

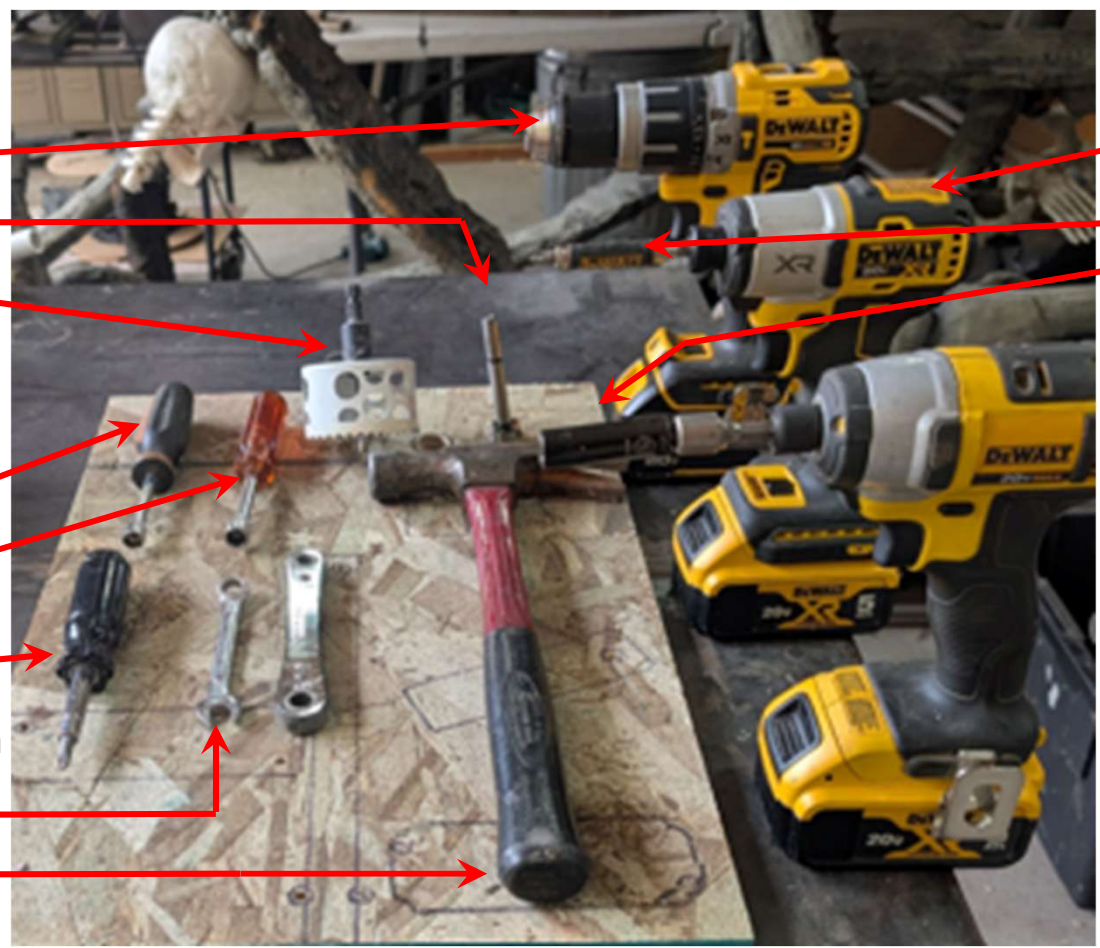
Bell Ringer 2025 – Tools Needed

Tools Needed – but don't go out and buy

- Battery Powered Drill
- 7/8" Forstner Bit
- 3" Hole Saw
- Tape Measure (not shown)

Tools Needed – Must Have

- 7/16" Nut Driver
- 10 mm Nut Driver
- Phillips Screwdriver #2
- Phillips Screwdriver #1
- 7/16" Box/Open End Wrench
- Hammer



Tools Optional – May Make the Task Easier

- Battery Powered Impact with a #2 Phillips, with a 7/16" deep socket, and with a 7/16" standard socket (not shown)
- Vice Grips (also not shown)

Bell Ringer 2025 – Materials Provided

Unfinished Headstone  
Power Supply  
Bell Mount

Not Shown – Available at  
the Gathering  
Cable Clamp with Screw  
Extra Spring (Hardware)

Cam Assembly  
Bell and Bell Arm  
Bell Spacer  
Cam Follower  
Hardware Packet  
Pre Drilled Mounting Board

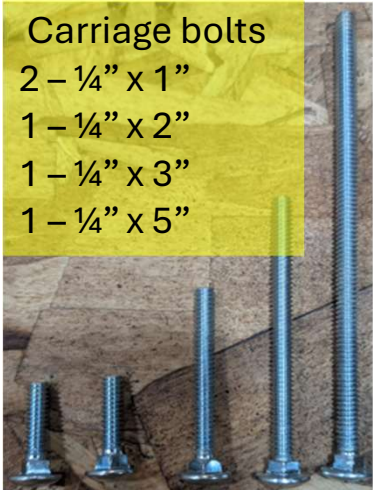
String Follower Mount  
Motor  
Cam Follower Mount

Motor Mount  
Rebar Mounting Guide –  
Rebar not provided)  
String Follower



## Bell Ringer 2025 – Hardware

- Hardware may be attached to the part or will be found in the hardware packet.
- Hardware not in kit will be available at the gathering and is marked with an \*
- Hardware that comes with the motor and bell are not included in this list.



