This guide is produced and maintained by the Ohio 4-H Shooting Sports Committee. All comments and suggestions should be forwarded to:
Larry Harris, State Extension Program Coordinator 4-H Shooting/Fishing Sports
1362 Caves Road, Jackson, Ohio 45640-9031
Phone: 740-286-0341 Office, 740-286-0341 Home
E-mail harris.870@osu.edu

This guide was prepared By:

Larry Harris, State Extension Program Coordinator
4-H Shooting/Fishing Sports
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>I</th>
<th>Background</th>
<th>Page 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>II</td>
<td>General Description</td>
<td>Page 4</td>
</tr>
<tr>
<td>III</td>
<td>Connecting to a Vehicle</td>
<td>Page 5</td>
</tr>
<tr>
<td>IV</td>
<td>Disconnecting and Parking</td>
<td>Page 6</td>
</tr>
<tr>
<td>V</td>
<td>Loading and Unloading</td>
<td>Page 7</td>
</tr>
<tr>
<td>VI</td>
<td>Setting up for Use as a Range</td>
<td>Page 8 – 9</td>
</tr>
<tr>
<td>VII</td>
<td>Operating the Range</td>
<td>Page 10 – 11</td>
</tr>
<tr>
<td></td>
<td>Range Rules &amp; Helpful Hints</td>
<td></td>
</tr>
<tr>
<td>X</td>
<td>Request for Use &amp; Sample Confirmation</td>
<td>Page 12 – 13</td>
</tr>
</tbody>
</table>
I BACKGROUND

This trailer is the property of the Ohio 4-H Shooting Sports Committee. Larry Harris, State Extension Program Coordinator 4-H Shooting/Fishing Sports, schedules and maintains the trailer. The trailer will be stored at Canter’s Cave 4-H Camp Inc. facility when not in use or for upgrading and maintenance. The trailer was a donation from the National 4-H Shooting Sports Foundation through donations from The National Rifle Association Foundation and Crosman Corporation.

Scheduling of this trailer is done only through the State Extension Program Coordinator, 4-H Shooting/Fishing Sports. And only after sufficient justification has been presented.

This justification shall consist of (as a Minimum):

- Explanation of need and description of intended use
- Satisfying towing and liability requirements
- Completion of an “Operations and Set-up” training
- Proof that 4-H Certified Rifle Instructors will oversee the operation of the unit at all times
- Request for Use must come through a County 4-H Agent, Certified County Coordinator or a Certified Rifle Instructor
- FEES: A user fee of $100.00 per week is required, Deposit of $135.00. Maximum of two weeks Use at one time.
II GENERAL DESCRIPTION

The trailer is a 8’ X 12’ Box-type trailer, equipped with a single axle and no brake system. It is 7’ high and weighs approximately 1800 to 2000 lbs. Loaded. There are three doors; one on the passenger side (or right side) front of trailer, which permits entry to the front compartment, and a two door system that opens the rear section of the trailer, which will be part of the Rifle Range. Both sets of doors are secured with padlocks. In addition, the front door has a built-in keyed lock. Trailer has a spare tire mounted in front of trailer behind the tongue area. A standard 4-pin flat male/female connector is used to supply running, stop, and turn signal lights power.

The trailer requires that the towing vehicle be equipped with:

- A standard 2” ball class II hitch rated to tow up to 3500 lbs.
- A standard 4-pin Flat male/female connector for trailer lighting (see figure below)
- Vehicle hitch must have a minimum tongue weight capacity of 350 lbs.
- Tire pressure – Recommended tire pressure on the trailer is 32 – 35 PSI.

![Diagram of trailer connections](image-url)
III  CONNECTING TO A VEHICLE

Connecting to the trailer is simple if the correct procedure and common sense are used.

1. Remove the hitch receiver padlock and push forward and lift the locking lever simultaneously to unlock the 2” ball receiver.

2. Using the tongue jack, raise the trailer tongue until it is slightly higher (1” to 2”) then the top of the ball on the towing vehicle.

3. CAREFULLY back the towing vehicle until the ball is under the trailer hitch receiver.

4. Lower the trailer tongue (using the tongue jack) until the receiver seats completely over the 2” towing ball, pull back and down on the locking lever and insert the padlock and lock it to secure the locking lever in place.

5. COMPLETELY raise the tongue jack as far as possible and remove the base plate and place it in the forward compartment of the trailer.

6. Connect the safety chains from the trailer tongue to towing vehicle hitch.

7. Connect the lighting cable (see bottom of page 4) four terminal male flat plug to towing vehicle four terminal female flat plug, then test all lighting system functions for proper operation. (Running lights, Stop lights and Turn Signal lights).

8. Remove the wheel chocks and store them in the front compartment of trailer.

9. Check the contents to assure items are stored and ready for travel.

10. Check where your keys are? Then close and lock front and rear doors (Note: be sure to lock with pad locks provided).

11. Drive Safely & within appropriate speed limits. REMEMBER you are towing a trailer that is 8’ wide axle to axle and 15’ to 16’ behind you!
IV DISCONNECTING AND PARKING

Seek a level, solid parking area that is at least 30’ X 70’+ and accessible to standard household power (110,120 Volt A/C) or portable generator, and check the area for safety concerns. (The 30’ X 70’+ area should allow you a Safety Zone of 10’ on each side, 10’ in back of firing line, and 28’+ ahead of the trailer).

