

# Bullet Mole Instruction Manual



## READ ALL INSTRUCTIONS

**ALTHOUGH THE BULLET MOLE® IS SAFE AND SIMPLE TO USE, THERE ARE CERTAIN SAFETY GUIDELINES YOU MUST FOLLOW TO ENSURE THAT IT REMAINS THE SAFEST AND EASIEST WAY FOR INSTALLING UNDERGROUND PIPE.**



Call DigAlert Nationwide at (8-1-1) before starting any underground project.



**Know Your Tool.** Read this manual carefully and understand the tool's application and limitations as well as the potential hazards.

## FULLY ENGAGE ALL THREADED PARTS

**Keep Work Area Clear.** Cluttered work areas invite accidents. Be sure your work area provides enough room to freely drive the tool through the ground.

**Use the Right Tool.** Do not attempt to install a pipe through a hole that is too small. Forcing the pipe through a hole diameter that is too small may damage the pipe. For smaller spans where space is limited, use a 2 ft. shaft and a slide hammer to drive the tool.

**Use the Recommended Accessories.** To insure a proper and safe installation, follow all guidelines below and use only recommended accessories.

**Always Wear Goggles or Safety Glasses with Side Shields.** When driving the tool through the ground, always wear the proper eye protection. Everyday glasses have only impact resistant lenses; they are not safety glasses.

**Only Use a Sledgehammer or Jackhammer**  
We do not recommend using the backside of an axe to drive the Bullet Mole®. Only use a safety sledgehammer or jackhammer with approved adaptor to drive the Bullet Mole®. Only use equipment in good working order.

**Know How to Safely use a Sledgehammer.** Improper use of a sledgehammer will quickly bring about fatigue and could lead to injury. The power of a sledge comes from getting the head

in motion. Save your back and make it easy by bending your knees, and to lift it, bring the weight close to your body. Straighten your knees a little at the top of the swing. Then let the hammer fall of its' own weight. Check the hammer head often for looseness.

A sledgehammer's wood or fiberglass handle can be as short as 10 inches or as long as 36 inches. Head weights range from 2 to 20 pounds. Choose a hammer with a forged head. Avoid heads of cast steel; these break more easily and can send dangerous metal chips flying. Select a tool that feels right for your strength and swing.

A cracked handle must be replaced promptly, not repaired or covered with tape.



## Caution:

- When using a sledgehammer or jackhammer always wear safety glasses or goggles, heavy-duty work gloves and steel toed shoes.
- Never use a hammer with a chipped head.
- Handles should be kept smooth and the head must be securely attached.
- Replace broken handles.
- Never use an ax as a maul or sledge
- Provide a clear area and adequate space to swing before using a sledge.

## Know How to Operate The Driving Source.

Although the Bullet Mole® is designed to be used with only a sledgehammer, an optional adaptor is available for a jackhammer. To avoid injury, be sure you are properly trained in the use of a jackhammer before attempting to use it to drive the Bullet Mole®. Only use an approved jackhammer adaptor when driving the tool.

## Level Trench and Elevate Tool From Bottom.

Before you drive the tool through the ground, the **trench must be level** and the tool should be elevated using an approved method such as a Sled Guide to prevent misaligning shaft while driving it through the ground.

**Store Tools Properly When Not In Use.** The Bullet Mole® is a solid tool that can become a projectile while transporting. Return the tool to its case after use and secure it firmly when transporting.



# How To Use

## OVERVIEW

There are two fundamental ways to install underground pipe using the Bullet Mole.<sup>®</sup>

### Installation Methods

**Method #1** Install the pipe as you make hole

**Method #2** Pull the pipe back through after making the hole.

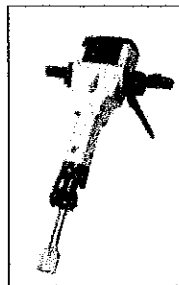
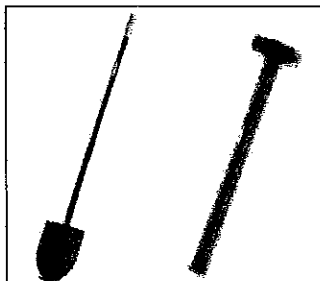
**Method #1** is performed using our Quick Shaft<sup>®</sup> Unit and it is primarily for 1" through 2" pipe (match compression point to pipe o.d.) on shorter runs of 6 ft or less. For longer runs of 1 1/4" to 2" pipe, you can add pipe sections as you add extension shafts to the tool and install the pipe at the same time you drive the tool.

