



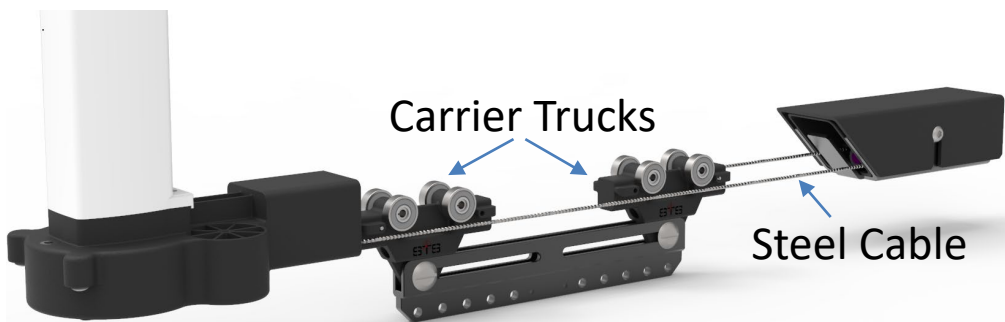
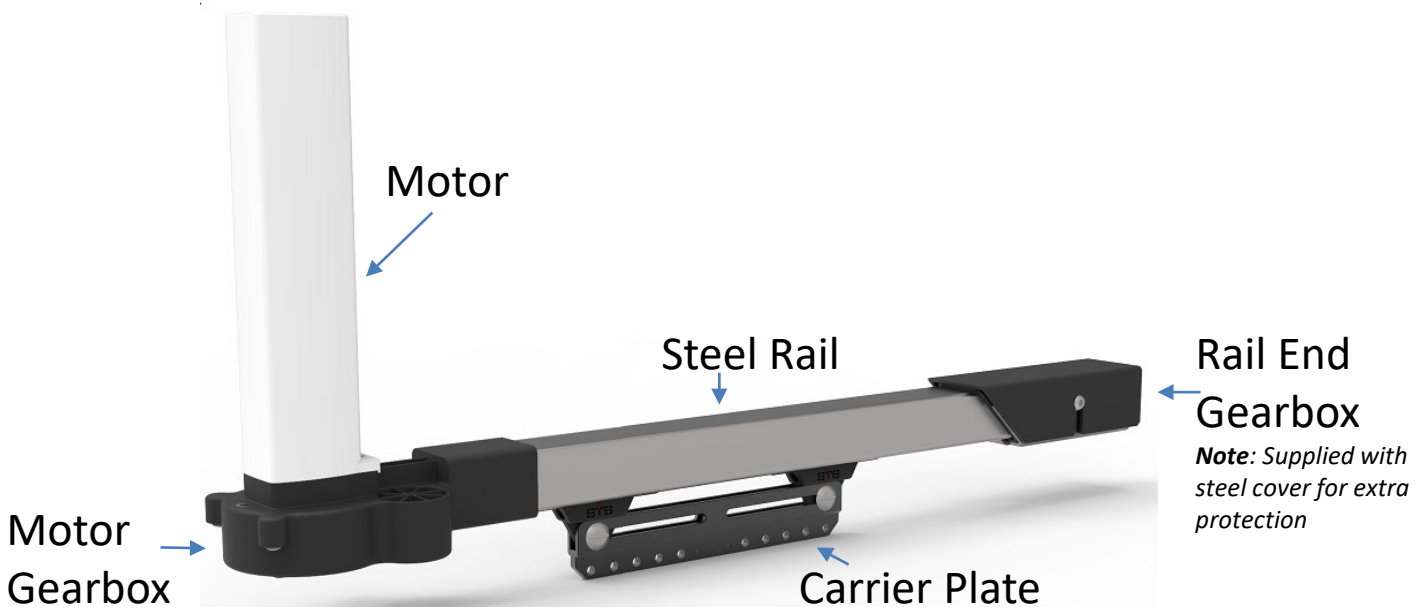
HEAVY DUTY TARGET RETRIEVING KIT

Rev18

SIMPLE & AFFORDABLE

STS is dedicated to provide the most AFFORDABLE solution for the target shooting enthusiasts eager to build their own target retrieval system, being private, home-based, or commercial. We offer complete target retrieval systems, bullet traps, target monitoring cameras and other advanced indoor range equipment and solutions with exceptional prices and quality when compared to other market offerings.

