RANGE SYSTEMS™

Pro-Touch+ Gen 1
Electric Target Retrieval System
Operation and Maintenance Manual

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TABLE OF CONTENTS

Introduction ..... **Page 3**

Basic Components ..... **Page 3**

Features and Specifications ..... **Page 4**

Controls ..... **Page 4**

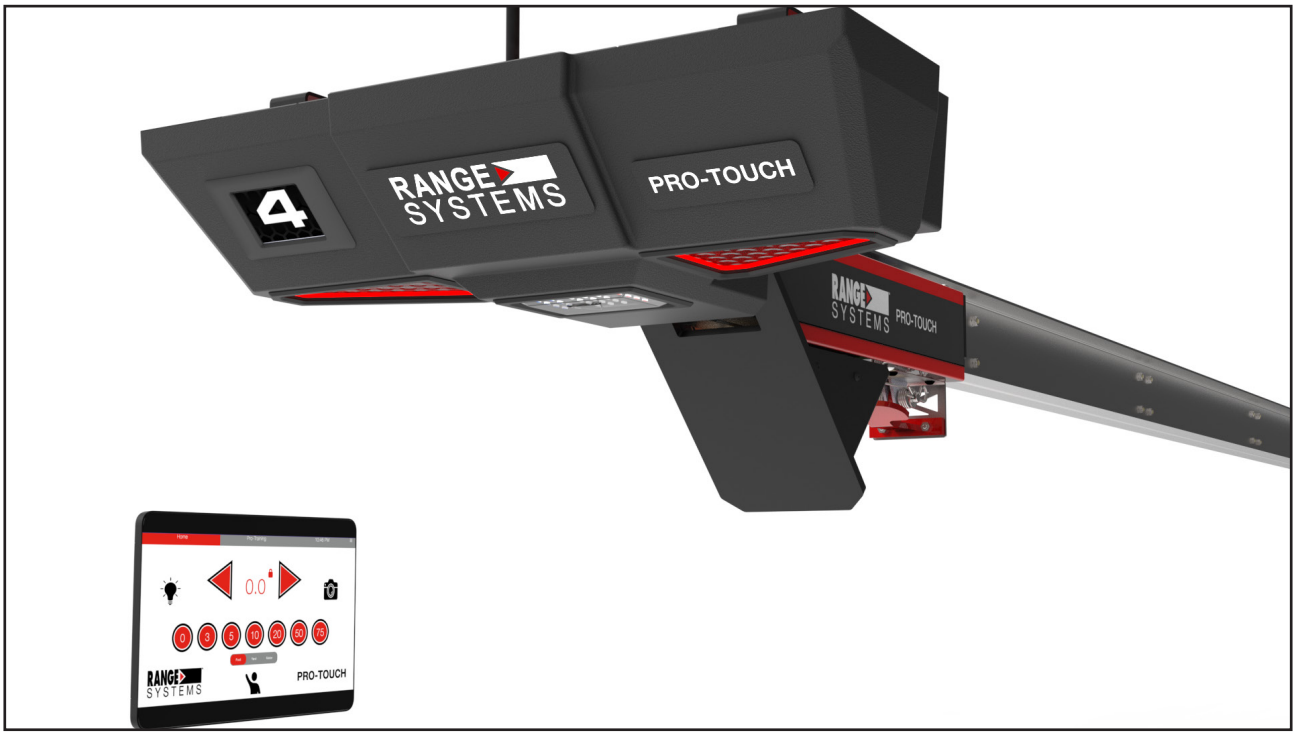
Settings ..... **Page 5**

Wireless Charging ..... **Page 9**

Maintenance ..... **Page 10**

Changing a Drive Cable ..... **Page 11**

Service/Replacement Parts List ..... **Page 12**



Introduction

The Pro-Touch + enhances the Pro-Touch system with advanced capabilities, including integrated target lighting, target camera, carrier strike detection, and a one-hand operated target clamp — delivering a full-featured target retrieval system.

To operate the system, the user interacts with the large touchscreen located in the shooting stall. From this interface, users can access multiple menu options that allow them to move the target to standard, predetermined distances using feet, yards, or meters. The target can also be moved to a custom distance along the track using the arrow controls, providing complete control over positioning.

The touchscreen also allows the user to control the lane lighting, including white, red, and blue options.

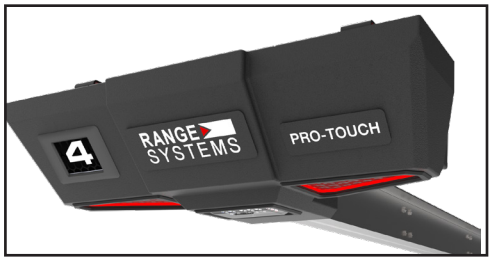
Attaching a target to the carrier is simple—press up on the spring-loaded clamp and insert the target backer. The use of optional clamp extenders (Range Systems part number XA1036) is recommended is recommended to help prevent errant rounds from striking the target carrier.

Thank you for choosing the Range Systems Pro-Touch Target Retrieval System.

Basic Components of the System

Drive Unit

Mounted near the firing line. Houses the drive motor, lane lighting, lane numbering as well as the control functions for the main systems and the touchscreen.



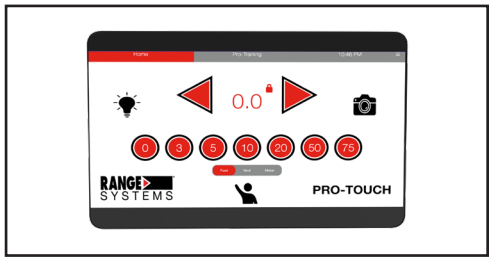
Target Carrier

Mounted on the track designed to hold the target and move back and forth on the track. Moving your target to selected distances away from the shooter.



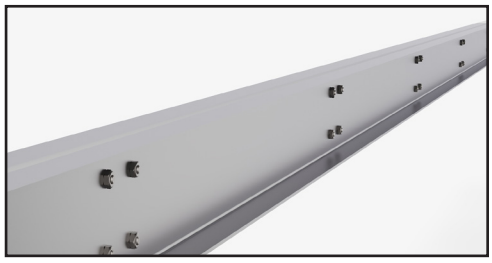
Touchscreen

Primary interface for the user to control the multiple functions of the target system. The Touchscreen allows the user to move the Target Carrier to different locations on the track, as well as to control the lights mounted on the drive unit. When paired with a Master Controller, it also allows the user to request assistance without leaving the shooting stall.



Track

The structure that the Target Carrier rides on when going back and forth. This multiple section track allows for easy installation and is suspended from the ceiling by easy to install track hangers.