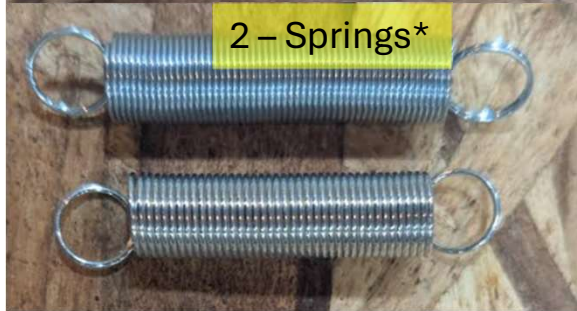
Carriage bolts  
 2 – ¼” x 1”  
 1 – ¼” x 2”  
 1 – ¼” x 3”  
 1 – ¼” x 5”



2 - small washers  
 1 - ¾” OD 3/8” ID washer

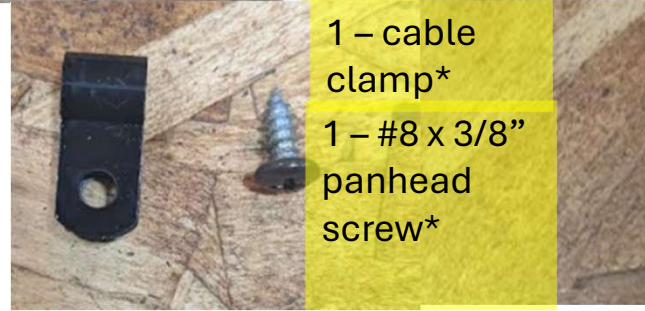


Phillips Head Grabber Screws  
 5 – 1 ¼” and 2 – 1”



2 – Springs\*

1 – 19” to 20” Black Cord with loop (not shown)



1 – cable clamp\*  
 1 – #8 x 3/8” panhead screw\*



2 – 8” Cable Ties



Wing Nuts  
 2 – 5/16”  
 1 – ¼”



5 – ¼” locknuts



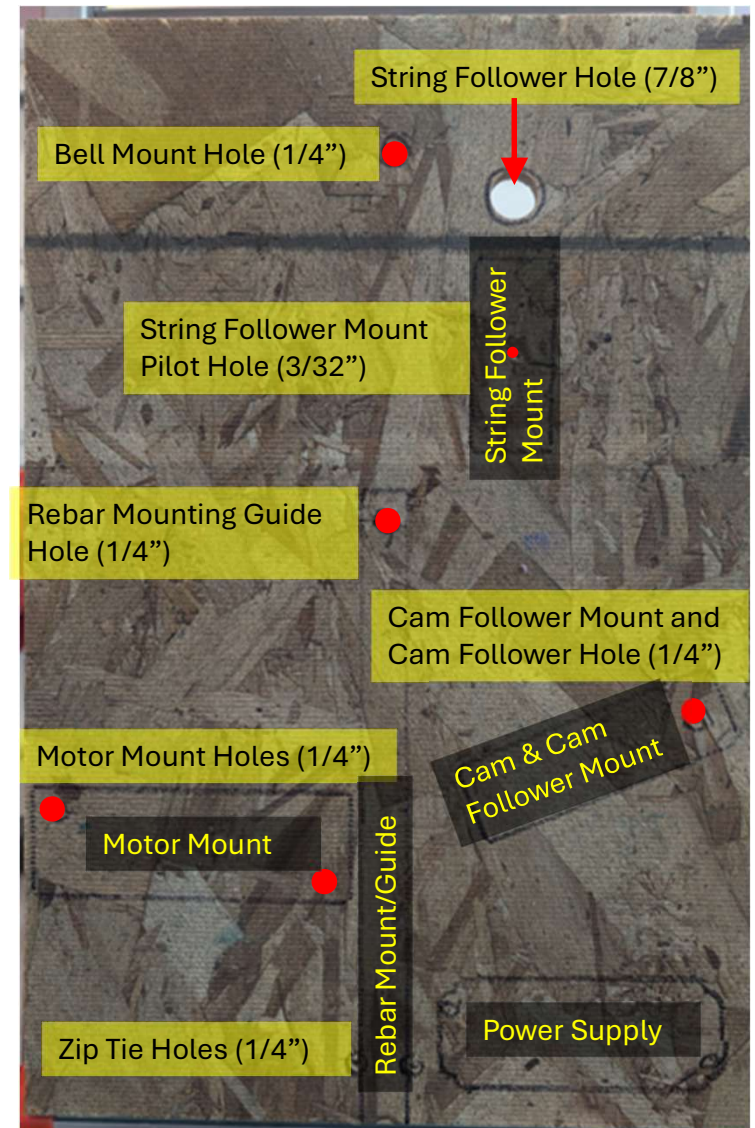
2 - #4 x ½” flat head screw

## Bell Ringer 2025 – Mounting Board Detail

The two figures to the right indicate:

- The size of the mounting board
- Where holes should be drilled
- The approximate location of the main components
- The size of the holes to be drilled in the mounting board

In this kit all holes are pre-drilled and main component locations are outlined.