Our new **Heavy-Duty Target Retrieval System**, steel cable driven and based on the simple, inexpensive and commonly used Unistrut steel rail is easy to install without the need for expensive factory installation or specialized technicians. However, for a successful installation and good system performance, a few critical steps must be followed. Hence, the importance to read and follow all the steps in this installation guide.



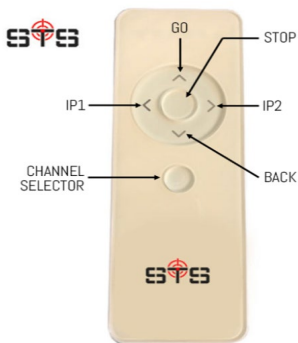


Target Retrieval System (HD) Features

- Steel Rails 12GA with SS aircraft wire
- Metal carrier with steel rollers and bullet deflector (max 9mm rated)
- Easy to install DIY kit (no need for specialized contractors)
- Inexpensive to maintain and troubleshoot
- High Speed Motor 4-5ft/s with smart technology:
 - *Soft start/stop, overload protection, wireless activated*
- Up to 160 ft capability
- Target Turner module option add-on (wireless activated)
- Dual controllers included: wired (water resistant) and wireless
- Wireless controller with smart functions:
 - *Programable Limits/Stops setup*
 - *Reverse direction*
 - *2 or 3 intermediate programmable stopping points*



Optional Target Turner Module



Wireless controller



Wired Controller



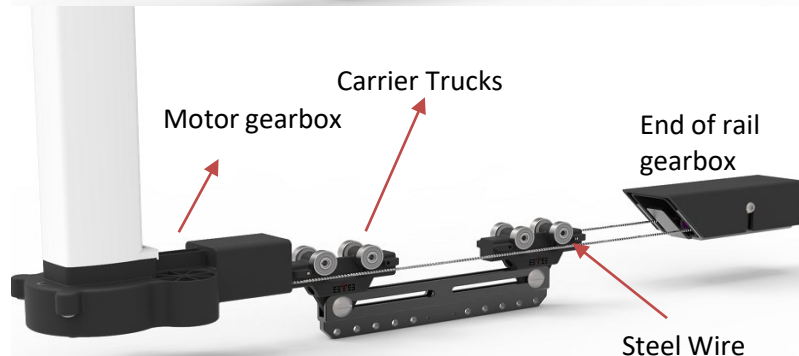
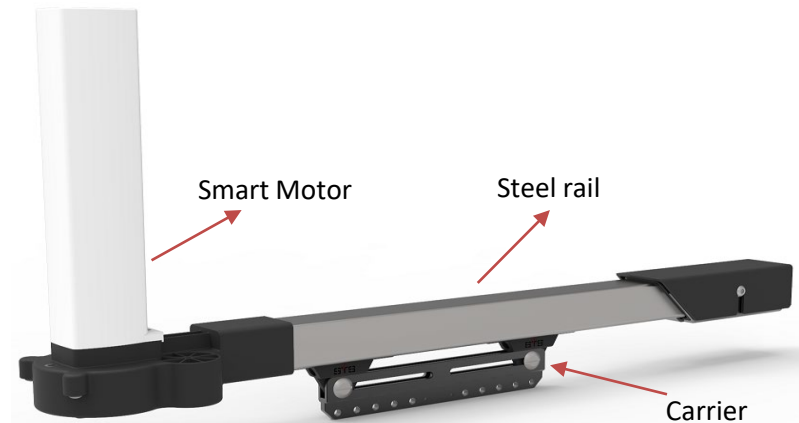
Turner Controller



Turner Module



Bullet Deflector



COMPONENT LIST PER 1 LANE:

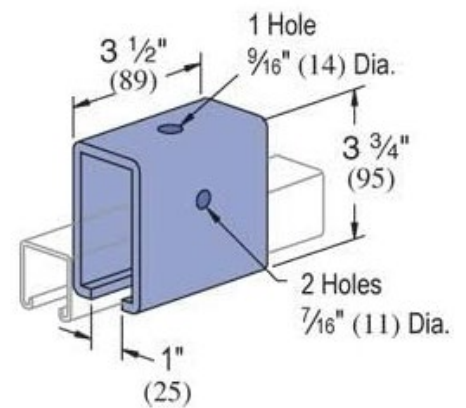
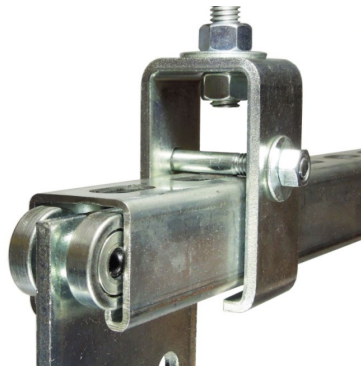
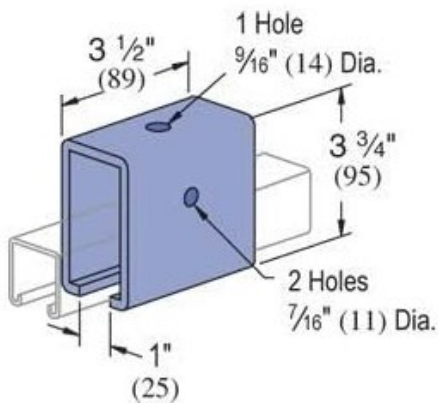
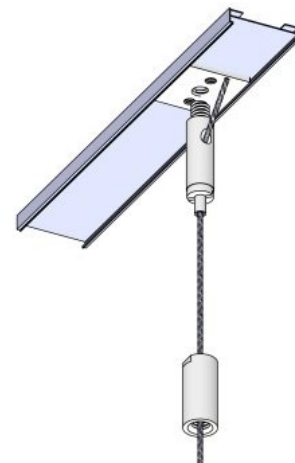
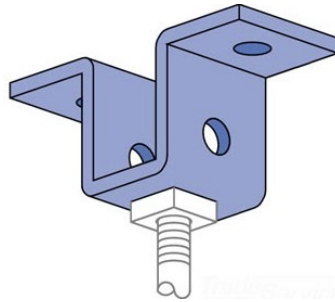
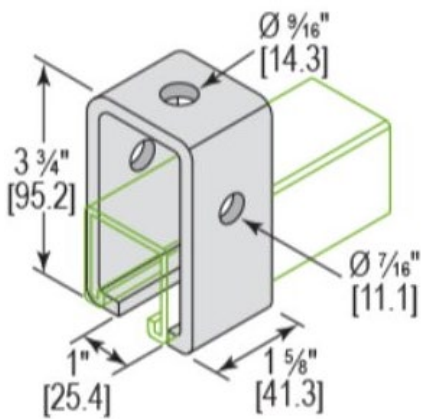
No	Part Number	Description	QTY	Notes	Pic
1	TRSHD-RXX	Standard 1-5/8 in x 1-5/8 in Strut Channel supplied in 5, 10 or 20Ft segments	According to length ordered		
2	TRSHD-CM1	Rail Ceiling Mounting	1 Every 2 segments	Total = (N x Rails) + 1	
3	TRSHD-MG1	Motor Side Gearbox	1		
4	TRSHD-RE1	Rail End Gearbox	1	Supplied with steel enclosure	
5	TRSHD-3277-XXX	Steel Cable Spool	1		
6	TRSX-93024V	Motor Kit with Wireless Controller	1	24VAC/DC with 110VAC adapter	
7	TRSHD-TC1	Target Carrier	1		
8	TRSX-SB10	Swing Bar	1	Dura Plastic, 90-degree holes	
9	TRSX-TH2	Target Holder	1	Corrugated Plastic	
10	TRSX-WT1	Wired Controller, Water Resistant	1		
11	TRSX-24V2ADC	Motor Power Supply	1	Input: 110VAC Output: 24VDC, 2A	
12	TRSHD-DEF	Carrier Deflector	1	Optional	
13	TRSHD-GUIDE	Instructions Set (Motor Manual & TRS Guide)	1	Included in Kit or download from website	

