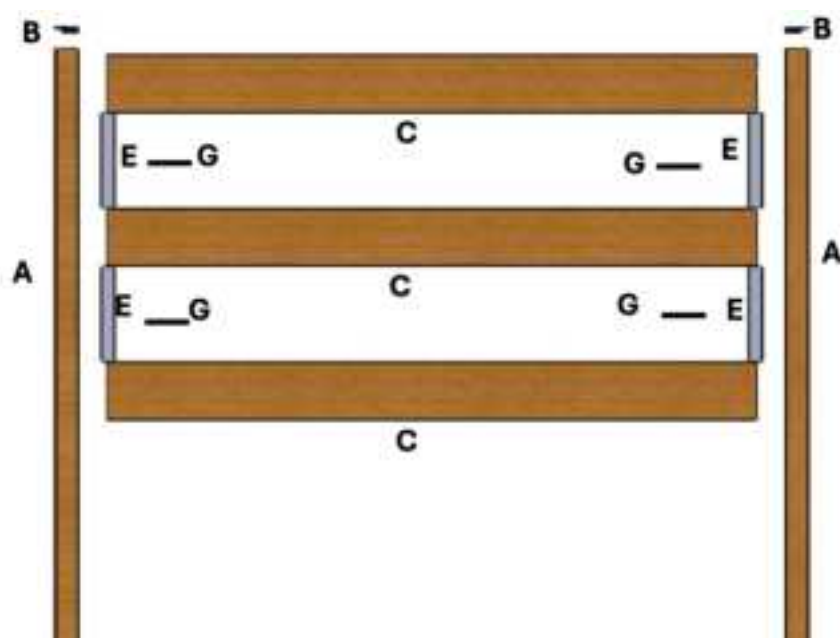
MODERN THREE-BOARD RANCH RAIL (4 ft. H x 5.75 ft. W)

Actual Dimensions: 48" X 69"

COMPONENTS

ITEM	QTY	DESCRIPTION	NC PART
Complete Product		Composite Modern Three Board Ranch Rail (4 ft. H x 5.75 ft. W)	100321XX30600
A	2	U-Post 2.5" X 2.5" X 64"	300722XX064
B	2	Sliding Top Cap	200721BK00000
C	3	Square Edge Board 67" X 6" X 7/8"	300341XX067
D	4	#8 1-5/8" BRONZE STAR TRUSS HEAD (used when joining multiple panels)	ACSCR#8X1-5/8BRONXET RUSS
E	4	9.8" Spacer	200723XX098
F	2	1 3/4 Torx Composite - Screws for Top Cap	ACSCR#10X1-3/4RV-
G	4	Chicago Bugle Head Coarse Thread Drywall - Screws for 9.8" Spacers	RR SPACER SCREWS
H	1	Board Stop Assembly (Pre-Installed)	200720BK00000
I	1	Top Cable Assembly	200030GV06900

**please note
hardware kit
is included
in-between
U-Posts in
box*



BEFORE YOU BEGIN

Verify Underground Utilities

Use aids such as local building departments, utility companies, or utility location services to ensure the area is free from underground lines or hazards.

1. **Locate Property Lines**

Ensure the fence is installed within your property boundaries to avoid encroachment and comply with legal requirements.

2. **Consult Local Building Codes**

Review local codes to ensure the fence and gate installation meets all requirements. Obtain any necessary permits before starting the installation.

3. **Wear Appropriate Safety Equipment**

Always wear gloves, safety goggles, and work boots to avoid injuries during installation.