## Bell Ringer 2025 – Prepping the Headstone

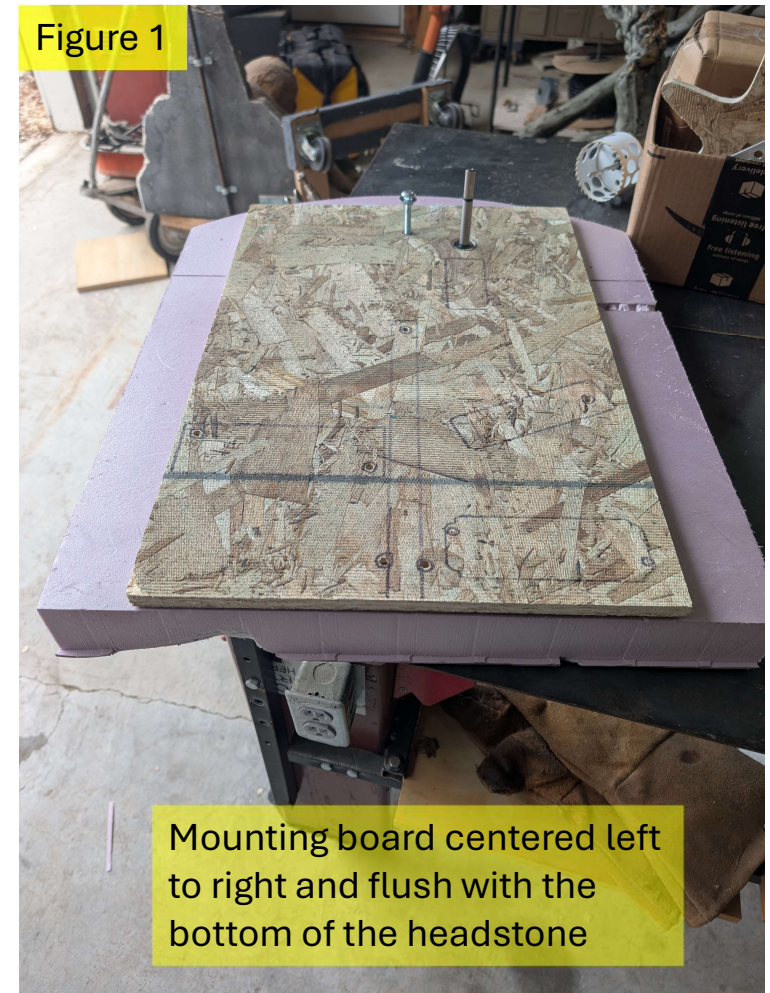
### Step 1A – Figure 1

- Using a tape measure center the pre-drilled mounting board on the headstone.
- The pre-drilled mounting board should be flush with the bottom of the headstone.
- The 7/8” hole should be towards the top on the right as shown in the figure.
- Mark the hole for the bell mount with the 1/4” x 5” carriage bolt
- Mark the hole for the string follower by pressing the 7/8” Forstner bit into the 7/8” hole on the mounting board as shown

#### Material Needed:

- Mounting Board
- Headstone

Figure 1



Mounting board centered left to right and flush with the bottom of the headstone

## Bell Ringer 2025 – Prepping the Headstone (continued)

### Step 1B – Figures 2 and Figure 3

#### Figure 2

- Using the 7/8” Forstner bit **slowly** drill the string follower hole in the headstone.
- Using the 3” hole saw **slowly** drill the bell mount hole in the headstone. The hole saw will not go all the way through the headstone.

#### Figure 3

- Turn the headstone over and finish **slowly** drilling the bell mount hole.
- Set the headstone aside.



## Bell Ringer 2025 – Attaching the Motor Mount to the Mounting Board

Steps 2A, 2B, 2C – Figures 4, 5, 6

### Material Needed:

- Mounting Board
- Motor Mount
- Motor Mount Carriage Bolts (2 – ¼” x 1”)

Figure 4 – Step 2A

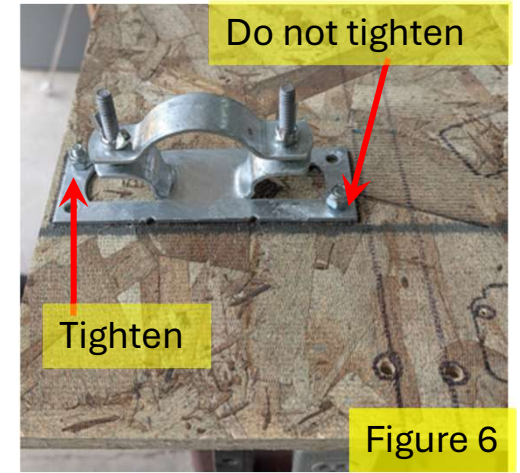
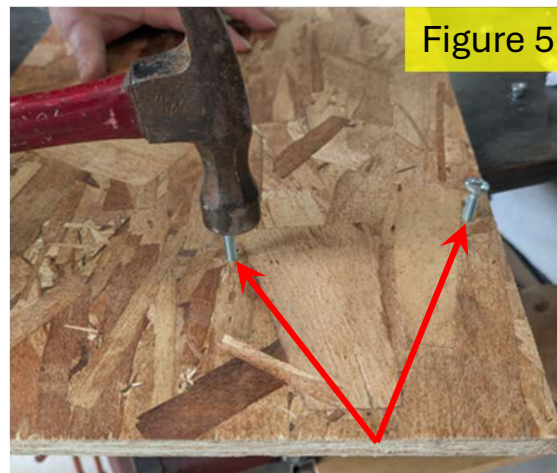
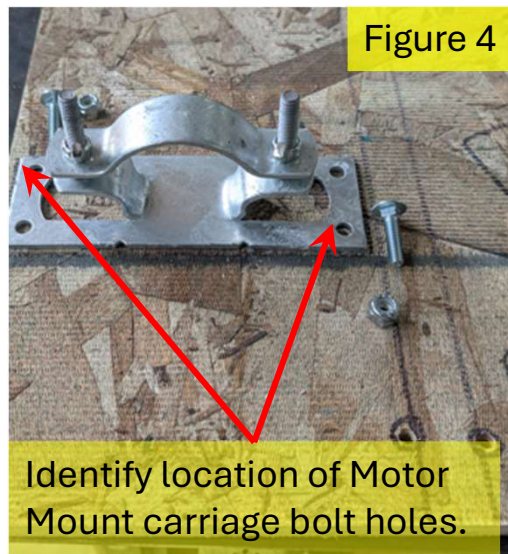
- Align the Motor Mount on the Mounting Board as shown. Note the two holes under the Motor Mount.

