

# ASAP Sr

*Single Stage*

## A Strap and Pole

*Version 1.2*



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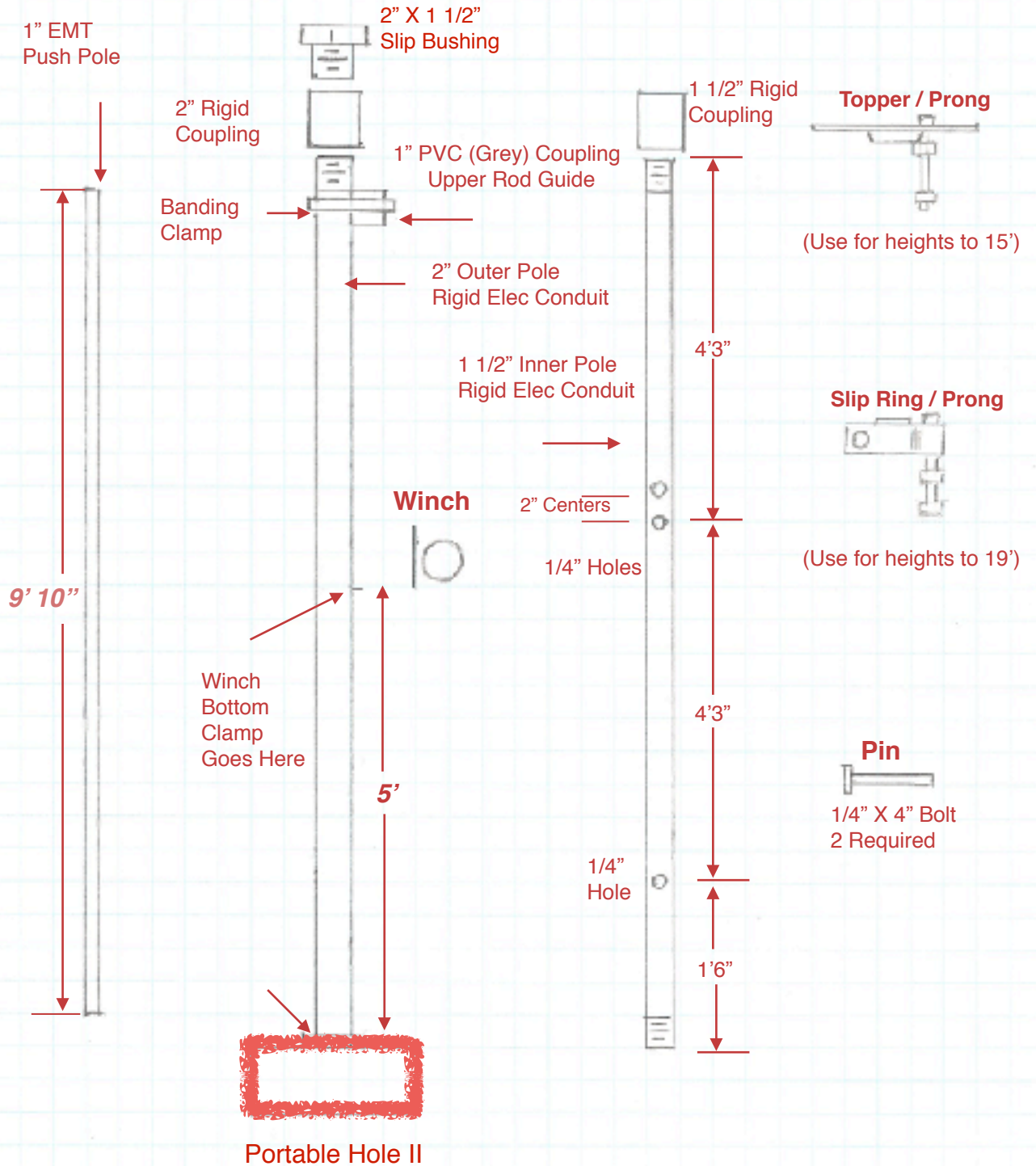
Magic Christmas

Alexandria, La.

## Description

The ASAP Sr, single stage, has the same concept as the ASAP Jr. The outer and inner poles are larger than the Jr providing more hardiness, heavier load capacity and more wind resistance. When mounted on a Portable Hole a total height of 19'1" can be reached. If additional height is desired, pipe extensions can be added to the 1 1/2" inner pole.

# ASAP Sr (Single Stage) Diagram and Measurements



## Poles Needed:

- 1 - 2" X 10' (9'11") Rigid Elec Conduit. Comes with a 2" Rigid Coupling.
- 1 - 1 1/2" X 10' (9'11") Rigid Elec Conduit. Comes with a 1 1/2" Rigid Coupling.
- 1 - 1" X 10' EMT

**NOTE:** Rigid Elec Conduit has a smooth Bore. Galvanized pipe has an internal weld protruding on the inside.

# Poles and Pipe Needed

1 - 2" X 10' Rigid Elec Conduit. Should come with a 2" Rigid Coupling.  
(Do Not Substitute Gal Pipe)

1 - 1 1/2" X 10' Rigid Elec Conduit (comes with 1 1/2" Rigid Coupling)