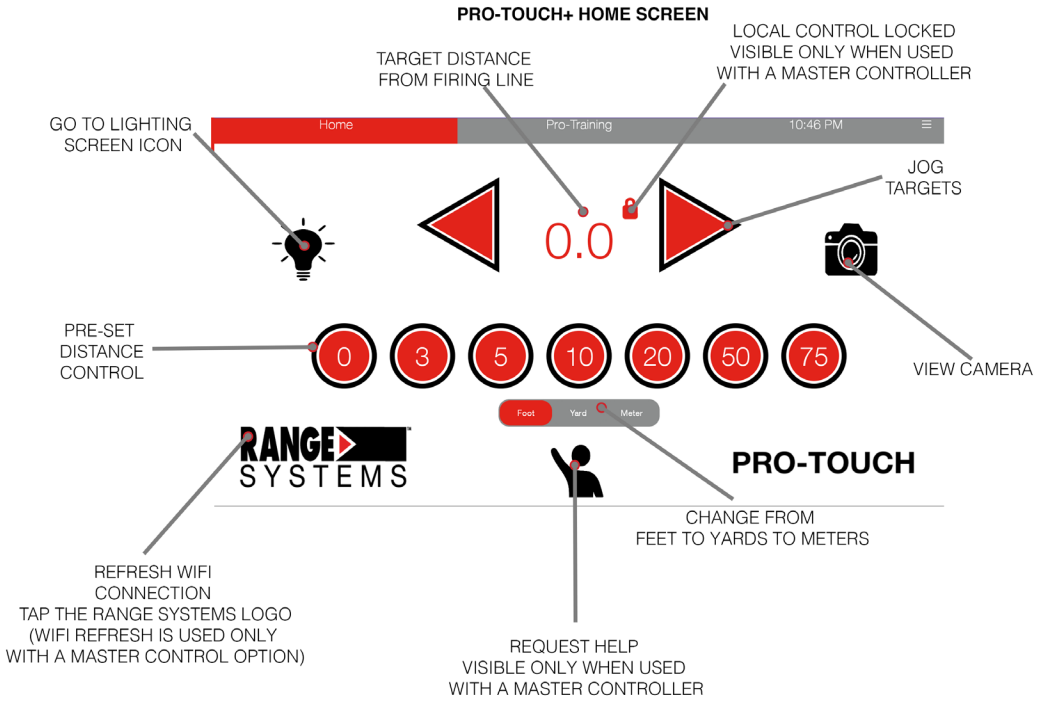
Features and Specifications

- Shot View technology allowing shooter to view the target from the local controller
- Carrier Strike Detection
- Automated wireless charging
- Hybridrive carrier movement
- Target movement controlled by intuitive Touchscreen
- Touchscreen control of multiple LED light options of white, red, blue
- Variable target distances from 0 – 150 feet (dependent on track length)
- Target Carrier protected by AR500 plate
- Target Carrier travels 25 yards in 7 seconds with fast ramp up and ramp down speeds
- One handed target clamp operation
- Heavy duty 11 gauge user replaceable zinc plated track sections
- Uses 110-240 VAC 50-60 Hz power, rated at 3A @ 120 VAC

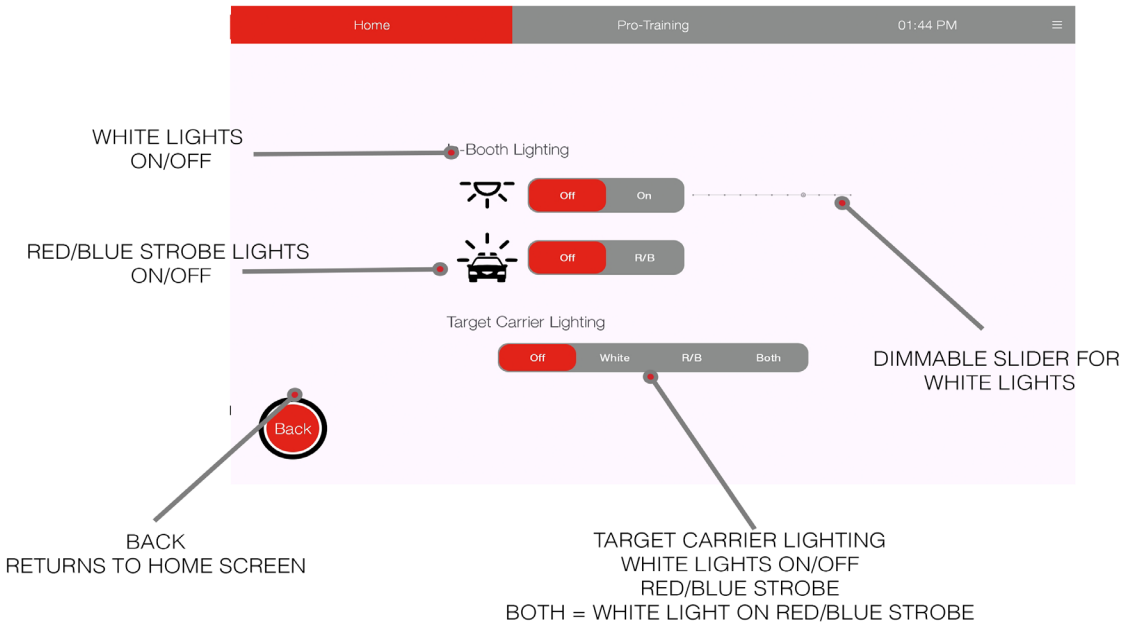
No more than 4 lanes per 20A circuit are recommended.

Pro-Touch+ User Controls

Home Screen



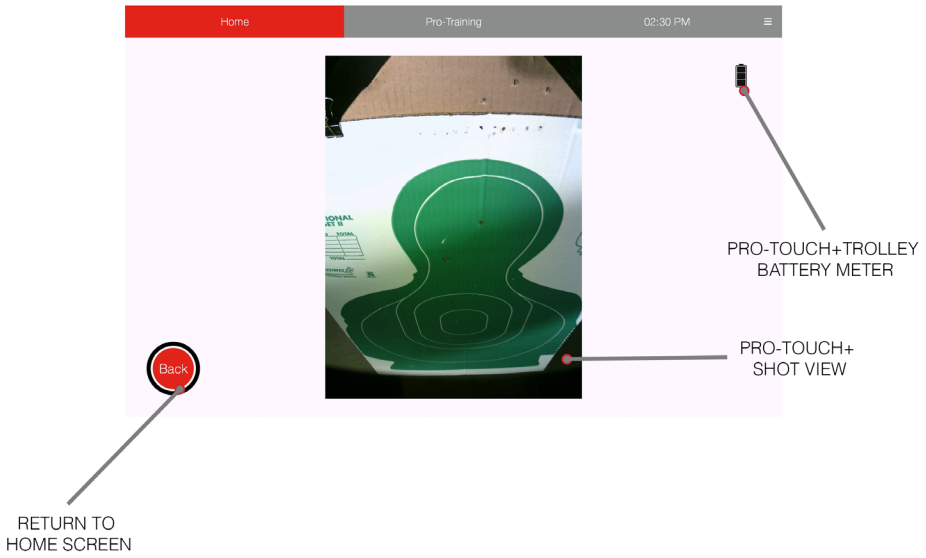
Lighting Screen



Pro-Training Screen (In Development)