Figure 5 – Step 2B

- Flip the Mounting Board over and insert the carriage bolts into the holes identified in Figure 4. You may need to use a hammer to get the carriage bolts through the Mounting Board.

Figure 6 – Step 2C

- Flip the Mounting Board over and place the Motor Mount over the two carriage bolts. Tighten the upper left lock nut securely. Attach, but do not tighten the lower right nut.



## Bell Ringer 2025 – Attaching the Rebar Mounting Guide to the Mounting Board

Steps 3A, 3B, 3C – Figures 7, 8, 9

Figure 7 – Step 3A

- Locate the pre-drilled hole and insert the Rebar Mounting Guide carriage bolt using a hammer if necessary.

Figure 8 – Step 3B

- Flip the Mounting Board over and insert the top of the Rebar Mounting Guide over the carriage bolt and secure with locknut.

Figure 9 – Step 3C

- Secure the bottom of the Rebar Mounting Guide with a zip tie and clip off excess end of zip tie.



Figure 7



Figure 8



Figure 9

### Material Needed

Mounting Board

Rebar Mounting Guide

Rebar Mounting Carriage Bolt ¼" x 2"

¼" Locknut

Zip Tie

## Bell Ringer 2025 – Attaching the Cam Follower Mount and Cam Follower to the Mounting Board

Steps 4A, 4B, 4C – Figures 10, 11, 12

Figure 10 – Step 4A

- Locate the pre-drilled hole on the Mounting Board and insert the Cam Follower Mount carriage bolt using a hammer if necessary.

Figure 11 – Step 4B

- Flip the Mounting Board over and insert the Cam Follower Mount over the carriage bolt and secure with locknut. This should be snug, but not so tight you cannot move it against the Mounting Board

Figure 9 – Step 4C

- Insert the Cam Follower over the carriage bolt. Secure with a locknut. The Cam Follower should pivot freely. It should stop at the Phillips screw on the Cam Follower Mount.



Figure 11

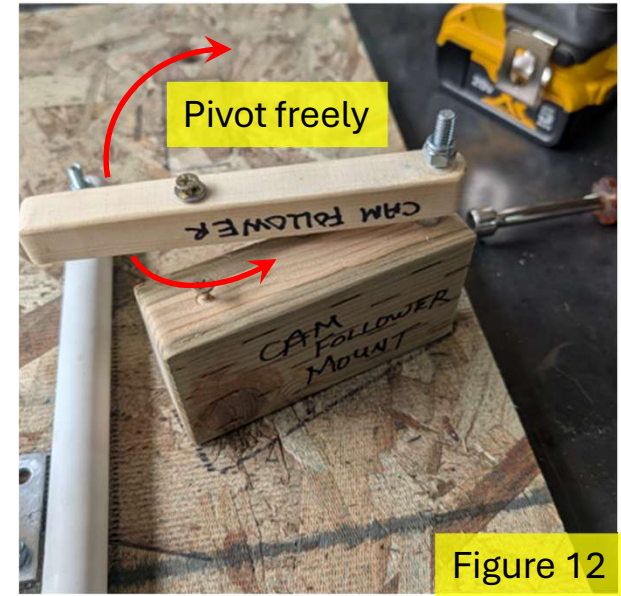


Figure 12

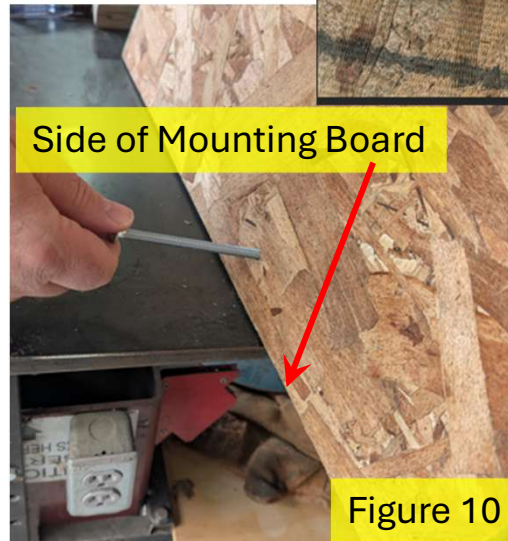


Figure 10

Side of Mounting Board

### Material Needed

Mounting Board

Cam Follower Mount

Cam Follower Mount Carriage Bolt  $\frac{1}{4}$ " x 5"

2 –  $\frac{1}{4}$ " locknut

Cam Follower

Spring

## Bell Ringer 2025 – Attaching the Cam Follower Mount and Cam Follower to the Mounting Board (continued)

### Step 4D – Figure 13

#### Figure 13 – Step 4D

- Attach the spring to the screw on top of the Cam Follower Mount and to the bottom of the Cam Follower