1 - 1" X 10' EMT



# ***ASAP Sr.***

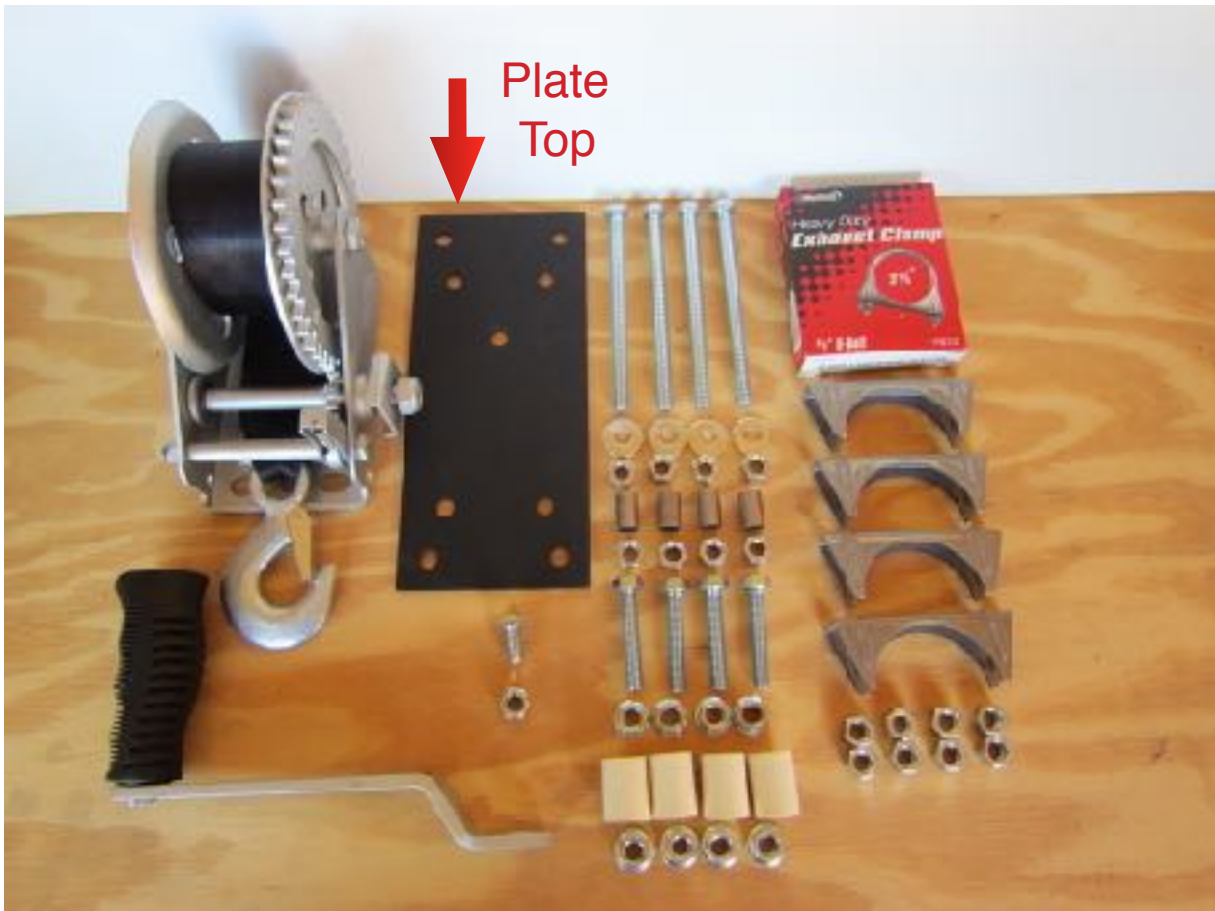
## ***1000# Winch Assembly***

The ASAP Sr uses the 1000# Marine Raider Strap Winch, available from Academy Sports and Outdoors - [www.Academy.com](http://www.Academy.com). The winch cost \$24.99 and ships free. Other winches might work if the mounting hole pattern is the same. The winch requires mounting on an adaptor plate as shown below.

# Parts Needed:

<i>Quantity</i>	<i>Description</i>	<i>Price</i>
1	Winch w/strap, 1000# Marine Raider. Available from Academy Sports and Outdoors.	\$24.99
1	Winch Adaptor Plate. Available from Boscoyo Studios.	14.00
4	Exhaust Clamp, 2 1/4" @ \$3.59 Use the one that have 3/8" U Bolts. The U Bolts are not used but the washer nuts are used. Available from Auto Supply Stores.	14.36
4	3/8" X 5" All Thread Bolts @ \$.73 Available from Home Depot.	2.92
4	3/8" X 2" All Thread Bolts @ \$.34 Available from Home Depot.	1.36
1	3/8" X 3/4 Bolt @ \$.25 Ace Hardware Store.	0.25
17	3/8" Hex Nuts @ \$.12 Available from Home Depot.	2.04
4	5/16 Flat Washers @ \$.12 Available from Home Depot.	0.48
4	3/8" X 3/4" Steel Spacers @ \$.40 (can sub 2 - 3/8" nuts and 1 5/16" washer per spacer) Available from Ace Hardware.	1.60
4	1/2" X 1" C PVC Coupling @ \$.27 Available from Home Depot.	1.08
	<b><i>Total</i></b>	<b><i>\$63.08</i></b>

# Parts



## Tools Needed for Assembly:

2 - 9/16" Box End Wrenches

1 - Needle Nose Pliers

## Step 1



Install 4 - 3/8" X 5" All Thread Bolts in Plate Corners using 5/16" washers, 3/8" Hex Nuts, Spacers and 3/8" Hex Nuts. (Can sub 2 - 3/8" Hex Nuts and 1 - 5/16" washer for the spacers) . Tighten.

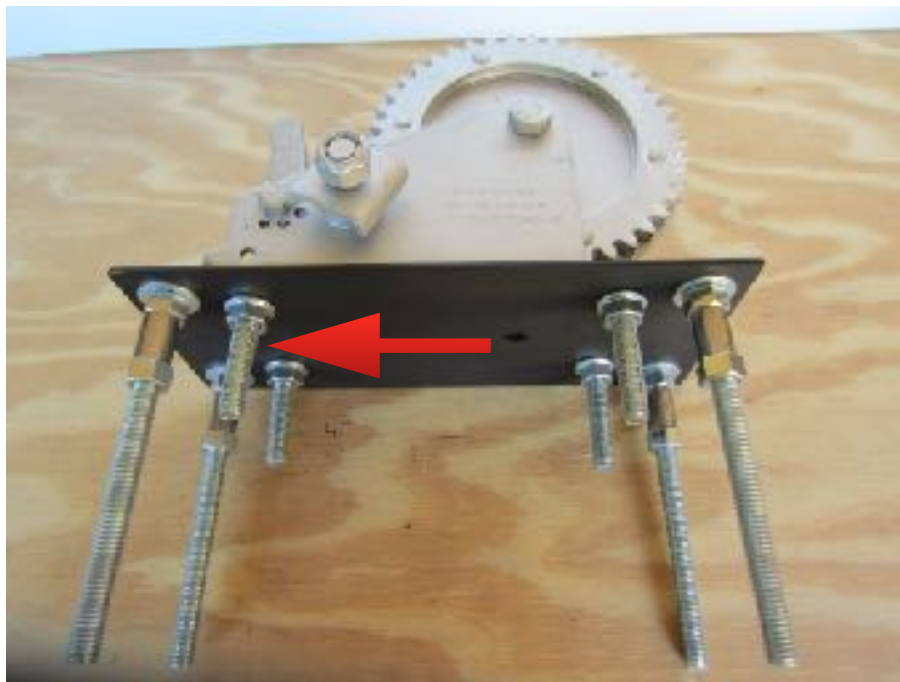
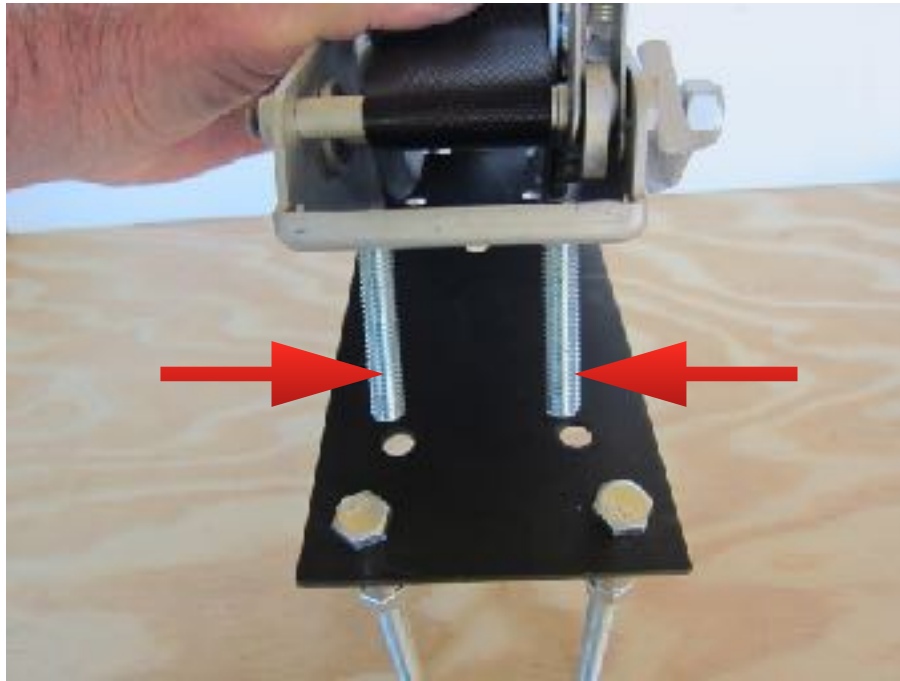