CHECK TO BE SURE THE TRAILER IS FAIRLY LEVEL, IF NEEDED, LEVEL THE TRAILER BY PLACING BOARDS UNDER THE TIRES. LEVEL IS NECESSARY FOR THE RESETTABLE SILHOUETTES AND TARGET RUNNERS TO FUNCTION PROPERLY. (*Note: The shooting trailer can be safely operated while left attached to the towing vehicle*).

Disconnect and park trailer as follows:

1. Carefully open the doors, being careful of items that may have shifted during transport. Locate the wheel chocks and chock one or both wheels.

2. Disconnect the lighting cable and Safety Chains from the vehicle.

3. Retrieve the tongue base plate and install on the jackshaft, lower the shaft until the trailer weight is partially removed from the tow ball.

4. Remove the hitch receiver padlock and push forward and lift the locking lever simultaneously to unlock the 2” ball receiver.

5. Using the tongue jack, raise the trailer tongue until it is slightly higher (1” to 2”) then the top of the ball on the towing vehicle.

6. CAREFULLY move the towing vehicle forward until the ball is clear from the trailer hitch receiver.

7. Lower the trailer tongue (using the tongue jack) until trailer is level.

8. The trailer can now be safely unloaded and setup as shooting range.
V  **LOADING AND UNLOADING**

Loading and unloading must be done in a manner that will prevent the trailer from being towed in an unbalanced condition. The user must be continually aware of the position of the panels and equipment so not to damage panels and equipment in setting up and taking down shooting range.

The trailer will most likely be loaded when it is picked-up. As a minimum, it should contain:

- **Contents rear compartment of trailer.**
  - Shooting equipment required to set-up a two-point air rifle range.
  - Two plastic lawn chairs.
  - Electric 110 volt A/C light to illuminate the interior of the rear of the trailer for shooting purposes.
  - One right side safety barrier panel, one left side safety barrier panel and a shooting table.
  - Two safety barrier panels attached to rear doors they are hinged for ease of operation.
  - A 4-H Shooting Sports Banner.
  - Two Crosman silhouette target sets, two do-all reactive target sets, two manual retrieval target sets.

**TAKE NOTE OF HOW THINGS ARE PACKED AND REPACK IN THE SAME ORDER PLEASE!**
VIS

SETTING UP FOR USE AS A SHOOTING RANGE

Once trailer has been properly parked (connected or disconnected from the tow vehicle), the user may begin unloading and setup of the shooting range. AT LEAST 3 PEOPLE ARE REQUIRED TO SAFELY CONDUCT THIS OPERATION – MORE IS BETTER!

1. Remove the chairs, banner and set them aside.

2. Remove shooting table and place approximately 8’ behind the trailers open doors (the safety barrier panel ends will eventually rest on the shooting table).

3. Remove the first panel from the trailer (with at least 2 people) it should go two the driver side of the trailer (left side) with the carpeted side of the safety barrier panel facing the inside (shooting range side) and place the two ¾” X 10” arms in the 1” X 1” tubes provided at the end of the driver side of the trailer door (left door). Place the other end of the safety barrier panel in the slot provided on the shooting table.

4. Remove the second panel from the trailer (with at least 2 people) it should go two the passenger side of the trailer door (right side) with the carpeted side of the safety barrier panel facing the inside (shooting range side) and place the two ¾” X 10” arms in the 1” X 1” tubes provided at the end of the passenger side of the trailer door (right door). Place the other end of the safety barrier panel in the slot provided on the shooting table.

5. With a Philips #2 screw driver remove the one screw on each rear door and release the safety barrier panel that’s hinged to the doors. This will close the small gap between the rear doors and the trailer body.

6. All of the safety barriers are now in place. Attach the 4-H Shooting Sports Banner that is attached to the 2” X 4” X 6’ to the top rear of the right and left safety barrier panels with #2 dry wall screws.

7. Place the two plastic lawn chairs at the back of the shooting table.

8. Check the Crosman silhouette targets for proper operation and unwind resetting pull cord on each target set and place over shooting table.
9. CAREFULLY Unwind and run manual retrieval target cords TAKE SPECIAL CARE NOT TO TANGLE THE LINES place cord around pulleys provided in target area in rear of trailer and around pulley provided attached to shooting table.

10. Make sure the target transport lines are on the pulleys at both ends and they are snug. If lines are too tight you will break the lines, too loose and target carriers will flip sideways and fall off pulleys.

11. Check all target systems for proper operation. (if you need to repaint the reactive and silhouette targets, use white paint and it is located in the bins located in the forward compartment of the trailer)

12. Attach the 110Volt halogen clamp light to the extension power cord provided, at the right rear of trailer just inside the rear door. (Switch for the light is located on the top rear of the light itself).