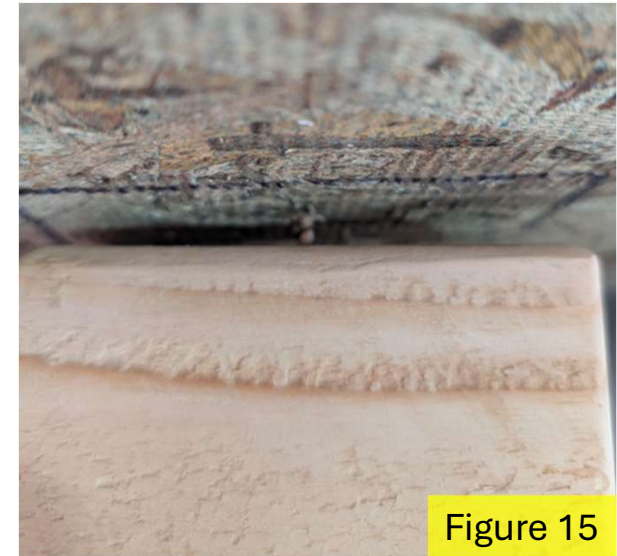
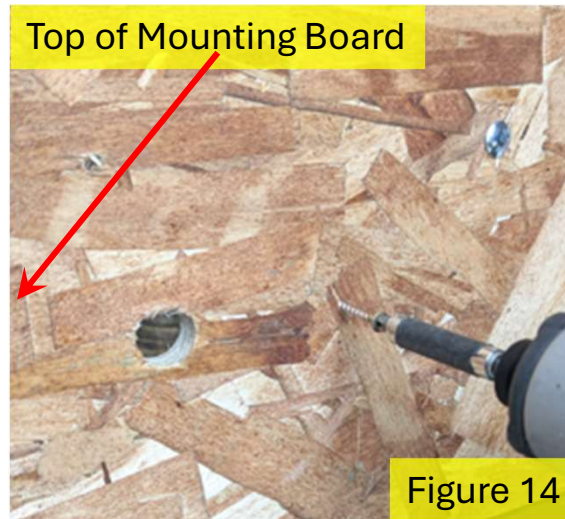
Figure 13

## Bell Ringer 2025 – Attaching the String Follower Mount to the Mounting Board

### Step 5A – Figures 14, 15

#### Figures 14, 15 – Step 5A

- Locate the pre-drilled hole on the Mounting Board and from the front side of the mounting board screw the String Follower Mount to the Mounting Board using a 1 ¼” Flathead Screw



### Material Needed

Mounting Board

String Follower Mount

1 - 1 ¼” Phillips Flathead Screw

## Bell Ringer 2025 – Mounting the Power Supply to the Mounting Board

### Step 6A – Figure 16

#### Figure 16 – Step 6A

- Attach the Power Supply to the Mounting Board using 2 #4 x 1/2” Phillips Flathead Screws



Figure 15

Figure 16

#### Material Needed

Mounting Board

Power Supply

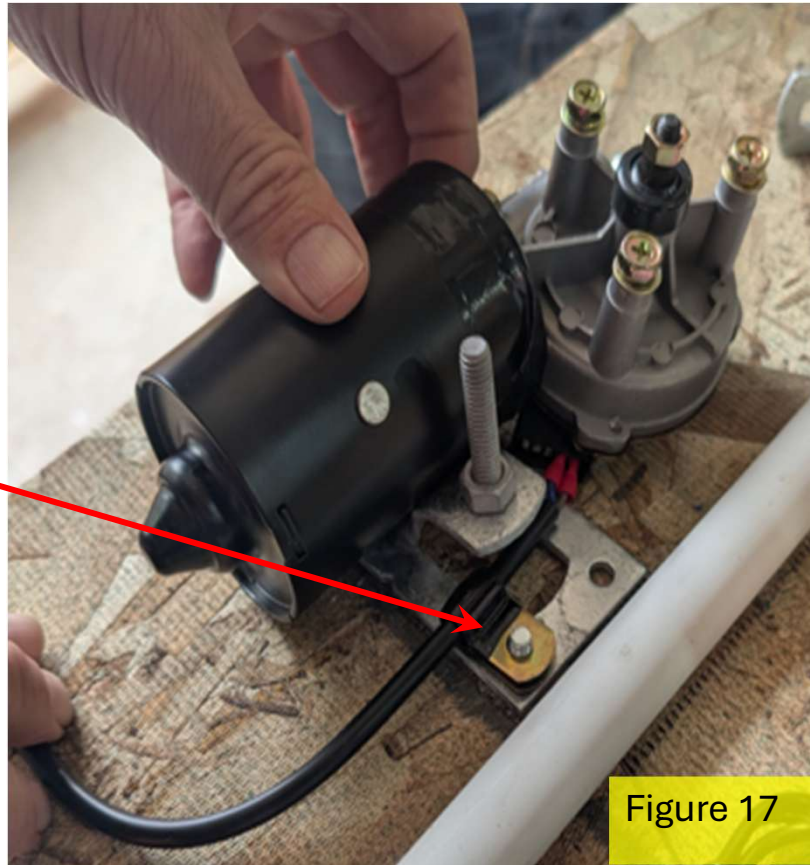
4 - #4 x 1/2” Flathead Screw

## Bell Ringer 2025 – Mounting the Motor to the Mounting Board

### Step 7A – Figure 17

#### Figure 17 – Step 7A

- Remove the top bracket from the Motor Mount
- Place the Motor into Motor Mount
- Remove the lower right  $\frac{1}{4}$ " locknut from the Motor Mount
- Slide the Motor cable clamp over the Motor Mount carriage bolt and install the  $\frac{1}{4}$ " locknut back onto the carriage bolt (do not tighten yet)



#### Material Needed

Mounting Board  
Motor

2 –  $\frac{5}{16}$ " wingnut

1 – cable clamp

1 – #8 x  $\frac{3}{8}$ " panhead screw

## Bell Ringer 2025 – Mounting the Motor to the Mounting Board (continued)

Steps 7B, 7C – Figures 18, 19

Figure 18 – Step 7B

- Place the Motor Mount top bracket over the motor and align the silver tab on the motor to the top bracket.
- Ensure the Motor spindle/shaft is perpendicular to the Mounting Board.
- Tighten the wing nuts
- Tighten the ¼” locknut

Figure 19 – Step 7C

- Connect the Power Supply to the Motor cable
- Secure the cable to the Mounting Board using the cable clamp and #8 x 3/8” panhead screw.