## Step 2



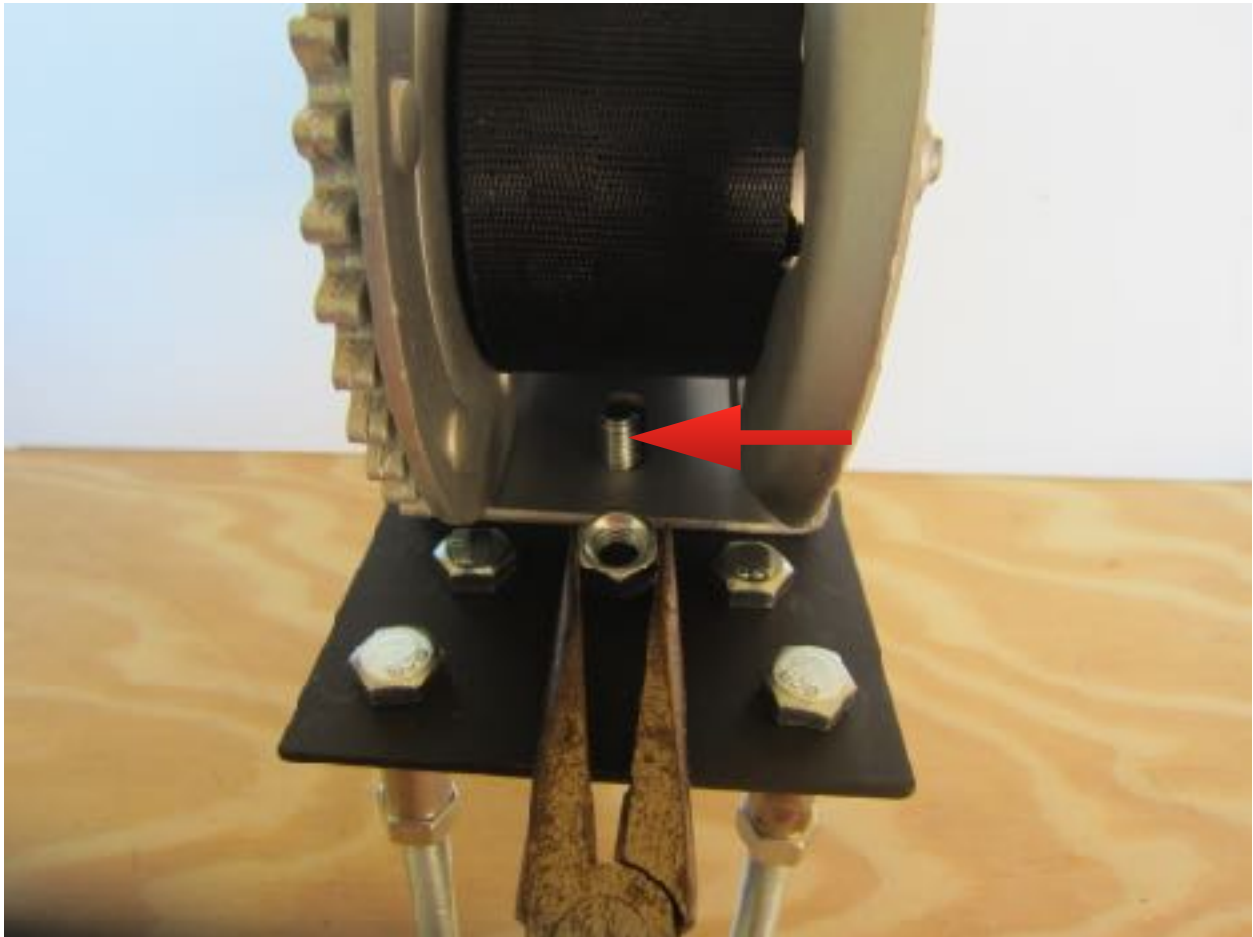
Install 2 - 3/8" X 2" All Thread Bolts in top of plate using 2 - 3/8" Washer-Nuts (From Exhaust Clamps). Tighten.

## Step 3



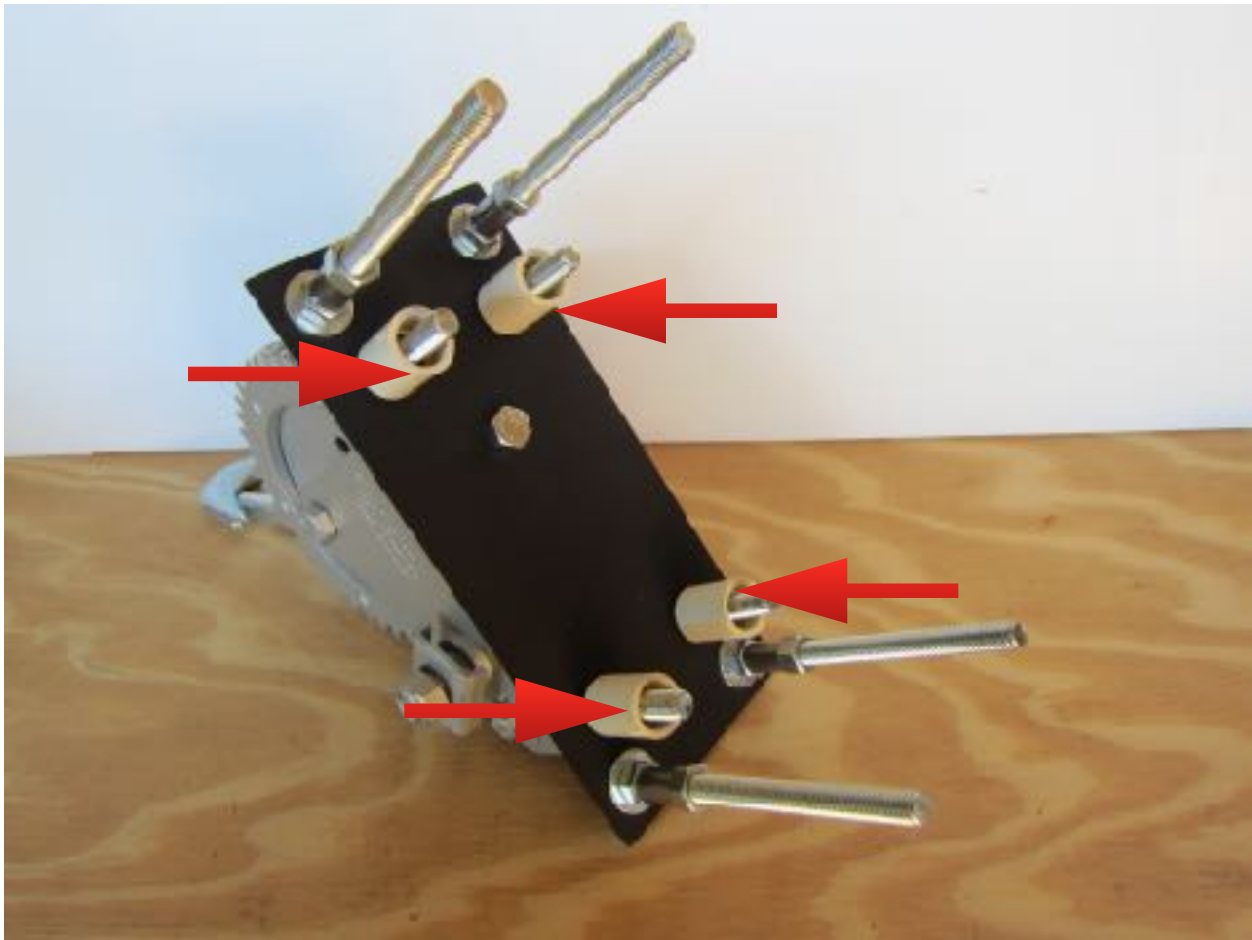
Place 2 - 3/8" X 2" All Thread Bolts into Lower Winch holes and attach winch to plate using 2 - 3/8" Washer-Nuts from Exhaust Clamps. DO NOT TIGHTEN.