TOOLS REQUIRED

Tools for Preparing the Fence and Post Burial

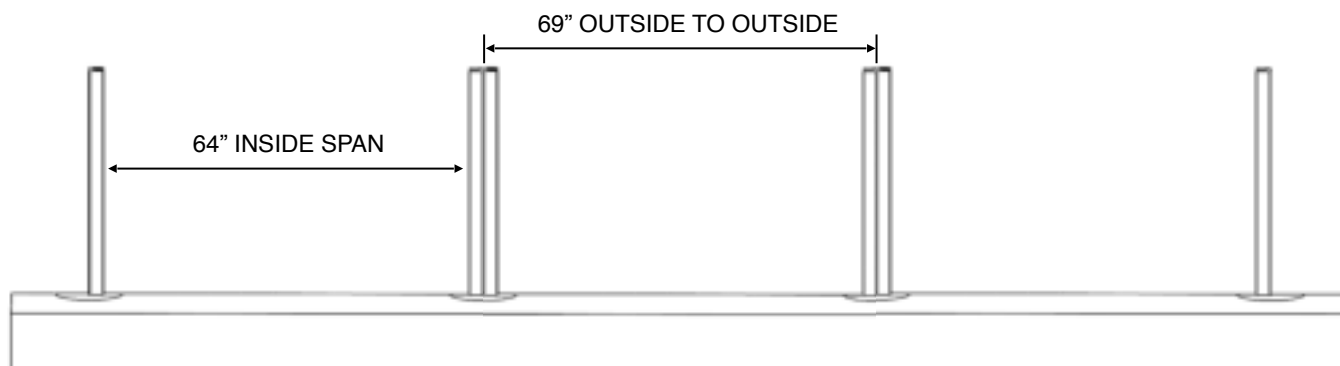
- Tape Measure
- Post Hole Digger & Shovel
- **Post Bubble Level** (for ensuring posts are vertically aligned at 90 degrees)
- Level and String Line
- Wheelbarrow
- Stakes or Markers
- **Torx T20 Bit** (for fastening the self-drilling composite screws provided by NC for both securing the posts and attaching the post cap)
- We recommend using a **power tool** for both operations to ensure proper installation of the fasteners.

FENCE LOCATION

1. **Mark the Fence Layout:** Use stakes and a string line to outline the fence location. The string helps ensure the fence remains straight during installation.
2. **Locate Gate Placement:** Mark the post hole locations for gate posts according to the gate installation instructions.
3. **Mark Corners and Ends:** Identify the locations of corner and end posts.
4. **Mark Intermediate Fence Posts:** Posts should be placed no wider than **69 inches (5.75 feet)** outside to outside posts for each fence panel.

STOP! Are you adding gate? How should you space your posts?

To add a gate, you must use two NC 5x5 Commercial Posts—standard posts won't support the weight. The gate is 48" wide, and each post is 5" wide, so space them 58" apart (outside to outside) to ensure proper hinge and latch function. For added strength, insert a 4x4 treated wood post inside each composite post. For 2 or 3-board Ranch Rail Gates, burial depth is 16.5".



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Understanding Your U-Posts

The **NC patented Universal Post System** is designed for maximum flexibility. Unlike traditional systems that require specific post types (start/end posts, line posts, and corner posts), the NC Modern system uses a **single, versatile U-channel post** that can be adapted for any configuration, simplifying the ordering process and providing flexibility during installation.

Each NC panel system includes **two U-channel posts**, designed with features for smooth installation:

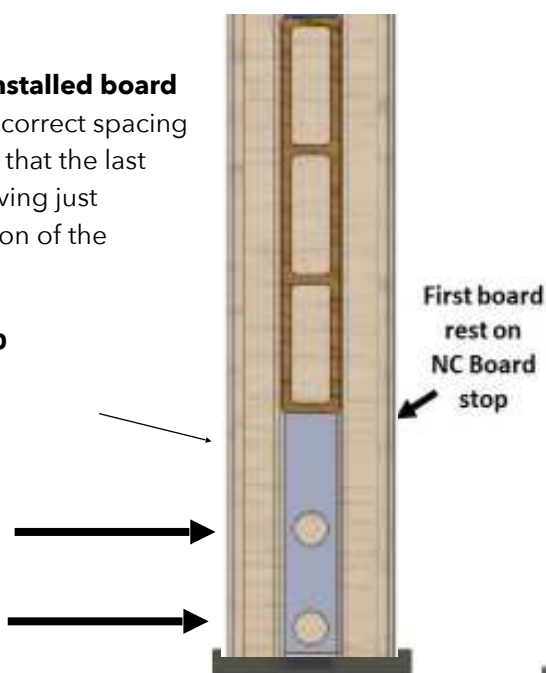
Board Stop:

Each post comes with a **pre-installed board stop**. This helps maintain the correct spacing between boards and ensures that the last board is aligned correctly, leaving just enough room for the installation of the Top Cap.