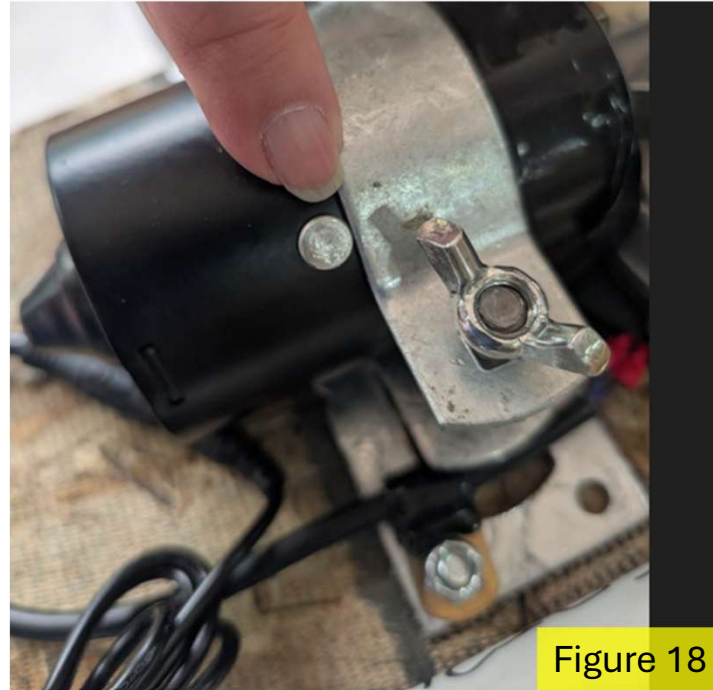


Figure 18

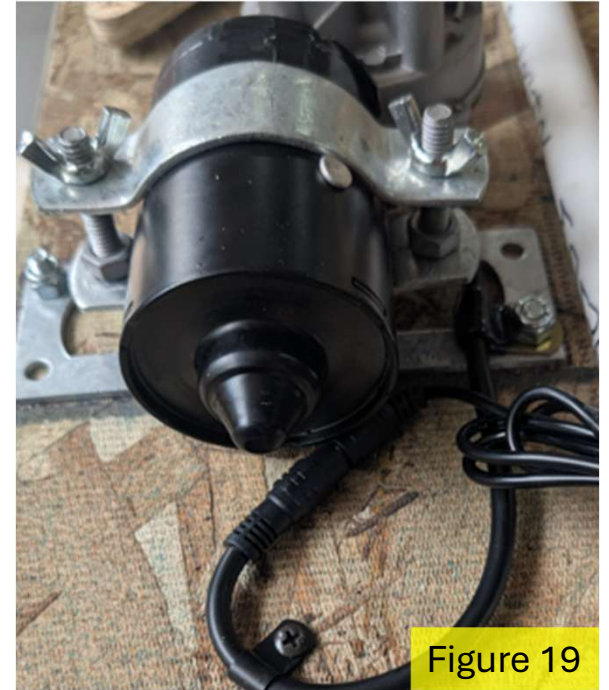


Figure 19

## Bell Ringer 2025 – Mounting Cam to the Motor Mounting Board

### Step 8A – Figures 20, 21

#### Figures 20, 21 – Step 8A

- Attach the Cam to the Motor spindle/shaft
- Ensure the Cam moves the Cam Follower by turning on the Power Supply



Figure 20

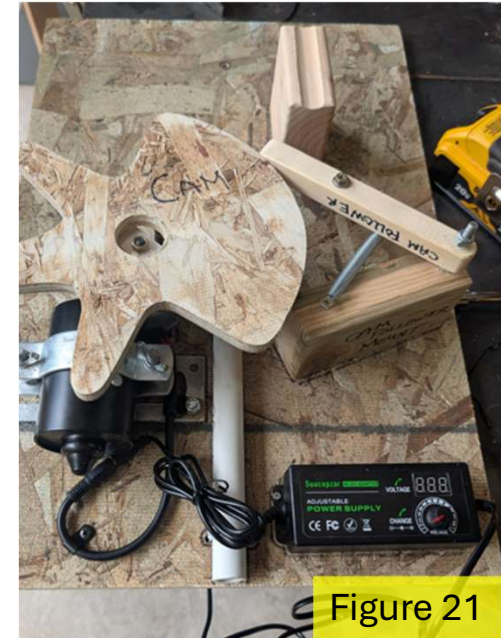


Figure 21

### Material Needed

Mounting Board  
Cam

## Bell Ringer 2025 – Mounting the Bell Mount to the Headstone and Mounting Board

Steps 9A, 9B – Figures 22, 23

Figure 22 – Step 9A

- Place the 5” carriage bolt through the Bell Mount and Bell Spacer. Place this assembly into the 3” hole in the Headstone

Figure 23 – Step 9B

- Place the assembly created in Step 9A through the Bell Mount Hole on the Mounting Board. Orient the Bell Mount with the two holes to the top of the headstone.
- Secure with the large washer and ¼” wingnut.