## Step 4



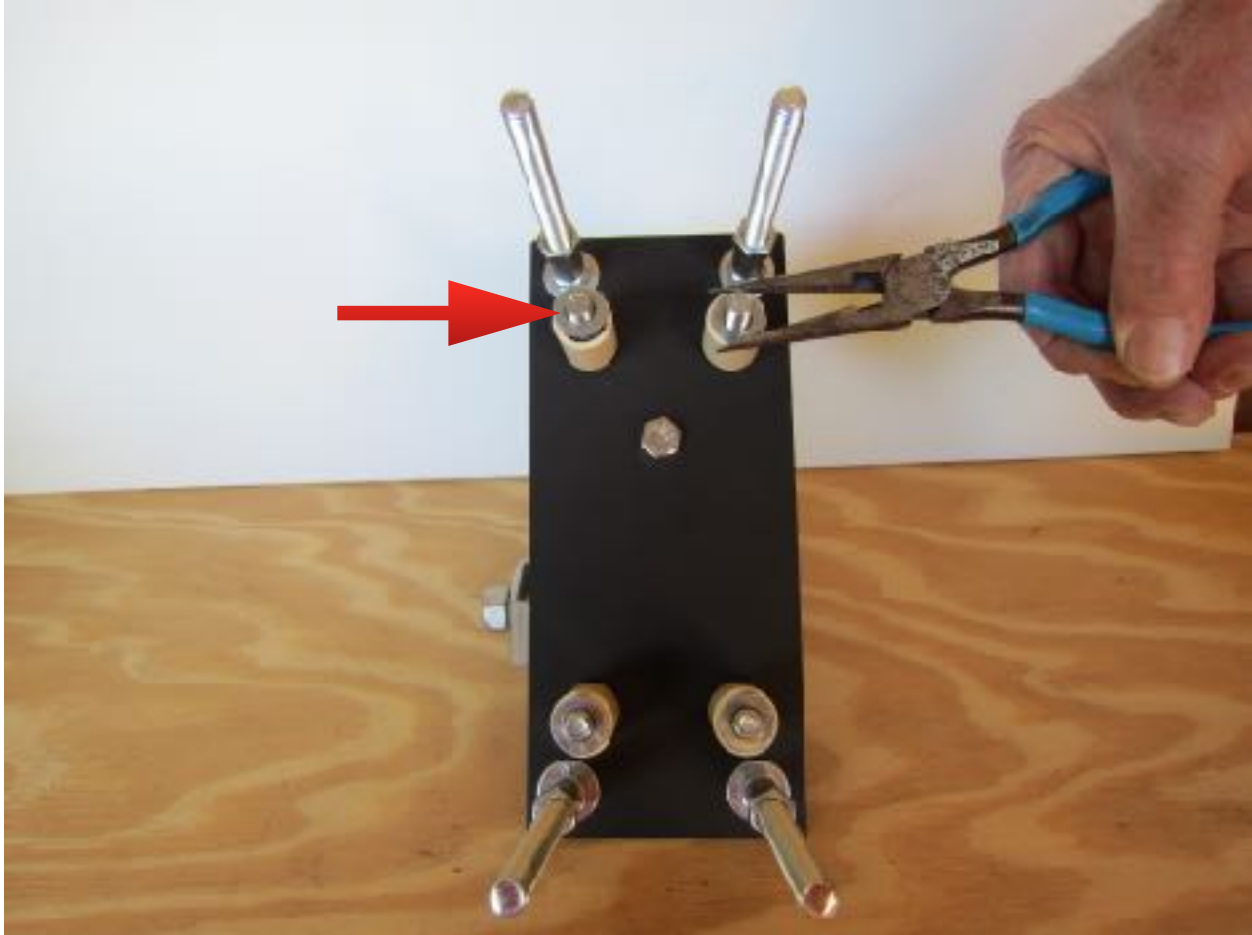
Install a 3/8" X 3/4" Bolt into upper winch plate and winch frame as shown. Use needle nose pliers to help start 3/8" Hex Nut onto Bolt. Tighten all 3 winch Bolts and Nuts.