Rails Installation Notes

(standard strut channel type 1-5/8" x 1-5/8")

- To ensure the free movement of the target carrier, the rails (strut channels) must be completely free of any interior obstructions. Hence the need to use U shape brackets.
- Make sure the rails are not bent and joints sections are not damaged. If they are, replace the rail or, if possible, cut out the damaged part
- The U shape brackets have dual purpose: the rail segments can be connected to each other and also suspended using the same U shape bracket (narrow or wide type). The wide type provide better rail support and they are easier to install, however they are a bit more expensive.
- The brackets can tighten to properly clamp the rails in place using the 3/8" bolts (at least 2.5" long) and nuts. The U shape bracket can be used to mount the rails directly on the ceiling.
- If rails must be suspended, the U shape brackets can be used in conjunction with threaded rods (or cables) and ceiling brackets. Typical rod diameter is 3/8" or 1/2" with corresponding nuts or couplers.

Rail Mounting Options



Direct on ceiling

Using threaded rods

Using suspending cables

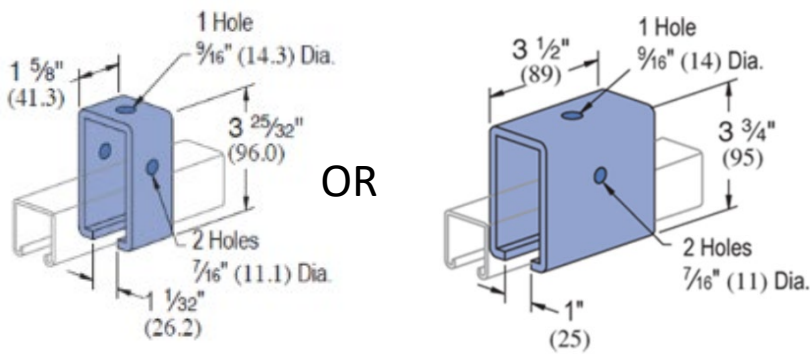
INSTALLATION STEPS

Note: Some components highlighted in the pictures below might look a bit different in reality, as we constantly try to improve.

STEP 1

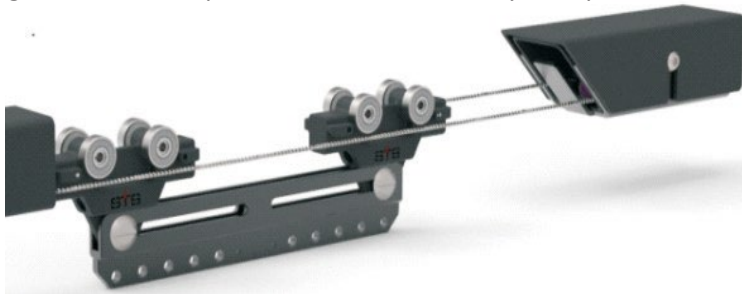
Install the rails using the provided U shaped brackets, which have dual purpose: connect the rail segments and also suspend them. In order to connect and secure the rails in place, tighten the brackets using 2.5" long bolts (3/8" size) and nuts provided. Attach brackets to the ceiling using screws or threaded rods to suspend the rails if needed.

Very Important: Inspect the rails thoroughly, including joints, as they must be clean cut and completely free of any obstructions, bents or any other damage so that the carrier can run smoothly, without excessive friction. If any rail joints are bent that rail must be replaced or the bent part must be cut.



STEP 2

Measure the cable and cut it (cable length = 2 x the rail's length + ~2ft). It will be adjusted to proper length/tension in step 6 and cut more accurately in step 7.