Board Stop

2" Ground Clearance

3.5" Ground Clearance



Grooves at the Top:

The posts have **grooves at the top** to accommodate the **Top Cable Fastener** during installation. These grooves also serve as the attachment points for the **Top Cap**, which finalizes the installation and gives the fence a finished look.



TOP CABLE GROOVE



TOP CAP GROOVE

Can my ranch rail be Surface Mounted or only Buried?

Our fences are engineered for maximum stability when buried directly into the ground. However, if in-ground installation isn't possible, our posts can still be surface-mounted using common bracket systems. While this method doesn't provide the same level of structural integrity as direct burial, it remains a practical solution. You can either: 1) Attach the standard U-Posts included in any NC Modern Fencing Panel model using a bracket like the RPBZ ZMAX Galvanized Retrofit Post Base for double 2x4 nominal lumber or, for more stability, we **RECOMMEND** purchasing our NC Commercial-Grade Posts to place between each panel, anchoring them using the E-Z Base Black Powder-Coated Post Base for 4x4 Nominal Lumber. For added strength, we recommend inserting a 4x4 pressure-treated wood post inside the bracket and the composite post in this configuration. This ensures better support for screws and results in a sturdier overall installation. Additionally, securing the fence to an adjacent structure—such as a house, wall, or corner—will help minimize movement, as angles provide natural reinforcement. *Please note surface mounts will void your warranty for any structural issues.*

Can I paint my fence?

No! Painting is not advisable. Our products come pre-finished with durable, lasting color and a textured, non-reflective surface. They're designed to maintain their appearance without the need for painting, staining, or sealing—just occasional cleaning with soap and warm water.

Prepare Your Posts

For **Multiple Panel Sections**:

- **Note:** When installing multiple panels, bolt the posts together before the burial process. This ensures proper alignment and simplifies installation.

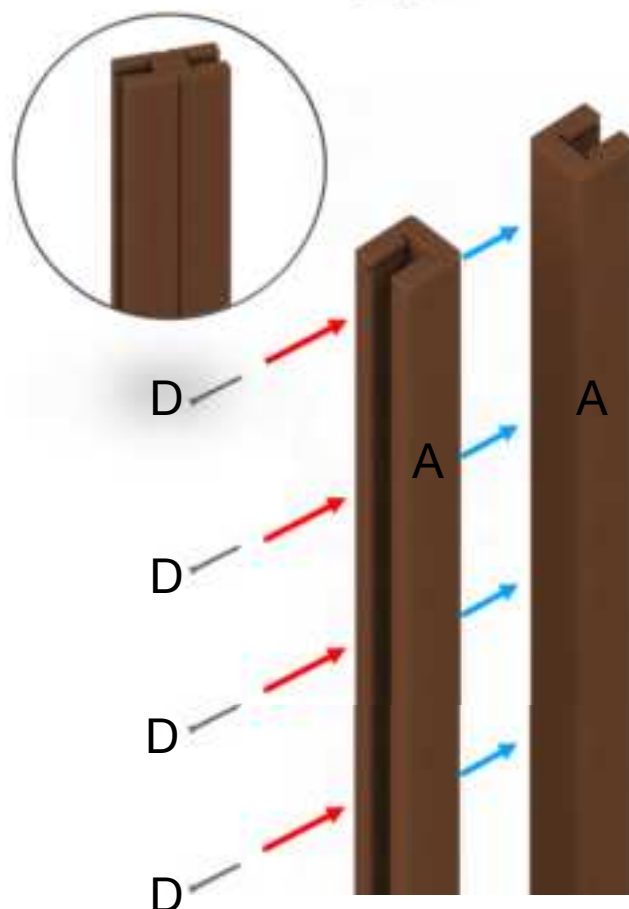
Procedure for Line Sections, Corner Posts, and End/Gate Posts:

The **NC system** uses a patented design with a **versatile U-channel post**. The **5 composite screws** provided should be used to assemble the posts in the desired configuration. We recommend using a **Torx T20 Bit** and power tool for faster, secure assembly:

- **For Line Sections:** Install two U-channel posts **back-to-back** to seamlessly connect panels.
- **For Corner Posts:** Install two U-channel posts **adjacent to each other**, ensuring correct orientation for corners.
- **For Start/End or Gate Posts:** Install a **single U-channel post** at the start, end, or gate section.

Do I need to buy a line, corner and start/end post?

No! Our patented U-Post system is designed for ultimate versatility, allowing you to use the same post for corners, line posts, and start/end posts with ease. This simplifies installation and reduces the number of different components needed.



Screw the Adjacent U-Channel Posts Together

If you are placing panels next to the other it is important to screw the posts together for maximum stability. Use the included four #8 1-5/8" Truss Head Screws (D) to secure the posts.

1. Place the first screw (D) toward the top of the inside of the U-Post (A). Make sure it is below the siding top cap routing!
2. Place the second screw (D) toward the bottom of the U-Post (A) just above your grade line.
3. Place the other two screws evenly between the top and bottom as pictured on the right.

Can I cut my fence to adjust the length?

Yes, our proprietary wheat-based composite formula can be cut just like wood using standard wood-cutting tools. When cutting a fence panel or ranch rail down, make sure to cut all boards at the same place to avoid creating an uneven alignment. First, you must remove the bottom cable by cutting it at the board stop. Then, once the panel is cut to your desired length, you will also need to adjust the Top Cable Assembly, which helps keep the posts plumb and properly spaced. To do this, cut the top cable to the desired length and remove the top cable bracket at the end, as it will need to be replaced. You will need to purchase an aluminum ferrule and stop set to reattach the shortened cable, ensuring it functions correctly. You can reattach it by hitting it with a hammer to crimp it back into place. Following these steps will help maintain proper spacing and stability during your fence installation.

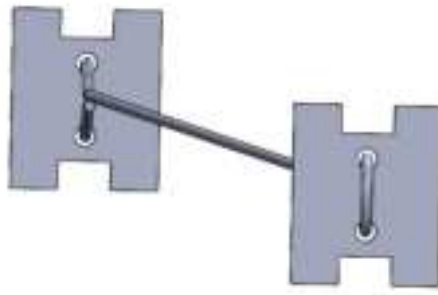
Precise Post Spacing for Installation

NC Top Cable Solution

Another patented feature of the NC system is the **Top Cable Fastener (I)**, which ensures precise post spacing during installation.

1. Precise Post Spacing During Installation

- The **Top Cable system (I)** consists of two H-type fasteners and a **69-inch cable** connecting them. This ensures the precise spacing required for the fence panels to function properly.
- **Install the Top Cable before the burial process:** Insert the H-shaped fasteners (I) into the grooves of the U-shaped posts (A). Spread the posts apart until the cable is **fully extended**. This keeps the posts aligned and properly spaced during this critical stage. the posts are spaced at exactly **69 inches**.



2. Maintaining Post Alignment During Curing

The **Top Cable Fastener** should remain in place throughout the concrete curing process. This keeps the posts aligned and properly spaced during this critical stage.

Note: The Top Cable Fastener is essential for maintaining the correct spacing for the free-floating board system, allowing the boards to move slightly without binding or falling out.

- **If Spacing is Too Short:** Boards will not fit correctly between the posts.
- **If Spacing is Too Wide:** Boards may become loose and potentially fall out of the channels.

Post Installation

1. Dig Post Holes to the Correct Depth

Dig **12-inch diameter holes** at least **26 inches deep** to ensure proper stability when burying posts **24 inches**.