## Step 5



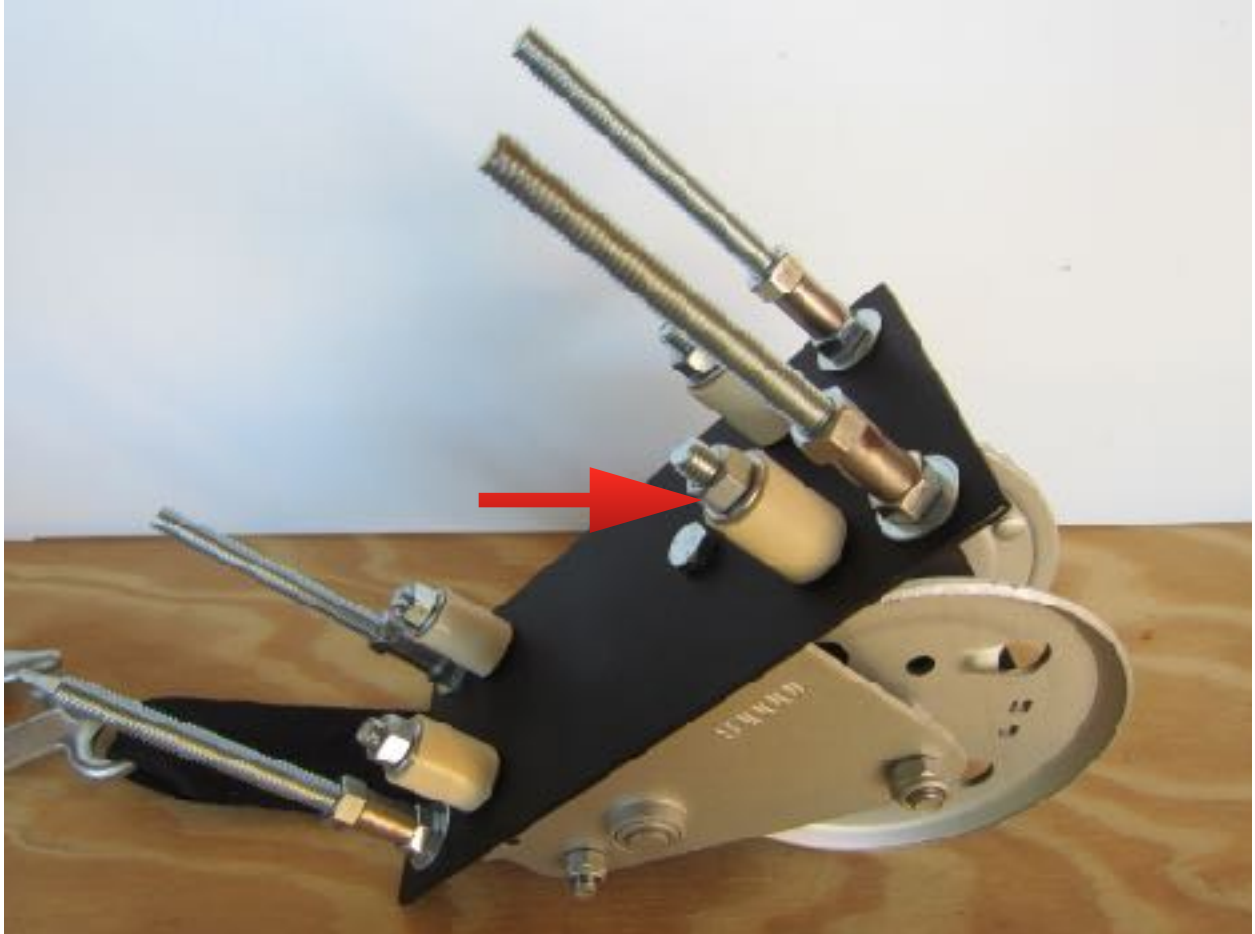
Turn Assembly over and slide 4 - 1/2" X 1" C PVC Couplings onto the 3/8" X 2" Bolts. These couplings will act as EMT Push Pole Guides.

## Step 6



Screw 3/8" Washer Nuts into the C PVC Couplings using Needle Nose Pliers.

## Step 7



Screw 4 - 3/8" Hex Nuts onto all 2" Bolts as keepers.  
Tighten.

## Step 8



Install 4 - 2 1/4" Exhaust Clamps onto the 3/8" X 5" Bolts using 4 - 3/8" Hex Nuts. To install on pipe remove Hex Nuts and Back Half of Clamp. Be sure to tighten Back Half of Clamp evenly and securely to pipe.

# Slip Ring / Prong

The Slip Ring / Prong slides over the 1 1/2" inner pole and allows the push pole to raise the inner telescoping pole up in steps of 4'3" each. The prong fits down inside of the 1" EMT push pole.

## **2" Pipe Gate Hinge Zinc Coated**

National Hardware N275-495 299BC

(Google National Hardware for supply outlets.)



- \*1/2" X 4" All Thread Bolt (Home Depot)
- \*2 - 1/2" Washers (AGB) (Home Depot)
- \*3 - 1/2" Nuts (Home Depot)
- \*2 - 9/16" Nuts (Ace Hardware)

**Caution:** There are other Pipe Gate Hinges available but most do not have the structural integrity as the one listed above.



Place the 1/2" bolt snugly outboard in the hole before tightening the 3/8" nut.

Add 9/16" nut. This nut does not fit the 1/2" bolt but loosely screws onto it.

Then add the following nuts in this order: 3/8" , 9/16" , 3/8".





File slight taper on top inside edges of the gate hinge to prevent hang up on the 1 1/2" inner pole.

Tighten carriage bolt until the 1 1/2" pole slides through the hinge freely.

***Click Link to see Video:***

<https://youtu.be/M3FiHubUMXY>

# Other Parts

## Slip Bushing



Slip Bushing for 1 1/2" Pole is made from a 2" X 1 1/2" galvanized bushing. Do not use PVC due to heavy pipe. Grind out the threads so that the 1 1/2" inner pole slides through freely but slightly snug.

## 1" EMT Guide



1 - 1" Elec PVC coupling (Grey)  
1 - 3 1/2" dia Hose Clamp  
(Home Depot)

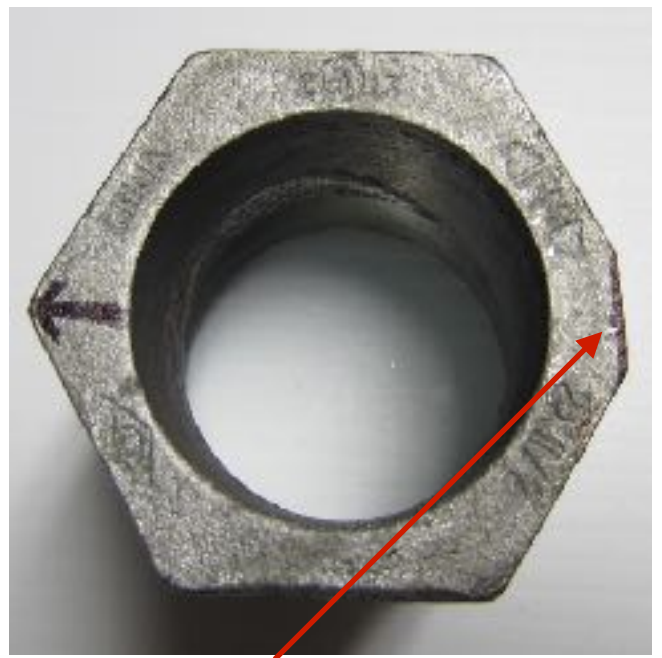
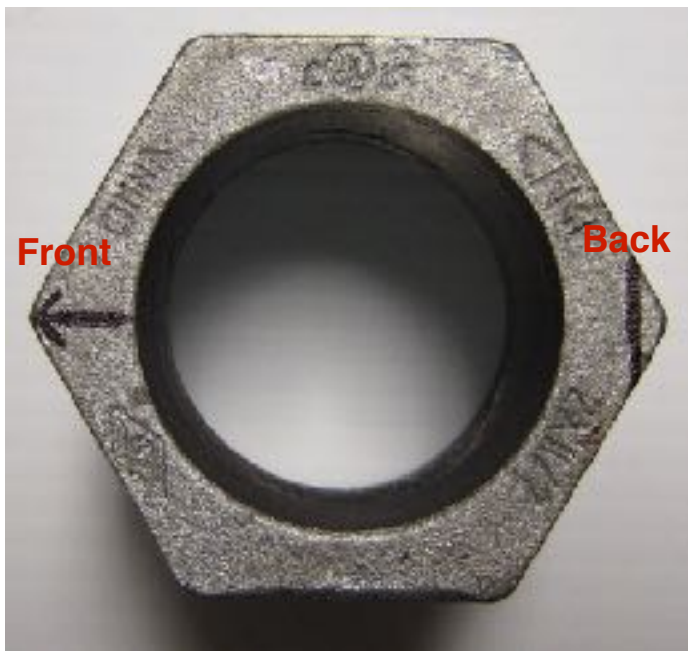
## Pins



2 Pins required for 19' high operation.  
Use 1/4" X 4" or 4 1/2" Bolts.  
File the tips to a point for ease of insertion into pipe holes.