STEP 3

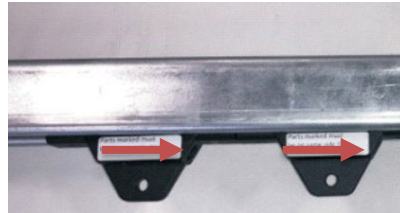
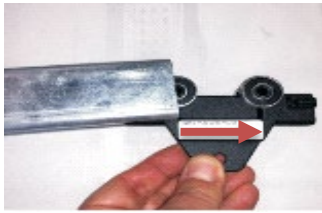
Attach the cable to both carrier's rolling trucks, as per the image below, and insert the trucks into the rail, one truck at each end to avoid cable tangling. As an option, use the supplied binder clips to hold the cable in place inside the rail lip.

Important: The carrier trucks and the motor gearbox cover have each an arrow on them (or yellow dot). Install the trucks so that the arrows on each truck and the arrow on the motor gearbox cover, point to the same direction. (for yellow dot version, when installed correctly, the yellow dots must always be on the same side of the rail)



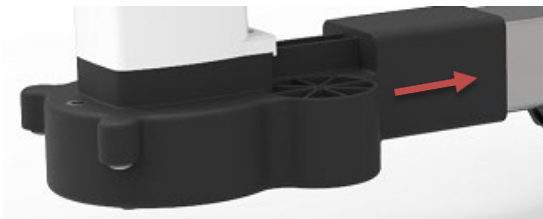
STEP 4

Bring the trucks closer to the middle of the rail while trying to avoid cable tangling. Use the binder clips if necessary.



STEP 5

Attach the gearboxes to the rail without pinching the cable: motor-side gearbox and rail-end gearbox



STEP 6

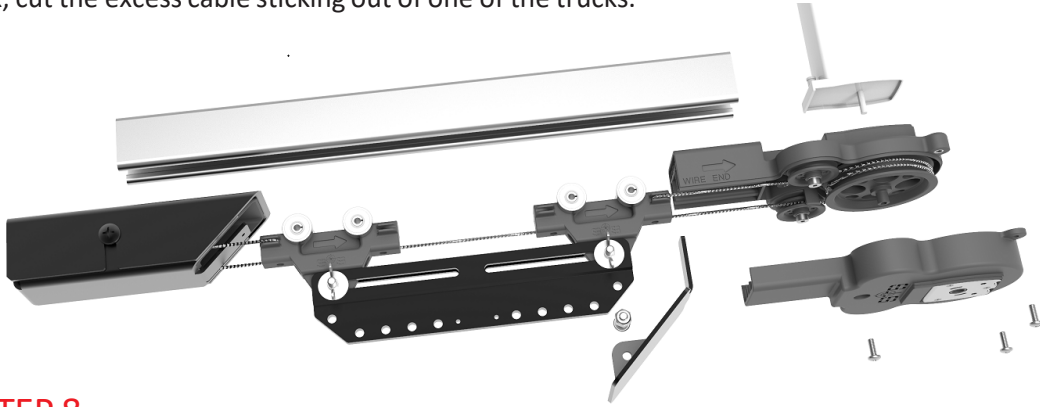
Loop the cable around the pulleys inside the gearboxes: loop twice in the motor gearbox and once in the far end gearbox. Bring the 2 carrier trucks together until they are about 1 inch apart. To do this properly, you will need to loosen up the cable pinch in one of the trucks, remove the excess cable slack without cutting the extra slack yet and retighten the cable. Attach the carrier plate using the provided bolt/wing nuts and tighten slightly the cable.

Note: Loop the cable twice around the big pulley inside the motor-side gearbox to avoid slippage. However, when doing that, make sure the wire does not overlap when running the carrier back and forth.



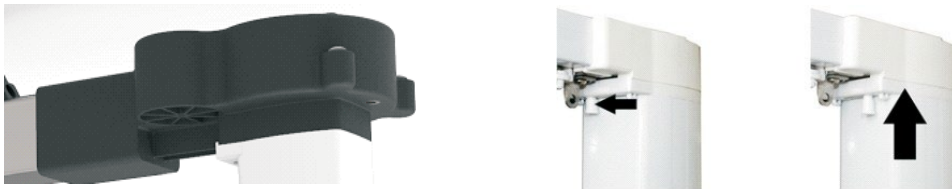
STEP 7

Test the smooth operation by running the carrier by hand along full length of the rail and watch the cable inside the motor gearbox to make sure it does not overlap. If everything ok, cut the excess cable sticking out of one of the trucks.