Camera View Screen



Shot View

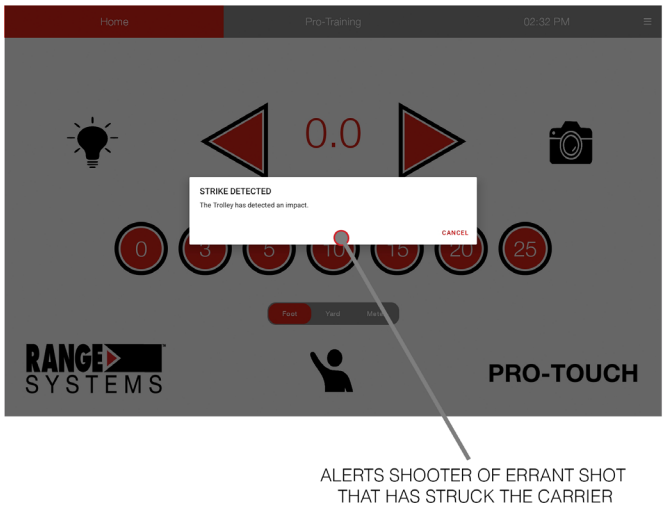
Allows shooters to view the target directly on the local screen without returning it to the firing line. This screen is accessed from the home screen by pressing the camera icon. (see Home Screen on page 4)

Zoom

- Pinch to zoom for a closer look at the target and shot placement.

Strike Detection Alert

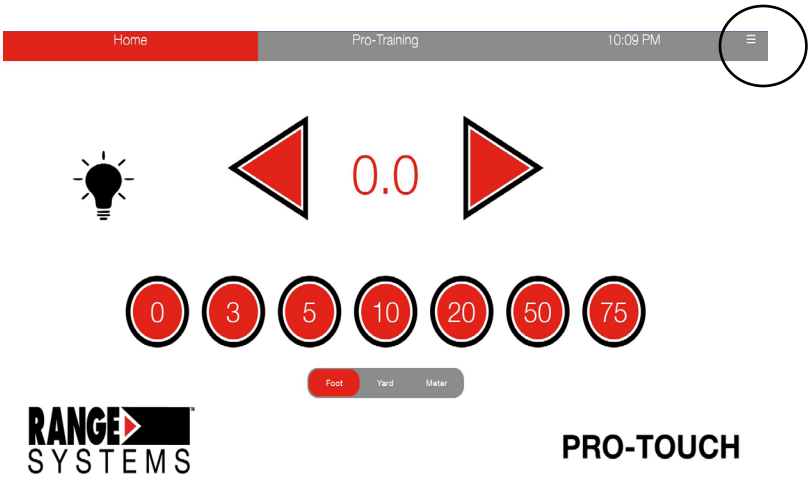
- Whenever the carrier is struck by an errant round, an alert will automatically appear on the local controller.



Pro-Touch Settings Screen

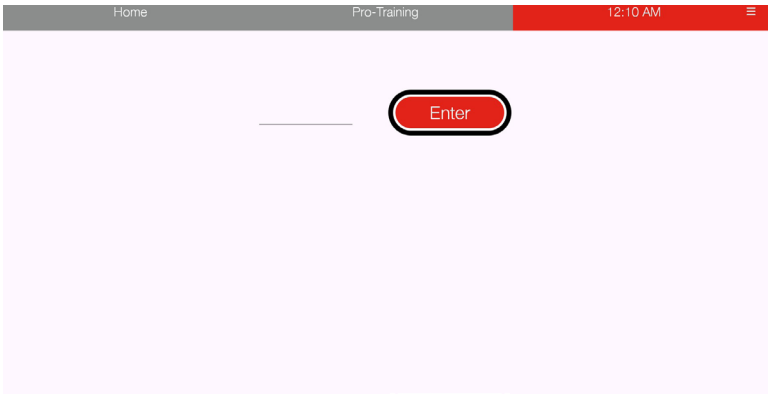
To Access Setting Screen

Press the hamburger menu in the upper right hand corner of the display.



Password Screen Appears

Enter access code 1911, then press ENTER.





Preset Position Distances:

- Enter up to six preset distances for target positioning.

Maximum Distance:

- Set the maximum travel distance (in feet) for the lane. This should typically be set 3 feet shorter than the total track length.

Note: Preset distances cannot exceed the maximum distance setting.

Lane Number:

- Assign the lane number displayed on the screen integrated into the Drive Unit.

Return Time (Use with Caution):

- This feature automatically returns the Target Carrier to the home position at a programmed time without user input.

Warning: This function will move the carrier automatically. Always disable this feature before performing any maintenance or service to prevent injury.

- Enter time using a 24-hour format (no colons or periods).
- Example: Enter 2200 and press SAVE to return the carrier at 10:00 PM.
- Maximum allowable time is 2359. The system will not recognize 2400 (12:00 AM).

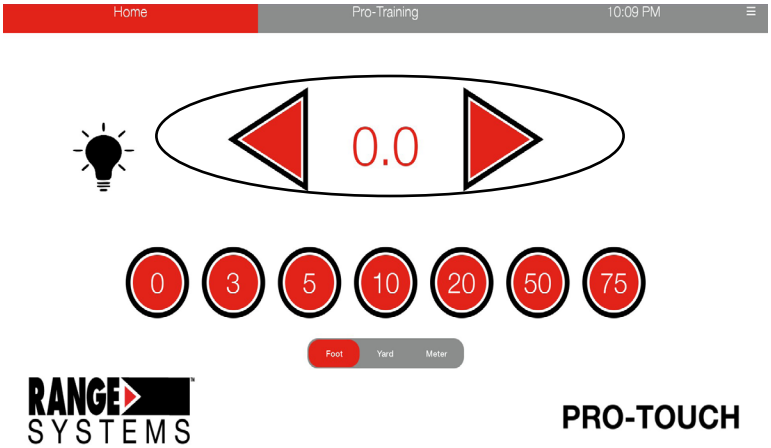
Note: The system ships with a default return time of 1911, which disables the automatic Return-to-Home function. To ensure the carrier battery remains charged, the carrier must either be manually returned to the home position each night or an automatic Return-to-Home time must be programmed.