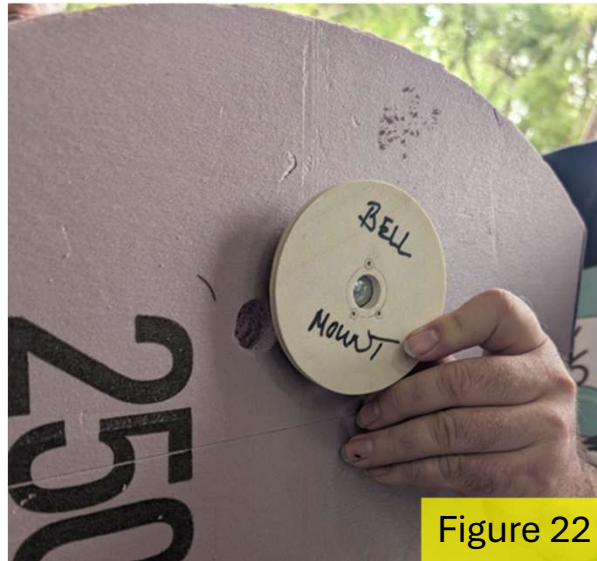


Figure 22

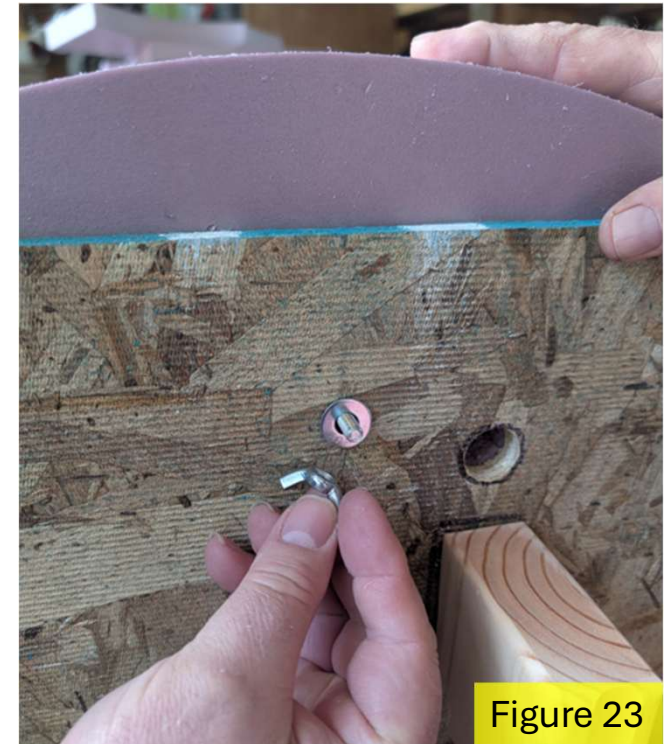


Figure 23

### Material Needed

Mounting Board	¼” Wingnut
Headstone	Large washer
Bell Mount	¼” x 5” Carriage Bolt
Bell Spacer	

## Bell Ringer 2025 – Mounting the Bell to the Bell Mount and Mounting Board/Tombstone Assembly

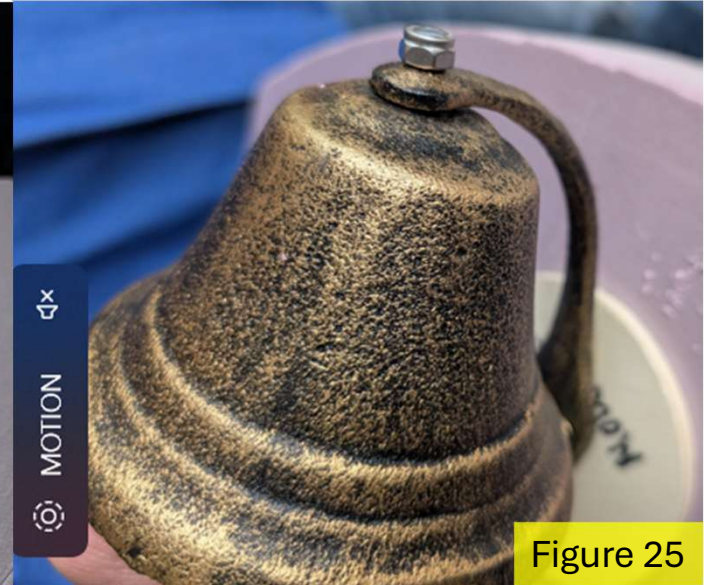
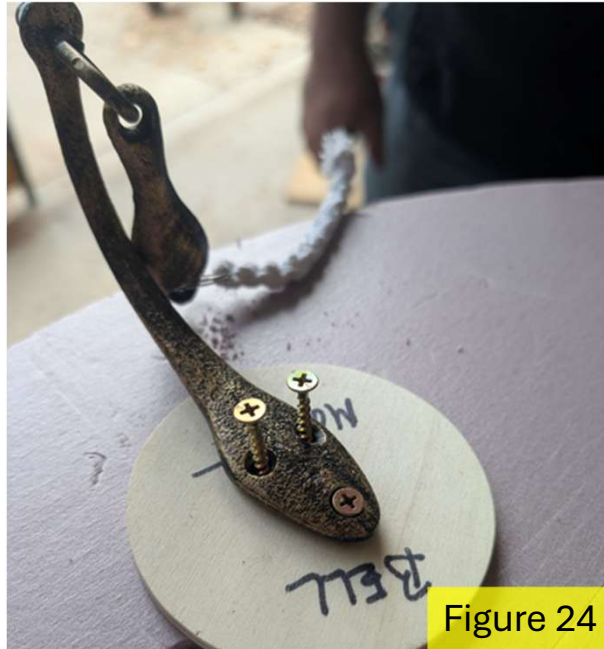
Steps 10A, 10B – Figures 24, 25

Figure 24 – Step 10A

- Attach Bell Arm to Bell Mount with 3 – 1 ¼” Flathead Screws. Do not tighten until all three screws are started.

Figure 25 – Step 10B

- Attach the Bell to the Bell Arm using the included Bell Arm locknut.