# Outer Pole Orientation

1. Screw the 2" Outer Pole snugly into the base with a pipe wrench. Use Teflon Tape on the threads.
2. Screw the 2" Rigid Coupling onto the 2" Outer Pole snugly.
3. Screw the 2 X 1 1/2" Slip Bushing into the 2" Rigid Coupling and snug it up until one of the Hex tips on the Bushing faces forward and the opposite tip faces backward. This places 2 Bushing "Flats" facing sideways.
4. File or grind off the Hex Bushing Tip facing to the rear so the Slip Ring / Prong will seat correctly.
5. The "flats" on the Bushing allow a bolt with washers to be placed thru an inner pole hole to limit the pole's rotation.



Remove about 1/8" of the Hex tip.

# Hand Drilling Accurate Holes in Pipe



Look for seam marks along the length of the pipe for longitudinal alignment.

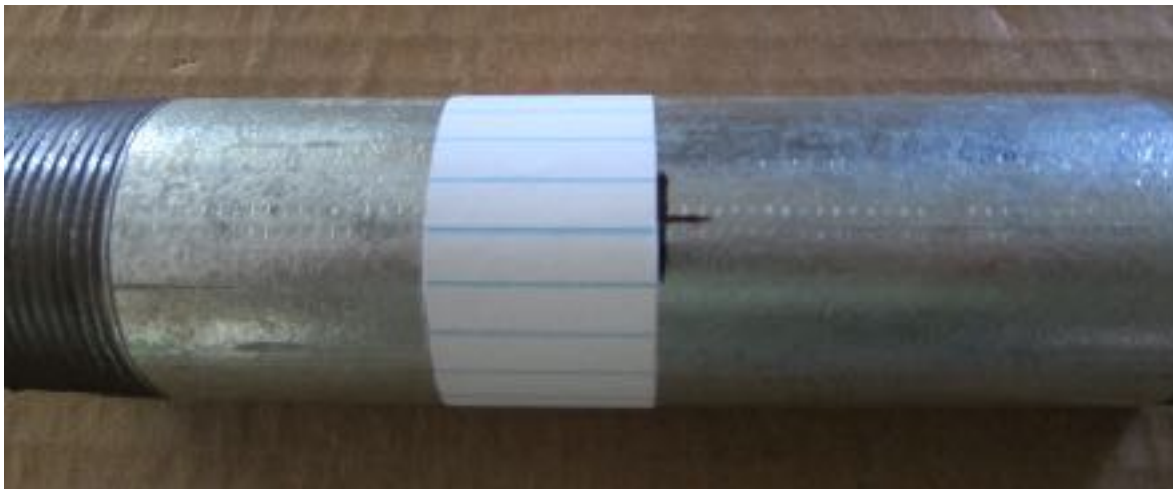


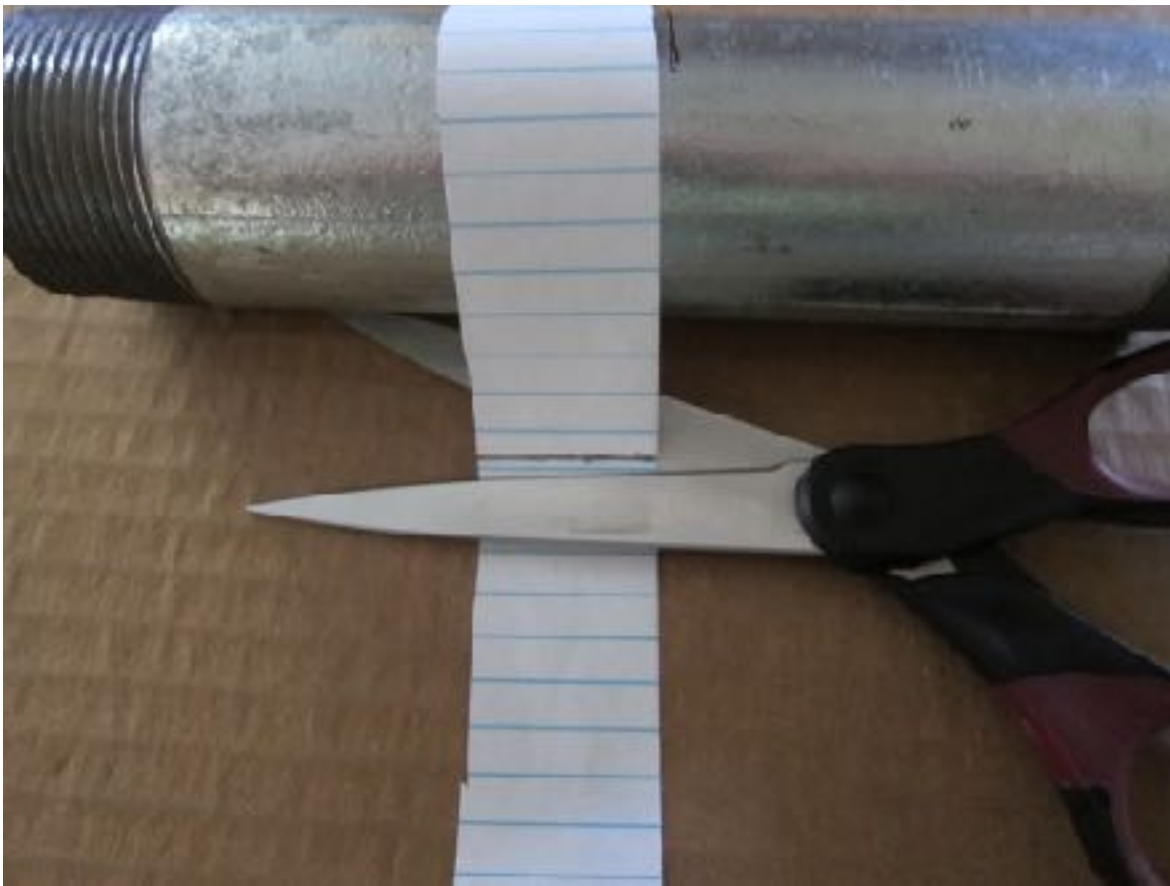
Measure and mark hole locations on one side of the pipe.



Cut a piece of notebook paper about 1 “ wide and longer than the pipe circumference.

Tape one end of the paper at a marked hole location and overlap the paper around the pipe as shown below.