1. **Add Gravel for Drainage**

Pour **6 inches of gravel** into the bottom of each post hole to improve drainage and ensure long-term stability.

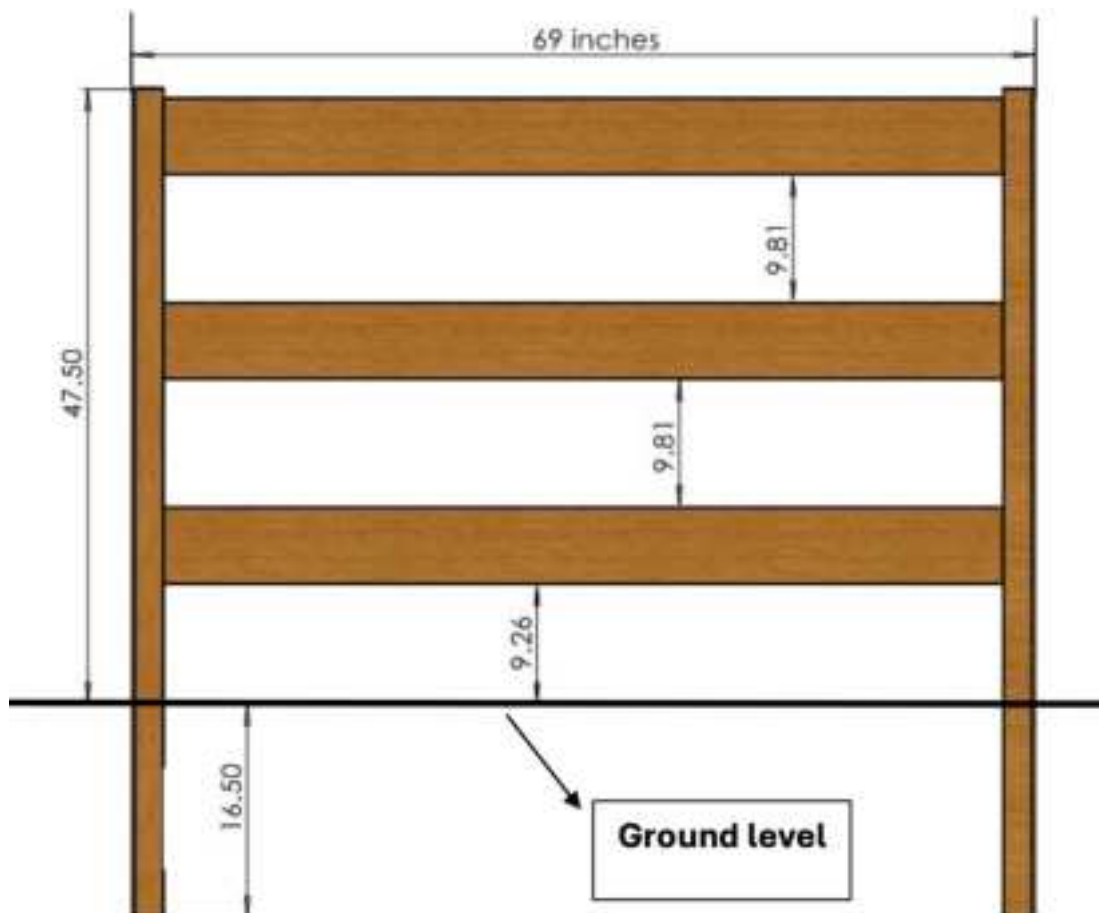
2. **Set the Posts in Concrete: Two Critical Factors to Monitor**

When setting the posts in concrete, monitor two critical factors to ensure the correct installation:

- **1. Precise Post Spacing:**

Use the **NC Top Cable Fastener** to ensure posts are spaced correctly at **69 inches**. Before pouring the concrete, ensure that the **Top Cable is fully extended** to lock the posts in place at the correct distance, allowing proper fence panel installation. Keep the **Top Cable tensioned** throughout the curing process to prevent any movement or misalignment of the posts.