Note: Clicks per foot are viewable but not editable by the user. This information is intended for technician reference during service.

Once all settings are entered and saved:

- Verify all preset distances display correctly.
- Double-check that the maximum distance is properly set for the lane length.

Warning: Setting the maximum distance beyond the physical track length may cause the system to attempt travel past the end stops, resulting in equipment damage.



Verify Maximum Distance:
Use the manual forward control to move the carrier downrange. As it approaches the end of travel, slow down and “jog” the carrier to confirm it stops at least 3 feet before the end stop.

This process can also be used to help determine and fine-tune the correct maximum distance. Once verified, return the carrier to the home position and test all preset distances.

Verify Limits & Functionality

Run a full manual test cycle:

- Jog the carrier downrange
- Return it to the home position
- Test all preset distances

Wireless Charging

The Pro-Touch™+ system features integrated wireless charging, allowing the carrier battery to automatically recharge whenever the carrier is returned to the home position.

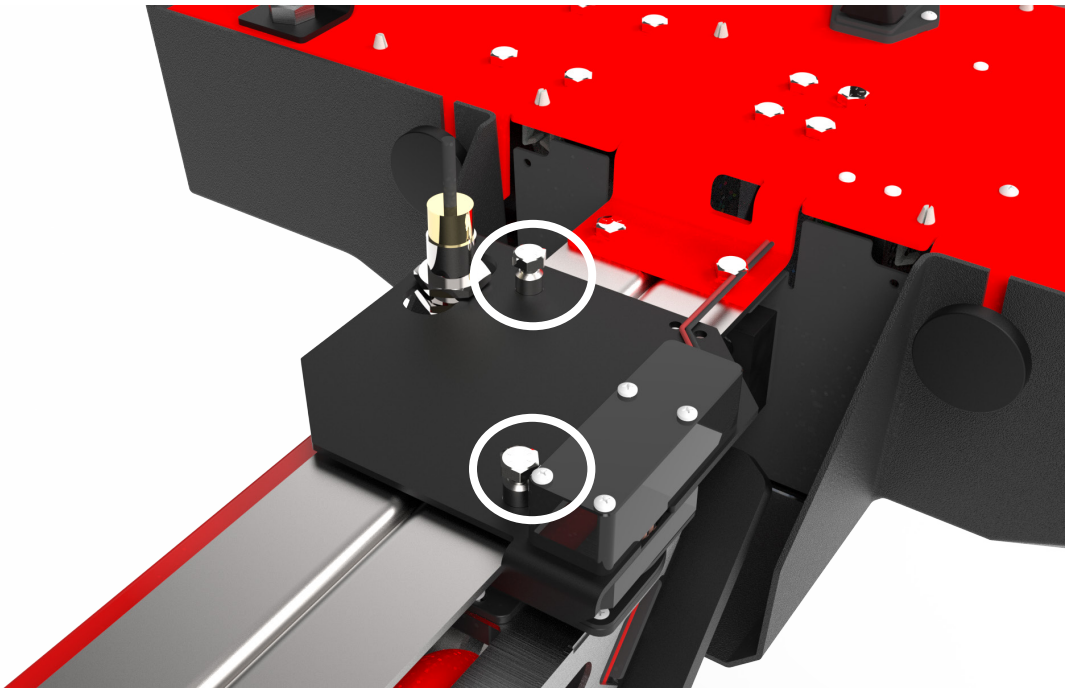
Under typical range operation, the Pro-Touch+ provides approximately 12 hours of runtime on a full charge. During demanding, high-use operation, expected runtime is approximately 8 hours.

A built-in Low Battery Alert notifies the operator through the system when the carrier battery requires charging, helping prevent unexpected loss of power during range operation.

When the carrier is returned to the home position, the wireless charging system automatically begins charging the carrier battery. A full charge takes approximately 4 hours.

Important: For proper charging, the carrier must be returned completely to the home position and remain there while charging. Facilities should return carriers home at the end of each day or program an Automatic Return-to-Home time to ensure the batteries are charged and ready for the next day of operation.

Verify Proper Charging Alignment
To check the wireless charging alignment, send the target carrier out to 15 feet and bring it back to the “Home” position. Adjust the location of the proximity sensor within it’s mounting slot and ensure the wireless charging transmitter and receiver are vertically aligned for optimal charging performance.



Maintenance

Although the Pro-Touch Target System is designed for many years of use, it performs best with regular and routine maintenance. All ranges have different usage rates; the recommended maintenance intervals below are general guidelines. Adjust your schedule as needed for heavier use or demanding conditions.

Always power down the system before performing any maintenance

Daily

- Check the track for missing or loose bolts.
- Inspect the track for damage. Repair or replace as needed to ensure proper Target Carrier operation. Note: Excessive noise or erratic movement may indicate track damage.
- Inspect the Target Carrier for any visible damage.

Weekly

- Check for brass or debris inside the Target Carrier.
- Trapped brass can damage the wheels or drivetrain.
- Inspect the drive cable for any signs of wear or damage.

Monthly

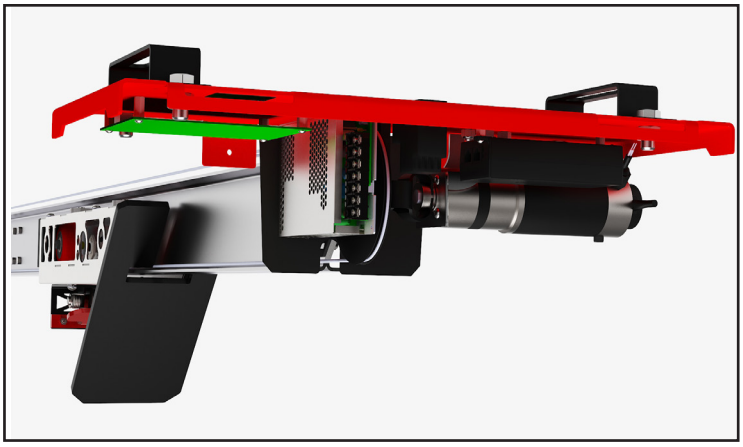
- Check the tension on the drive cable.
  - Steel cables may stretch over time.
  - If adjustment is needed, use a 1 1/8” socket to tighten the cable.
  - Refer to “Install the Drive Cable and Apply Tension” instructions on page 11.
- Lower the housing around the Drive Unit and remove any trapped brass or debris.
- Clear any brass or debris from the track.
- Inspect the drive and stabilizer wheels on the Target Carrier for damage or wear.
  - If the Target Carrier bumps over bolts during travel, worn or damaged wheels may be the cause.