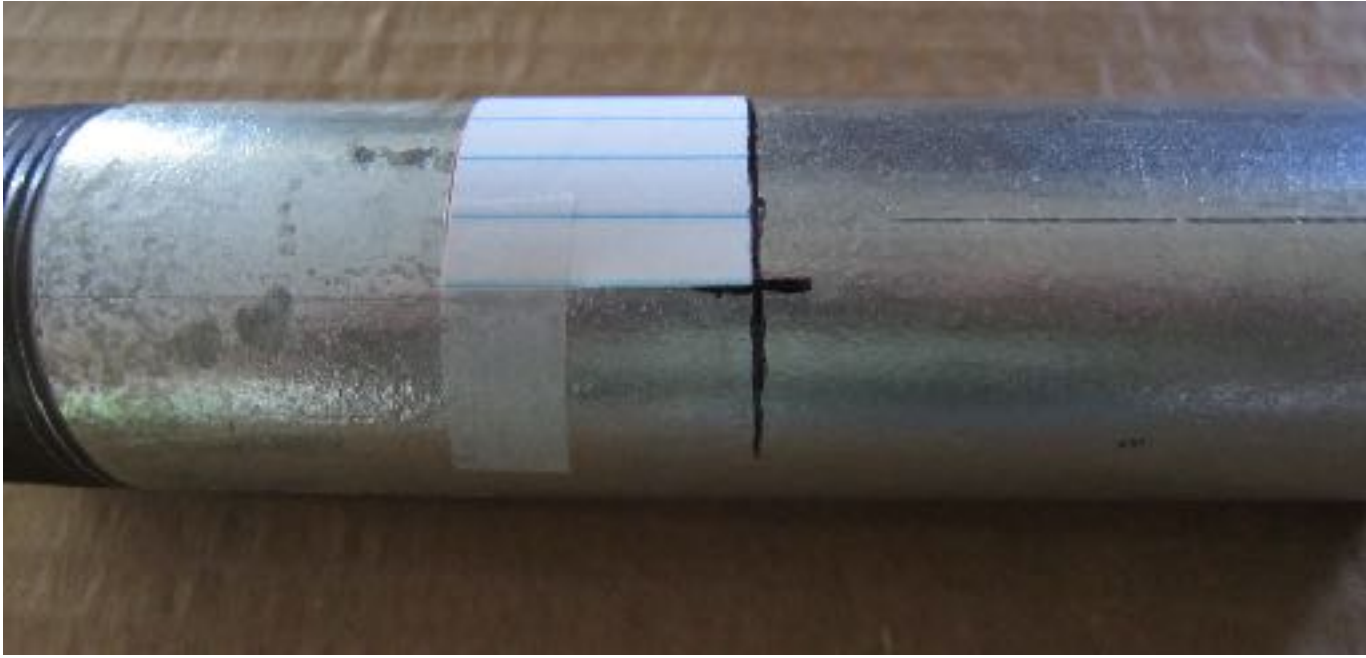




Cut off the overlapped paper at pipes's circumference.



Fold the paper in half either over or under taped end.



The doubled paper is the distance around 1/2 of the pipe.

### **After the hole locations are marked:**

1. Punch indentation at hole mark.
2. Drill small 1/8" pilot hole.
3. Drill larger hole.
4. Remove drill burrs and remove cuttings on inside of pipe by standing pipe up and tapping on side.

# How to Make a Hole Marking Jig Out of PVC

**Note:**

Use a 1 1/2" PVC coupling for 1 1/2" pipe and 1" PVC coupling for 1" pipe.

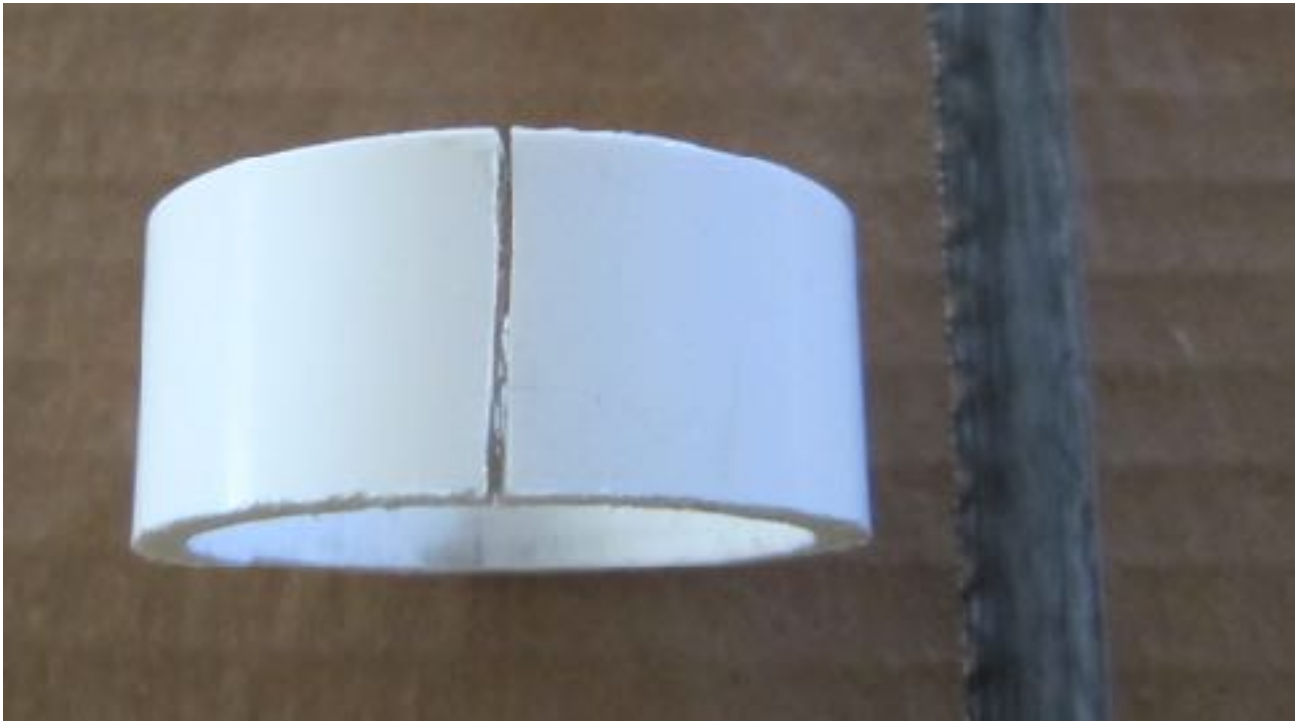


Cut a 3/4" piece off of the coupling with a hack saw.