5. Allow the Concrete to Cure: Allow the concrete to cure for 24-48 hours before proceeding with installation.



1. **Maintain Proper Post Alignment and Spacing**

Keep the **Base Cable Assembly taut** to ensure the posts remain correctly spaced. Additionally, continue to use the **Top Cable Fastener** to maintain proper post alignment during the curing process.

2. **Allow the Concrete to Cure**

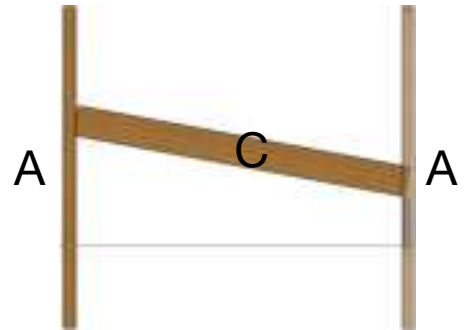
Allow the concrete to cure for **24-48 hours** before proceeding with installation.

Fence Board Installation

The **NC system** comes pre-assembled with a **Board Stop**, which ensures correct spacing for the boards.

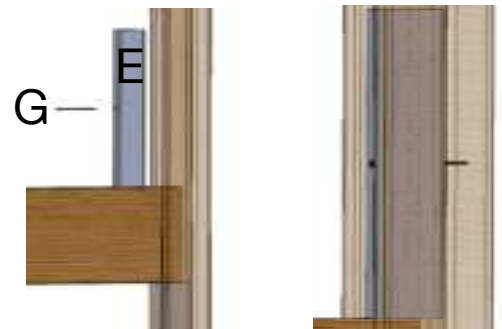
1. **Install Bottom Square Edge Board (C)**

- Hold the bottom board (C) at a slight angle and insert one end into the U-shaped post (A) and place the other end of the board into the opposite post.



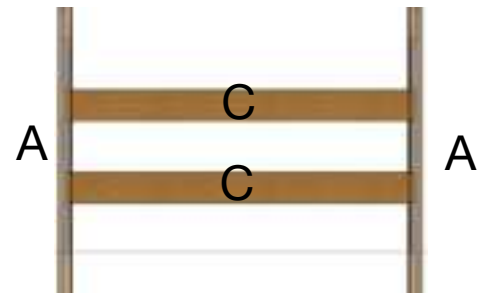
2. **Install NC Spacers**

- Attach screw (G) through one of the 9.8" Spacers (E).
- Insert spacer on top of the first board installed into the U-Post. Secure with one of the screws (G) for the 9" Spacers (E).



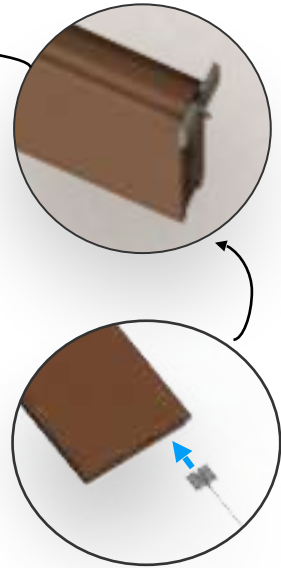
3. **Continue Adding Square Edge Boards**

Repeat the process with each Square Edge Board (C) and 9.8" Spacer (E), using the spacers to maintain alignment.



4. **Install the Top Cable Inside the Top Cavity of the Last Board**

- Before installing the last board, insert the **H-shaped fasteners** attached to the **Top Cable** into the top cavity of the board. Once secured, slide the last board into place.



5. **Ensure Proper Space for Top Cap Installation**

After the last board is installed, ensure a proper gap for installing the **Top Cap**.



Top Cap Installation

1. **Install the Top Cap (B)**

Slide the **Top Cap (B)** into the routed space at the top of the U-channel posts.

2. **Secure the Top Cap**

Fasten the **Top Cap (B)** using the provided 1-3/4 inch composite screws (F) with a **Torx T20 Bit** and power tool.



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