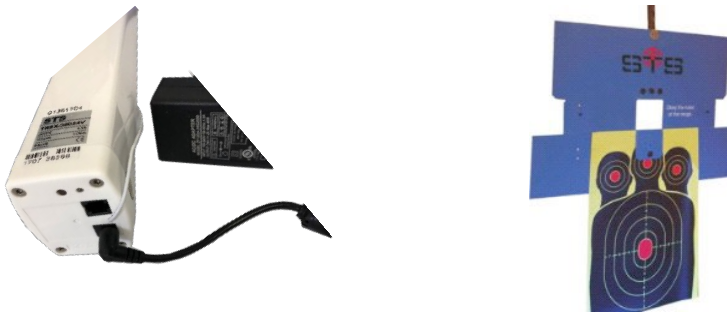
STEP 8

Attach the motor either on top or bottom of the main gearbox (above or below the rail)



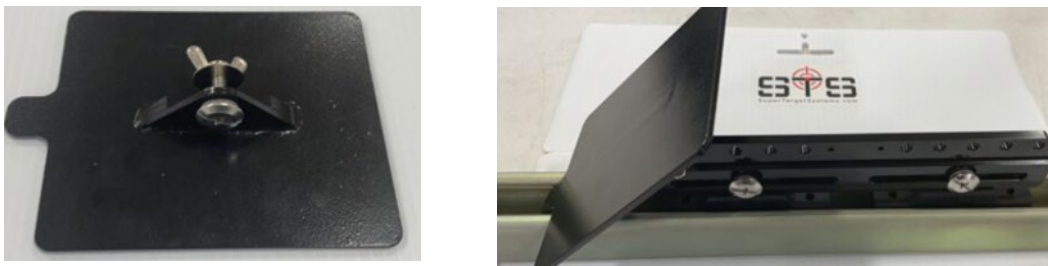
STEP 9

Power the motor using the power adapter and test the system. Check the motor manual how to set the motor rail limits, intermediate stopping points etc. for advanced or smoother operation.



STEP 10

Attach the optional carrier deflector, U shape stoppers, target bar and target holder



STEP 10

Final Checkpoints & Fine-Tune Operation

- Use the wireless remote controller, shipped pre-paired with the motor, to setup advanced motor functions: motor limits, intermediate stopping points, etc.
- Make sure the arrows marked on each of the 2 carrier trucks and motor gearbox cover are pointing in the same direction
- Remove motor and cover of the motor gearbox, run the carrier by hand all the way, and look for obstructions, points of increased friction etc. The carrier should move easily, while pushed with one finger
- Make sure the cable is not too tight, no excessive cable tension required, adjust the cable tension on the carrier side if needed
- Check the cable wrapping around the big pulley inside the motor gearbox and make sure it does not overlap
- Setup carrier/motor run limits (see motor manual) so that the carrier does not hit hard the stoppers
- Setup programmable intermediate stops if needed (optional)

Troubleshooting Tips

No	Issue	Solution
1	Motor does not start	Check power, check motor LED lights, then check if controller is paired properly (if wireless) or comms cable if plugged-in properly (if wired)-see motor manual for details on pairing
2	Carrier does not move	Check cable tension and reduce if necessary. Check if cable fell out of any pulleys. Try moving carrier by hand. Check LED lights on motor to make sure it receives controller's commands properly
3	Carrier stops unexpectedly.	Check for lane obstructions. Check arrows matching. Clear the motor memory of any previous stops, remove any programmable limits
4	Carrier hits hard the rail ends	Setup motor limits
5	Controllers GO and HOME buttons work in reverse	Change motor running direction (see manual)
6	Carrier moving too slow	Remove the motor, move the carrier by hand and look for potential high friction spots. Check the cable around the pulleys. Check cable tension and arrows matching.

Thank You for your business!

Telephone: (800) 556-3162

Sales: sales@supertargetsystems.com

Technical Support: support@supertargetsystems.com

2055 Comprehensive Dr. | Aurora, IL -60505

www.supertargetsystems.com