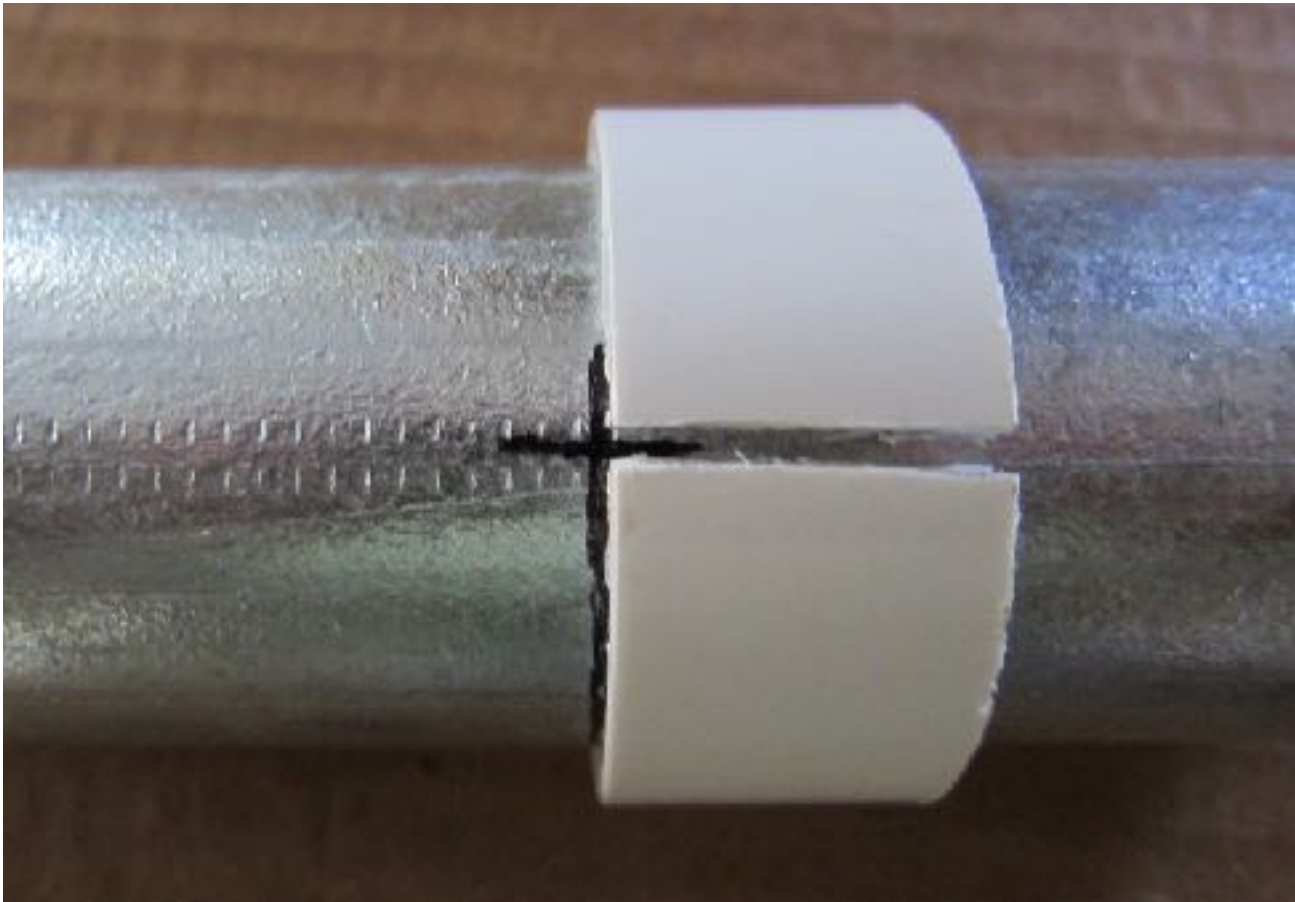




Use the paper method as shown previously to mark hole locations on each side of the PVC slice.

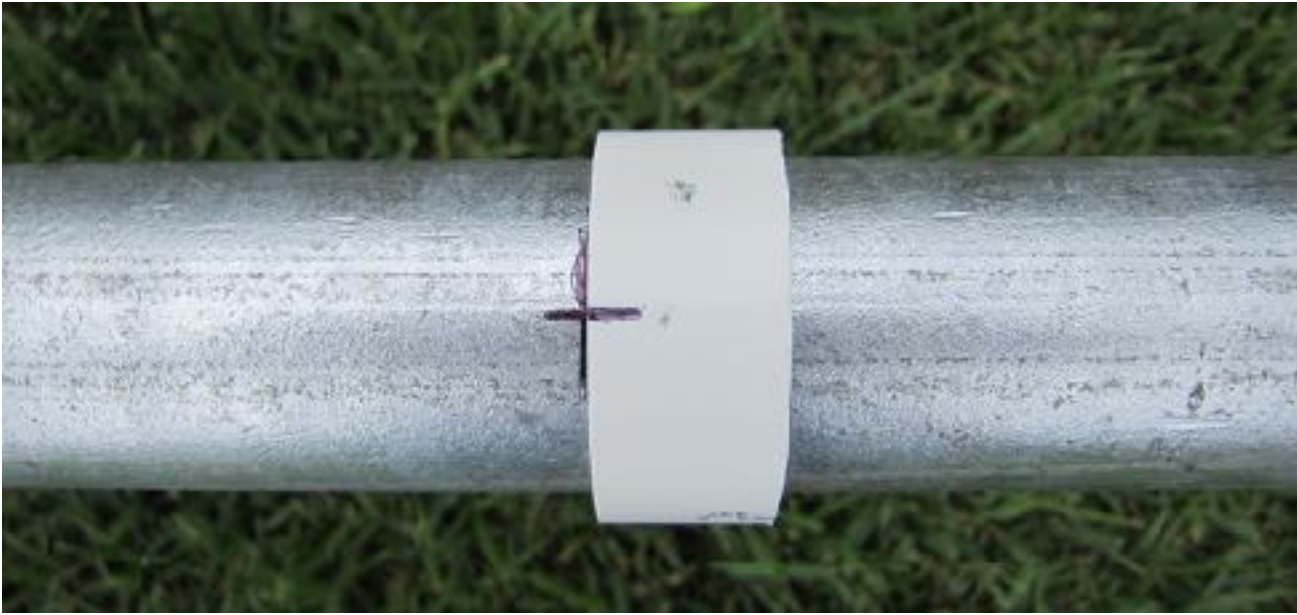


Cut across the PVC slice at one of the markings so it will open up enough to slide onto the pipe.



Slide PVC slice onto pipe to desired location.

The marking on the other side of the PVC slice is the correct spot for the hole on the other side. If done carefully, accuracy is  $\pm 1/32$ ".





Chairs can be used to hold pipe while marking and drilling.

# Inner Pole Extensions



Additional height can be gained by adding short sections to the existing inner telescoping pole. Prefabricated sections (nipples) are available in lengths of 12", 8", 6", 4", 3" and 2" from electric and plumbing supply stores. Other custom sections can be fabricated to meet specific height requirements.



Screw the extra section into the coupling above the Slip Ring / Prong.

# 1 1/2" Inner Pole



Some of the slack of the inner telescoping pole can be removed by adding a Centralizer to the bottom of the pole. A 1 1/4" PVC Male Adapter can be driven into the bottom of the pole and secured with JB Weld or equivalent. File down enough of the PVC points to allow the pole to slide smoothly inside the 2" outer pole.

# Contact Info:

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ASAP Video: <https://www.youtube.com/watch?v=P8XRpqi3dvU>

## ***Disclaimer***

This Document explains how I built the ASAP Pole for my own personal use.

Anyone building or using the ASAP pole from these plans and information does so at their own discretion and liability.

*Walter B. Monkhouse*

*July 2, 2017*