Service Support

Service plans are available. Please contact us to develop a custom maintenance schedule tailored to your range’s specific needs.

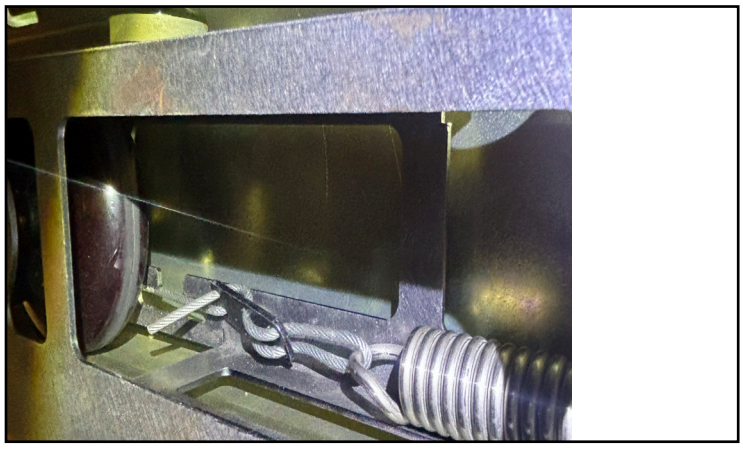
Install the Drive Cable & Apply Tension

Begin routing the cable from the Drive Unit toward the bullet trap, allowing it to rest on top of the track. Loop the cable around the tail pulley, then route it back toward the trolley so it rests along the lower portion of the track where the wheels travel.

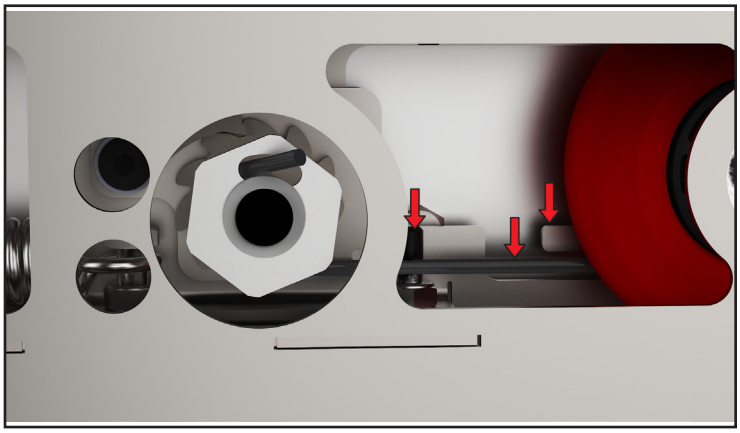


Once the cable is in place, use vise grips to secure the trolley so it cannot move forward or backward.

Route the downrange end of the cable through the Cable Lock Plate, forming a loop toward the trolley. Trim any excess cable to prevent snags. Connect the cable loop to the spring inside the trolley as shown (see reference image).

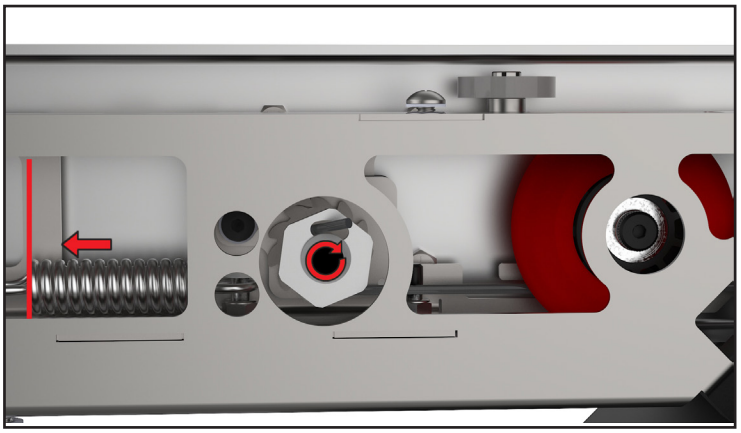


Next, route the opposite end of the cable around the Drive Unit pulley. Run the cable along the inside of the trolley, ensuring it passes through the slot in the frame and inside the bolt (see reference image).



Pass the cable through the slot in the tensioner spool (see reference image), then cut the cable approximately 2–3” past the spool face. Tie a knot to prevent the cable from pulling back through the spool slot, and trim the excess to approximately 1/2”–1” beyond the knot.

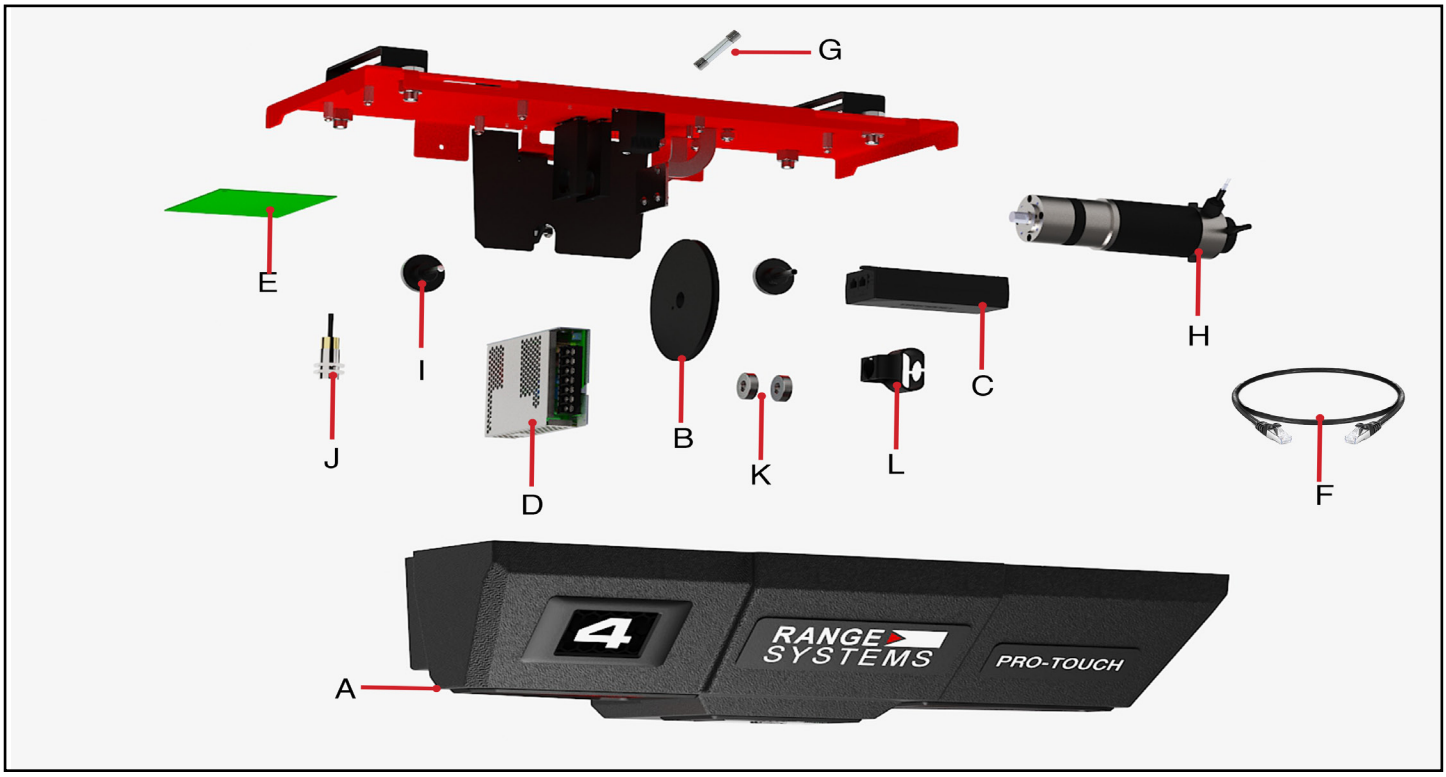
Begin tensioning the cable by turning the tensioner spool using the provided 1-1/8” socket. As tension is applied, verify that the cable is properly seated on both the drive pulley and end pulleys.
When properly tensioned, the spring should be stretched approximately 3/8”, with the body of the spring sitting about 1/8” short of the edge of the frame support.