**Method #2** is used for longer runs of 3/4" & 1" pipe in applications under driveways, patios, or large paved areas requiring additional extension shafts to span the required distance. While it is possible to run 1 1/4" to 2" pipe using this method, we recommend method #1 in all cases other than the most ideal soil conditions.

### Additional Tools Required

In every case the only items required are:

- 1) The Bullet Mole<sup>®</sup>
- 2) Shovel
- 3) Sledgehammer (or jackhammer with approved adaptor)



(Optional Driver)

### Easy Three-Step Process

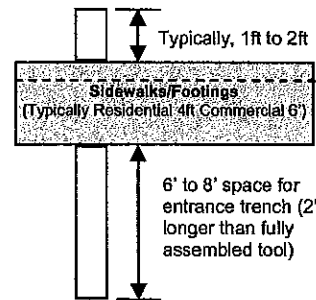
The process of installing pipe with the Bullet Mole<sup>®</sup> is broken down into three stages:

- 1) Preparing the trench
- 2) Making the hole
- 3) Installing the Pipe

Each stage is performed in one or two easy steps. Read on for further information regarding the various applications and the detailed installation process for each.

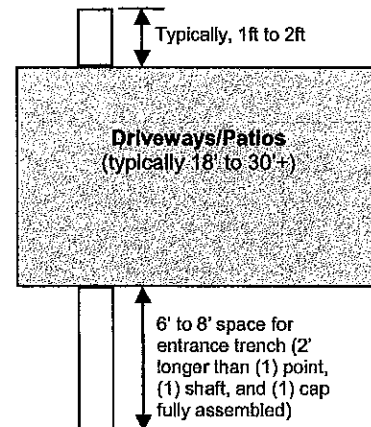
### Short Runs

Sidewalks/Footings  
(up to 6 ft)



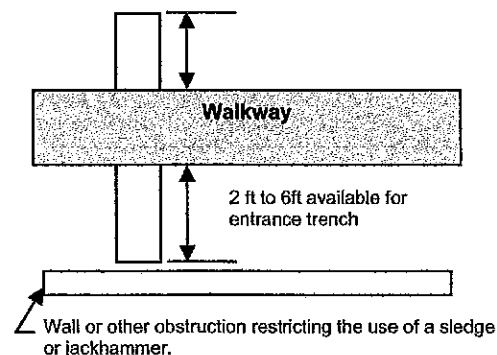
### Longer Runs

Driveways/Patios/Paved Areas  
(Greater than 6 ft)



### Tight Spots

Driveways/Patios/Paved Areas  
(Greater than 6 ft)



In this application a 2 ft Extension Shaft and Sledge hammer are used to make the installation

# Fast Start Installation



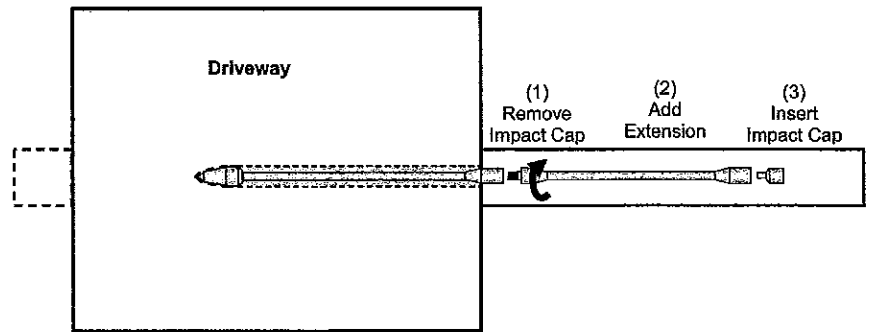
<p><b>Step One –</b> Prepare Entrance and Exit Trenches:</p> <ul style="list-style-type: none"> <li>• The entrance must be 2 ft to 3 ft longer than the longest assembled shaft being used.</li> <li>• Trench depth varies with application (Typ. 12" to 18"). <u>Trench bottom must be level.</u></li> <li>• Size exit trench as needed.</li> </ul>	
<p><b>Step Two –</b> Prepare Pipe &amp; Tool (Only when installing pipe while driving the tool)</p> <ul style="list-style-type: none"> <li>• Cut pipe to desired length, but no greater than the inside dimension of the shaft being used.</li> <li>• Slide pipe onto the shaft and attach the compression point and the impact cap.</li> </ul>	<p><b>Note:</b></p> <ol style="list-style-type: none"> <li>1. Use the 1" plus or 2" compression point/ impact cap for larger diameter.</li> <li>2. Refer to Step Four (alternate method) for additional cutting details on longer runs of 1¼" to 2" pipe.</li> </ol>
<p><b>Step Three –</b> Drive Tool</p> <ul style="list-style-type: none"> <li>• Place the assembled tool 4" to 6" from the bottom of trench using the sled guide or other support.</li> <li>• Once in place, drive the tool using a sledgehammer or other driving device.</li> </ul>	
<p><b>Step Four –</b> Remove Tool from the Pipe:</p> <ul style="list-style-type: none"> <li>• After penetrating into the exit trench, unscrew the point and slide the shaft back out leaving the pipe in place.</li> <li>• Complete your installation and backfill the trenches.</li> </ul>	