### Material Needed

Mounting Board/Tombstone Assembly

Bell Arm

Bell

3 - 1 ¼” Flathead Screws

## Bell Ringer 2025 – Mounting the String Follower to the Mounting Board/Headstone

Steps 11A, 11B – Figures 26, 27

Figure 26 – Step 11A

- Dis-assemble the String Follower

Figure 27 – Step 11B

- Feed the Loop end of the Cord through the short piece of PVC
- tape the non-loop end of the Cord to the PVC then feed the loop through the PVC elbow, then through the long PVC
- Re-assemble the String Follower by:
  - feeding the loop through the PVC 90
  - Putting the PVC 90 and short piece of PVC together
  - Feeding the loop through the long piece of PVC
  - Putting the PVC 90 and long piece of PVC together

### Material Needed

Mounting Board	Black Cord with Loop
String Follower	Piece of tape

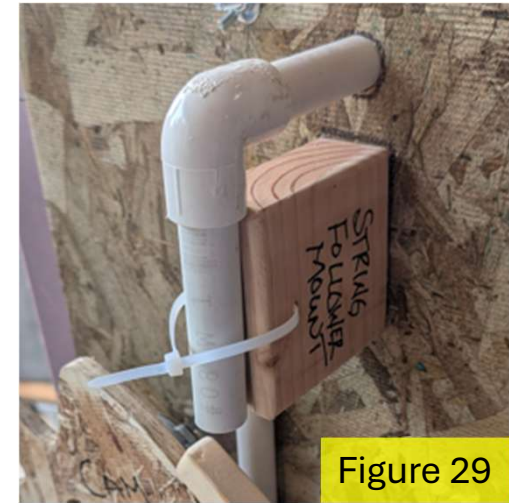


## Bell Ringer 2025 – Mounting the String Follower to the Mounting Board/Headstone (continued)

### Step 11C – Figures 28, 29

#### Figures 28, 29– Step 11C

- Place the String Follower on top of the String Follower Mount ensuring the loop on the cord comes out of the front of the headstone
- Secure the String Follower to the String Follower Mount using the zip tie.
- At this point do not remove the tape.



## Bell Ringer 2025 – Attaching the Black Cord to the Bell

### Steps 12A - Figure 30

#### Figure 30 – Step 12A

- Attach the loop to the silver ring on the Bell
- If needed slip a zip tie piece to hold the silver ring open
- Remove the tape from the non-looped end of the Cord



## Bell Ringer 2025 – Attaching the Black Cord to the Cam Follower

### Steps 13A - Figures 31, 32

#### Figure 30 – Step 13A

- Loosen the screw on the Cam Follower
- Slip the Cord between the two washers and loosely tighten

#### Figure 31 – Step 13B

- Raise the Cam Follower towards the top of the Headstone
- Loosen the screw on the Cam Follower and remove the slack from the Cord
- Tighten the screw



Figure 30



Figure 32

## Bell Ringer 2025 – Fine Tuning the Bell

### Step 14A - Figure 33

#### Figure 33 – Step 14A

- To get the Bell Ringer to work the way you want, the following can be adjusted:
  1. Remove additional slack from the cord.
  2. Replace the spring with a higher tension spring.
  3. Adjust the position of the Cam Follower Mount (If you adjust this, please be sure to tighten the nut under the Cam Follower to ensure the Cam Follower Mount does not move).

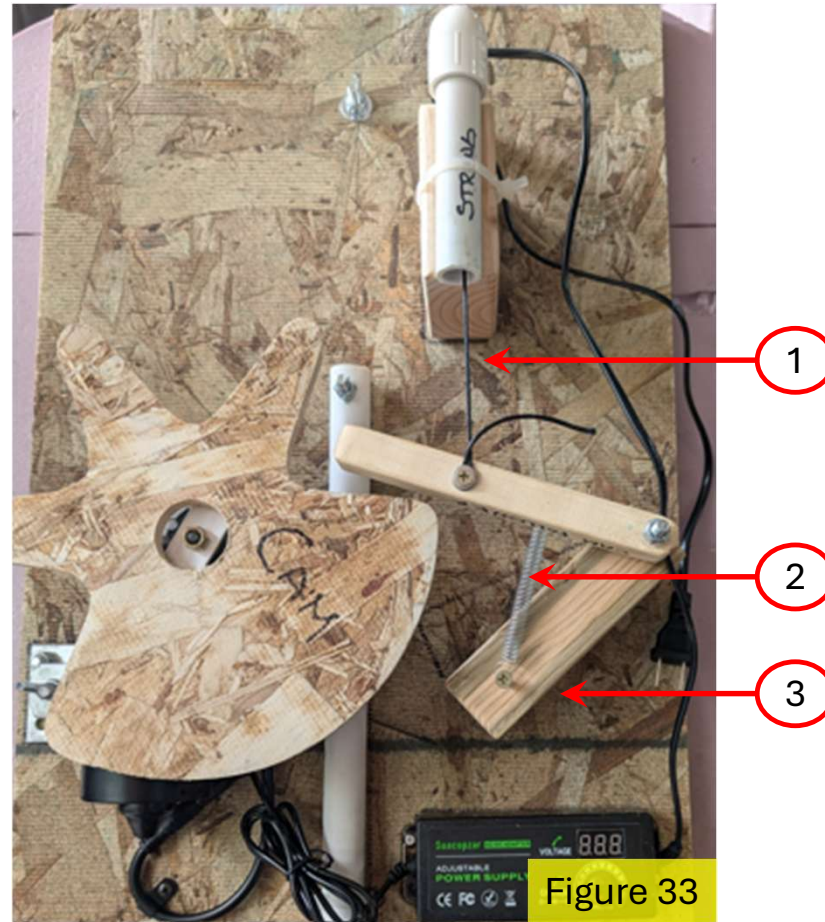


Figure 33