Note: Correct cable tension is critical for proper system operation. If you have any questions during this step, please contact support.

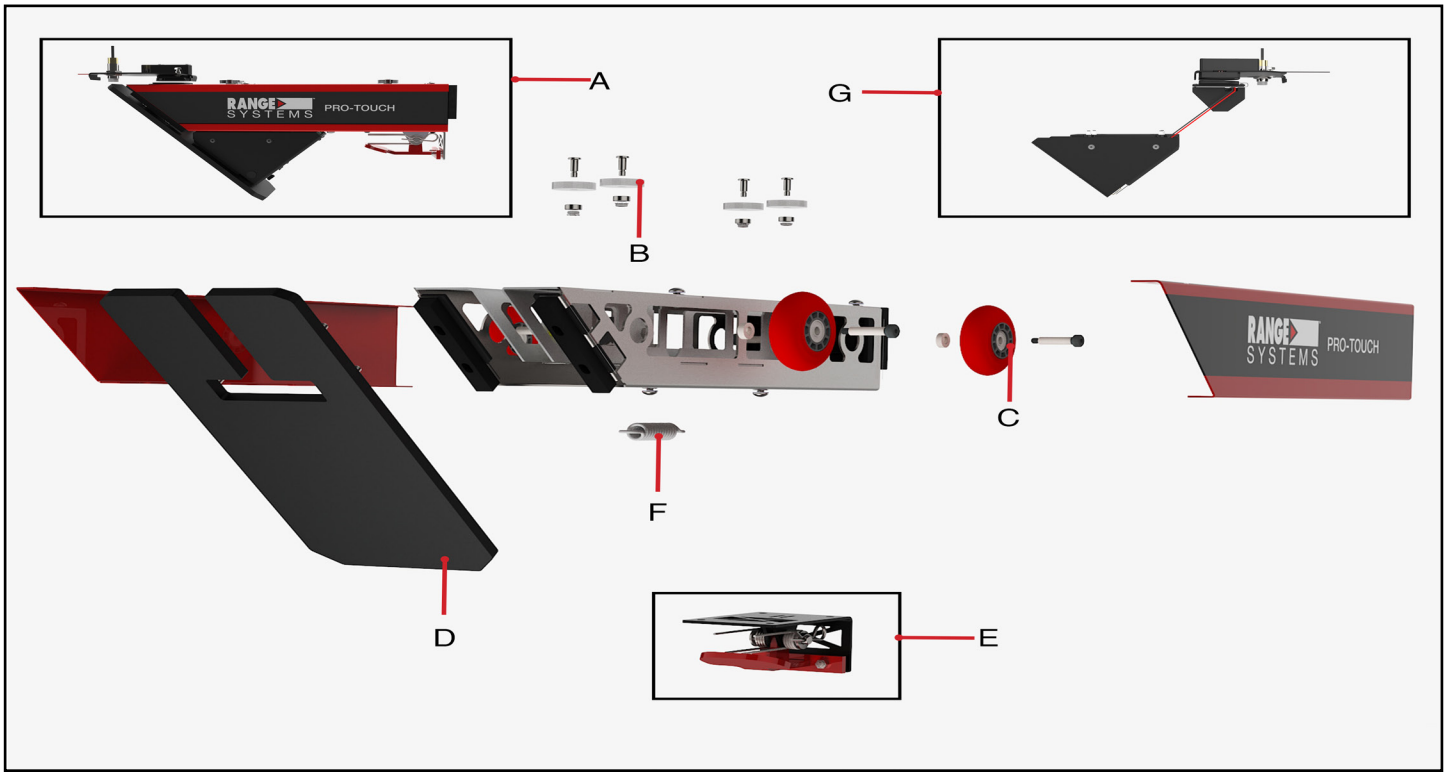
Recommended Replacement Parts

Drive Unit



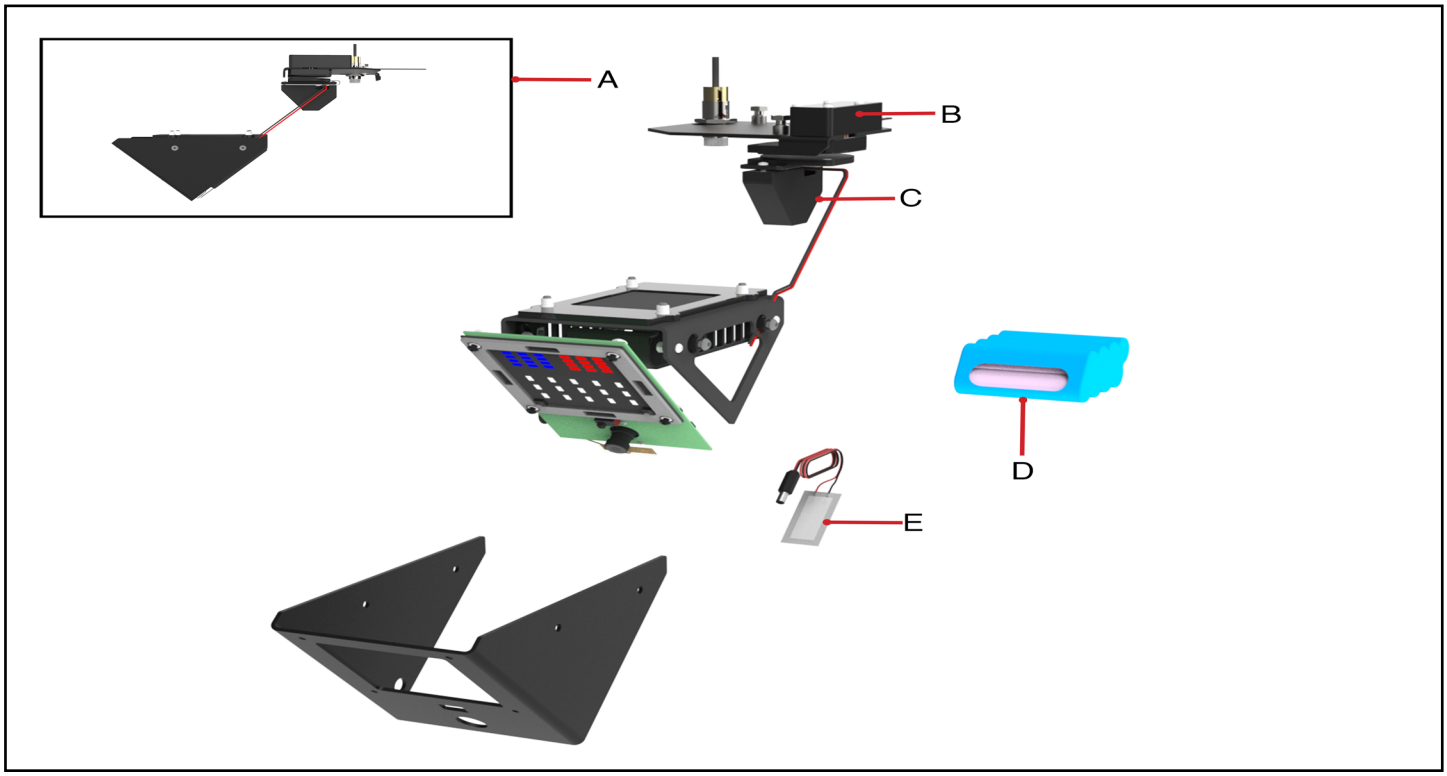
ITEM NO.	PART NUMBER	DESCRIPTION	QTY
A	XA5260	COWLING ASSEMBLY	1
B	XA2260	DRIVE PULLEY	1
C	XA1416	POE INJECTOR	1
D	XA1411	POWER SUPPLY	1
E	XA1284	CONTROL BOARD	1
F	HM1005	2’ ETHERNET CABLE	1
G	HN0971	FUSE	1