# Additional Steps for Driveways



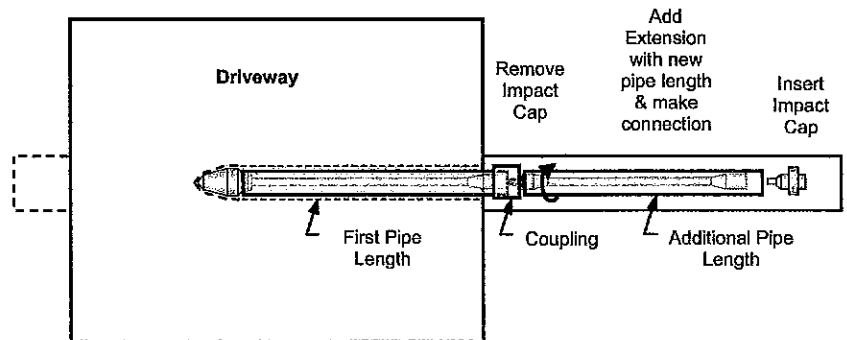
## Step Five - Add extensions:

- Once the full length of the first shaft is driven into the ground, add an extension shaft to continue the installation.
- Continue driving the tool and adding the required extensions to span the required distance.



## Step Five (Alternate) - Drive 1 1/4" & 2" pipe with greater ease by connecting length as you go.

- Use the 1" Plus (for 1 1/4" pipe) or 2" Compression Point and Impact Cap.
- After driving the first pipe:
  - Remove the impact cap,
  - Attach an extension shaft with the next pre-cut pipe section.
  - With a suitable PVC connector, make the connection to the previous pipe.
  - Continue driving the next section of pipe.
  - Repeat s as required.

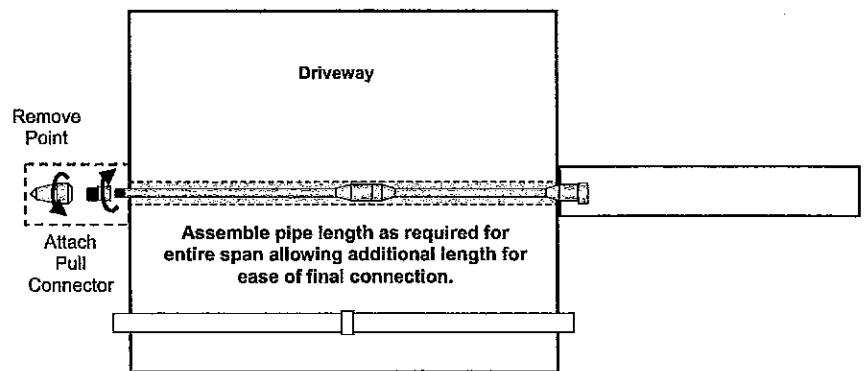


**Note:** For 1 1/4" pipe, use a 1" Plus Compression Point and position the Quick Shaft® as the final shaft in the installation as to provide support on the leading edge of the first pipe length.

## Step Six - If you did not use alternate method above, remove the point once the tool exits out the other side and,

- Assemble the pipe to be installed across the entire distance of span.
- Attach the proper pull connector

**Note:** For 1 1/4" pipe, use a 1" Plus Compression Point



## Step Seven - Attach the Pipe and Pull back:

- Attach the fully assembled pipe to the pull connector and pull the entire length back through the hole.
- Remove each extension one by one as you pull the pipe back.
- Once the pipe is in place, complete the connections on each end before backfilling trenches.