13. Setup a controlled entrance and exit to the shooting area; mark out a waiting area also. (People like to stick their head in to see how their kids shooting. Note: There isn’t room for a crowd at the shooting table!)

14. Be sure to recognize our supporters… hang the Crosman banners so they can be seen. Recognize any other supporters they may have helped out with your program.

15. Remove any items in the rear of the trailer that would prove to be a safety hazard or impede the operation of the targets.
VII OPERATING THE RANGE

1. Have the targets, pellets, safety glasses, range rules, pellet clips, C02 cartridges, etc, out of the “down range” area and at the shooting table area before removing the rifles from the rifle rack located in the forward compartment of the trailer.

2. Rifles are .177 cal model 1077 Crosman and operate on C02. Rifles are 12 shot repeating rifles. (Operating manuals are located in forward compartment of trailer in the green supply box).

3. Put on your safety glasses

4. Load the pellet wheels with pellets, making certain that the pellets are inserted correctly with the pellet skirts in the opposite direction of the cogs of the wheel. The pellet wheels will only fit the action clips one way. Please refer to the (Operating manuals are located in forward compartment of trailer in the green supply box) if you are unsure of the rifle operation.

5. The paper targets slip down into the target frame from the top and are held by the pressure between the two wire frame fingers. Once they are attached turn the cranking handle in the direction that you want the target to go. DO NOT SLAM THE TARGET FRAME INTO THE BACKSTOP.

6. Invite in your first guests. Give them safety glasses, explain the range rules, load the rifles and follow your range commands and have SAFE FUN!

7. BE SAFE AND SET A GOOD EXAMPLE FOR 4-H SHOOTING SPORTS!

8. Clean up is just the reverse of setup. Be sure everything is accounted for and is secured as needed in the trailer. Report any damage or problems as soon as possible.

9. Be sure to place the padlocks back on the trailer before you take to the road.

10. PLEASE PROVIDE US A COUNT ON THE PARTICIPANTS.
RANGE RULES AND HELPFUL HINTS

1) Have a well-defined and marked entrance, waiting area and shooting area.
2) Explain Range and Safety Rules to participants.
3) Review Basic Range Rules:
   Always keep the muzzle pointed in a safe direction.
   Always keep the action open until ready to shoot.
   Always keep your finger off the trigger until ready to shoot.
4) 4-H RIFLE INSTRUCTOR should stand at the table where close supervision and assistance can be provided to the participants at all times.
5) Shooting Positions – Shooting from the bench is recommended, however, experienced participants can shoot from the off-hand standing position.
6) Remember to collect safety glasses. Don’t let participants walk off with your safety glasses.
7) Hand Washing – Make sure that instructors and helpers handling lead pellets wash their hands after each shift and before eating or drinking.
REQUEST FOR LOAN OF THE OHIO 4-H SHOOTING SPORTS TRAILER

County 4-H Program would like to request the use of Ohio 4-H Shooting Sports Trailer for use from ____________ to ____________ For the purpose of: (Please indicate the estimated Number of youth to be involved and their age range in order that the appropriate equipment will be available for your program).

Approx # Youth ____________ Age Range ____________

Purpose: __________________________________________________________________________

We have read, understand and agree to follow operating procedures of the Ohio 4-H Shooting Sports Trailer Operating Procedures Manual (10/01) as well as following accepted procedures as outlined in the 4-H Shooting Sports Rifle Curriculum and Instructor training. We also agree to pay the usage fee of $100.00 with the deposit being $135.00 plus reimbursement for expendable items including targets, pellets, etc. Additionally, we will be responsible for any damage or loss to the trailer and any equipment included.

Date: ______________________________________________________________________________

Certified 4-H Rifle Instructor Responsible for Operating the Range/Trailer

Instructor Name: ______________________________________________________________________

Address: ____________________________________________________________________________

Home Phone: ______________ Work Phone: ______________

E-mail: ______________________________________________________________________________

Instructor Signature: ____________________________________________________________________

PLEASE ENCLOSE $135.00 USER FEE PAYABLE TO: STATE 4-H OFFICE – MEMO LINE TO READ – 4-H SHOOTING SPORTS TRAILER.

SEND TO: Larry Harris
State Extension Program Coordinator
1362 Caves Road, Jackson, Ohio 45640-9031
SAMPLE

CONFIRMATION
FOR USE OF THE OHIO 4-H SHOOTING SPORTS TRAILER

TO:  ____________________________

DATE:  ____________________________

We have scheduled the OHIO 4-H SHOOTING SPORTS TRAILER for use in the
__________________________________________ County 4-H Program from

Date:  ____________________________ to  Date:  ____________________________.

As per your request, the designated 4-H rifle Instructor is:

__________________________________________

The Ohio 4-H Shooting Sports Trailer will be available for you to pick up on

_________________________ And should be returned no later than  _________________

Larry Harris
State Extension Program Coordinator
4-H Shooting/Fishing Sports
1362 Caves Road, Jackson, Ohio 45640-9031
E-mail  harris.870@osu.edu