H	HN0959	DRIVE MOTOR	1
I	HM0898	HOUSING KNOB	2
J	HM0573	HOME PROXIMITY SENSOR	1
K	HM0899	BEARINGS	2
L	HM0189	COUPLER SHAFT FLEXABLE	1

Trolley



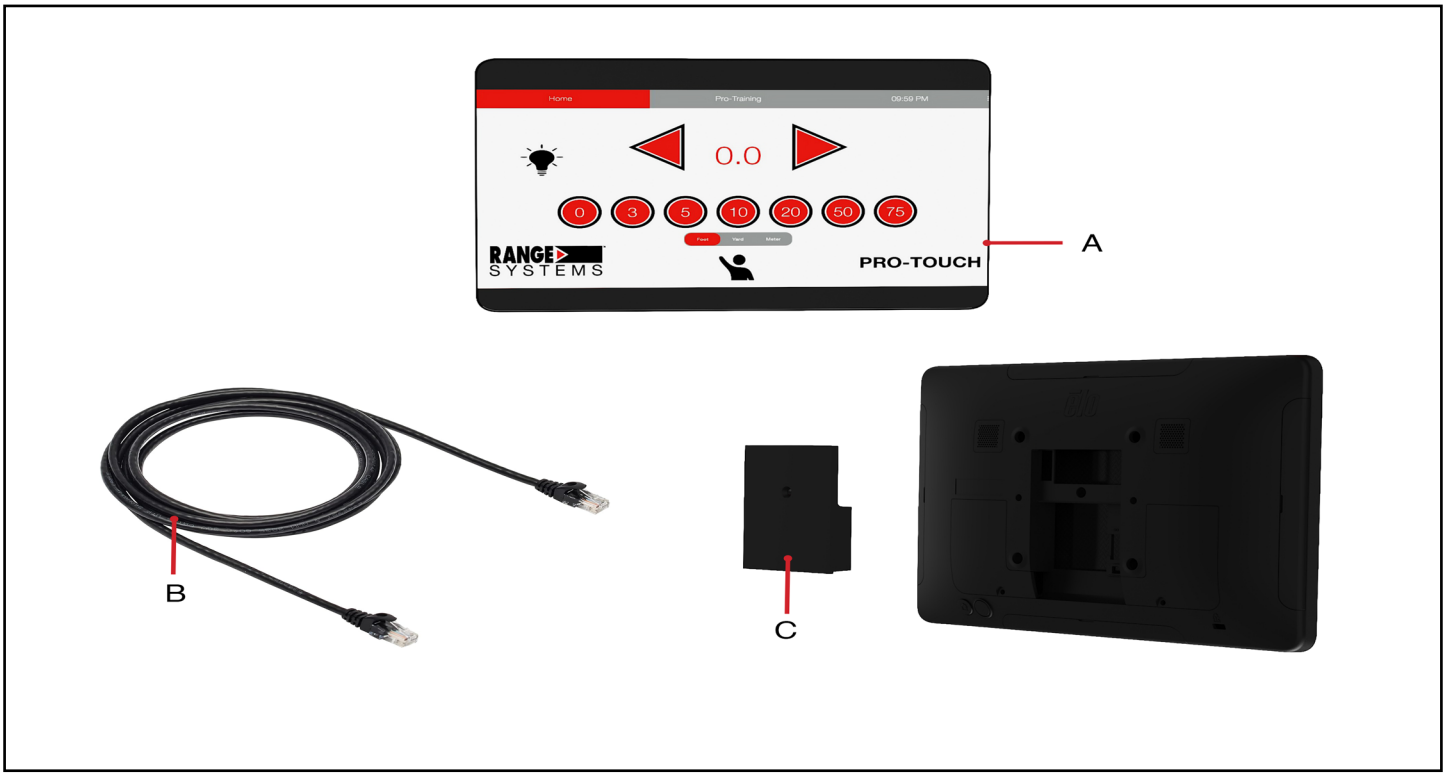
ITEM NO.	PART NUMBER	DESCRIPTION	QTY
A	XA5218 & XA5362	COMPLETE BASE TROLLEY WITH + MODULE ASSEMBLY	1
B	XA1605	UPPER GUIDE WHEEL	4
C	XA2243	MAIN TROLLEY WHEEL	4
D	XA2290	FRONT SHIELD	1
E	XA5237	TARGET CLAMP ASSEMBLY	1
F	HM0895	EXTENSION SPRING	1
G		SEE PAGE 14 FOR +MODULE TROLLEY PARTS LIST	

+ Module



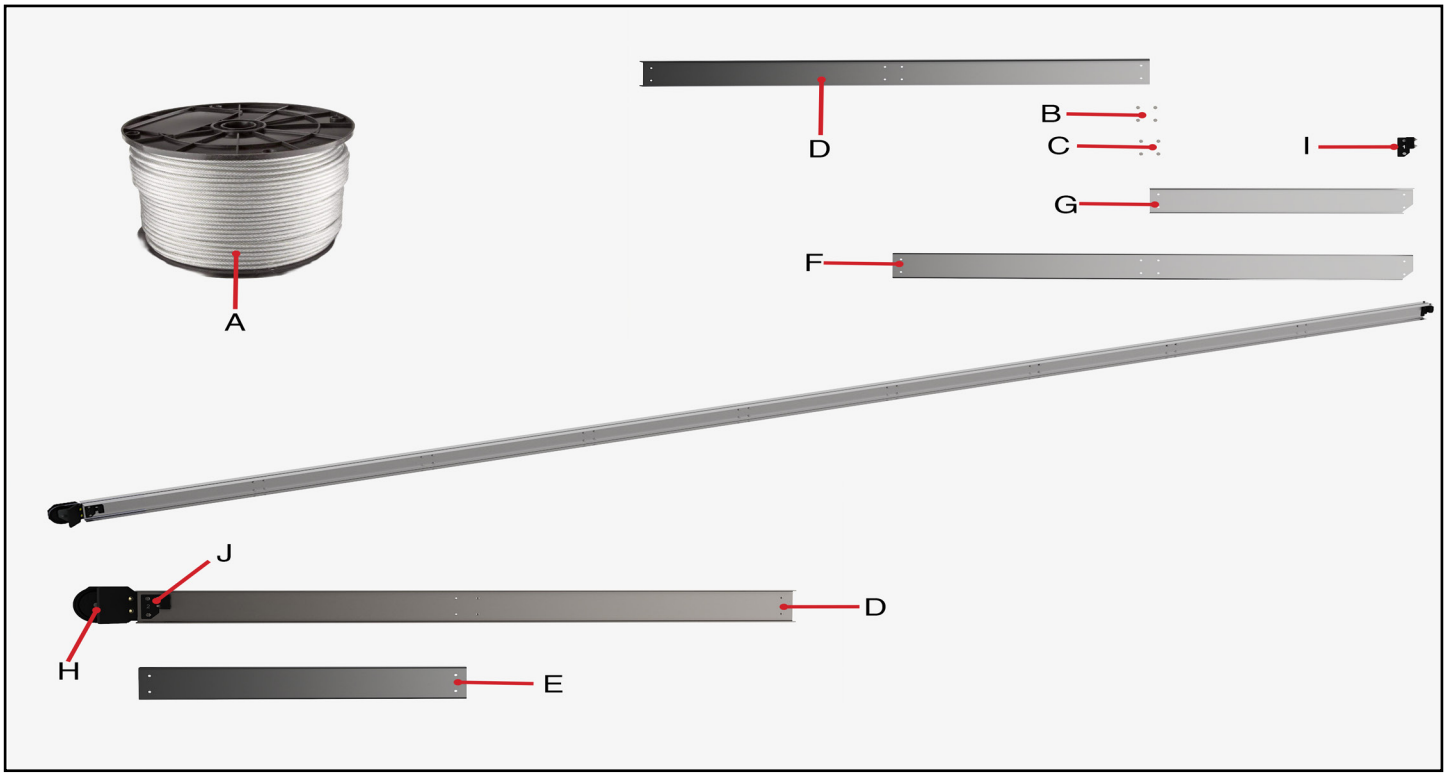
ITEM NO.	PART NUMBER	DESCRIPTION	QTY
A	XA7033	COMPLETE + MODULE	1
B	XA5366	INDUCTION TRANSMITTER WITH PROXIMITY SENSOR	1
C	XA5369	CHARGING INDUCTION RECEIVER	1
D	XA5275	BATTERY PACK	1
E	XA5363	STRIKE SENSOR	1

Touchscreen



ITEM NO.	PART NUMBER	DESCRIPTION	QTY
A	XA5305	LOCAL TOUCHSCREEN	1
B	HM0953	10’ ETHERNET ADAPTER	1
C	XA1550	POE ADAPTER	1

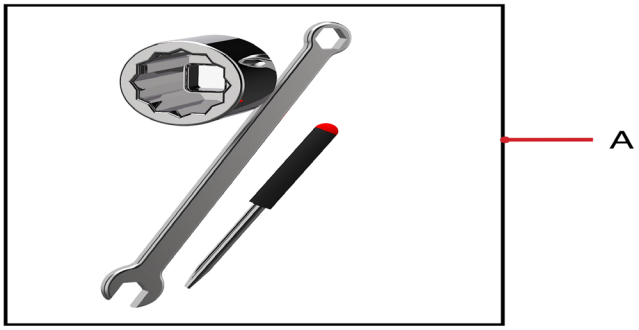
Track



ITEM NO.	PART NUMBER	DESCRIPTION	QTY
A	XA5293	REPLACEMENT CABLE 250’	1
B	HM0161	TRACK BOLTS	*
C	HF0540	TRACK NUTS	*
D	HF0701	MAIN TRACK SECTION	*
E	XA2225	HALF TRACK END SECTION	1
F	XA2226	DRIVE UNIT FULL TRACK SECTION	1
G	XA2227	DRIVE UNIT HALF TRACK SECTION	1
H	XA2228	END PULLEY ASSEMBLY	1
I	XA5217	DRIVE UNIT END BUMPER ASSEMBLY	1
J	XA5332	TRACK END BUMPER ASSEMBLY	1

* Note: Quantity is determined by range length

General



ITEM NO.	PART NUMBER	DESCRIPTION	QTY
A	XA5293	PRO-TOUCH TOOL KIT	1