



CLAY TARGET MACHINES

## OWNERS MANUAL FOR MEC 100E WOBBLE



**PLEASE READ AND FULLY UNDERSTAND THE INSTRUCTIONS PRIOR TO SETTING OR TUNING THE MACHINE.**

**CAUTION: ANY MEC CLAY TARGET MACHINE MUST BE IN THE DISARMED STATE WITH THE BATTERY DISCONNECTED PRIOR TO MAKING ANY ADJUSTMENTS, LOADING THE CLAY TARGETS OR TRANSPORTATION OF MACHINE.**

**Step 1** – Securely set the machine in the trap house. See below for the correct way to install the MEC machine into the trap house. **IF NOT FASTENED SECURELY, SERIOUS INJURY AND/OR DAMAGE TO MACHINE CAN OCCUR!!!**

**DO NOT CONNECT THE POWER.** Ensure that the machine is in the **DISARMED/SAFE** position.



CLAY TARGET MACHINES

**NOTE** – In some instances your machine may be missing the top plate shaft. This was done purposely to allow us to ship more economically. You will have to do a few easy steps to reattach the shaft to the top plate.

**Step 2** – Undo the 5/16" nuts that hold the top plate to the frame. Swing the pusher out of the way.



**Step 3** – Swing the plate out towards the front of the machine. This will allow you access the holes in the top plate to attach the shaft. Using the 3 bolts provided simply tighten the shaft to the top plate. For added security Red Loktite can be used, but is not necessary.



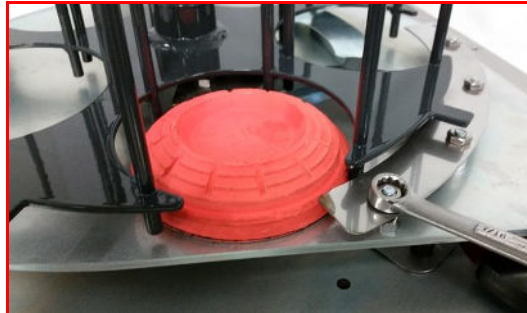
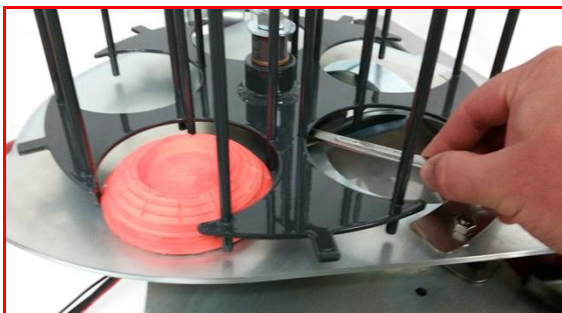


CLAY TARGET MACHINES

**Step 4** – Next, swing the plate back around and rest on the Nylon spacers. Reattach the 5/16” Carriage bolts and secure with the Lock Nuts. Lastly, place the carousel onto the shaft, followed by the gray plastic spacer, then the washer, and finally secure with the locknut. If no grease is present, please add a little bit to the shaft. You may have to spin/rotate the carousel counter clockwise for it to slide on. Next, place the gray plastic collar over the shaft and onto the flange bearing in the carousel. Now place the 3/4” washer and nut onto the threads and tighten. Do not over tighten. You want a little bit of resistance there, but not too much. You shouldn’t be able to spin the carousel with one finger.



**Step 5** – Check the height / clearance of the knife-edges by placing a clay in the carousel. Rotate the carousel so that the clay starts to pass underneath the inner and outer knife separator blades. The clay must pass freely under the knife separator blades without binding but with the minimum of clearance. Adjust if necessary with 7/16” open ended wrench. You are looking for a gap about the thickness of a business card, between the horizontal shoulder of the clay and the underside of the knife edges. Photos below show adjustment with carousel fitted, but you can remove the carousel to make adjustment easier if preferred.



**\*\* ALL MEC MACHINES ARE SET UP USING THE WHITE FLYER STANDARD TARGETS. ADJUSTMENTS NEED TO BE MADE WHEN USING OTHER BRANDS OR STYLES OF TARGETS\*\***



CLAY TARGET MACHINES

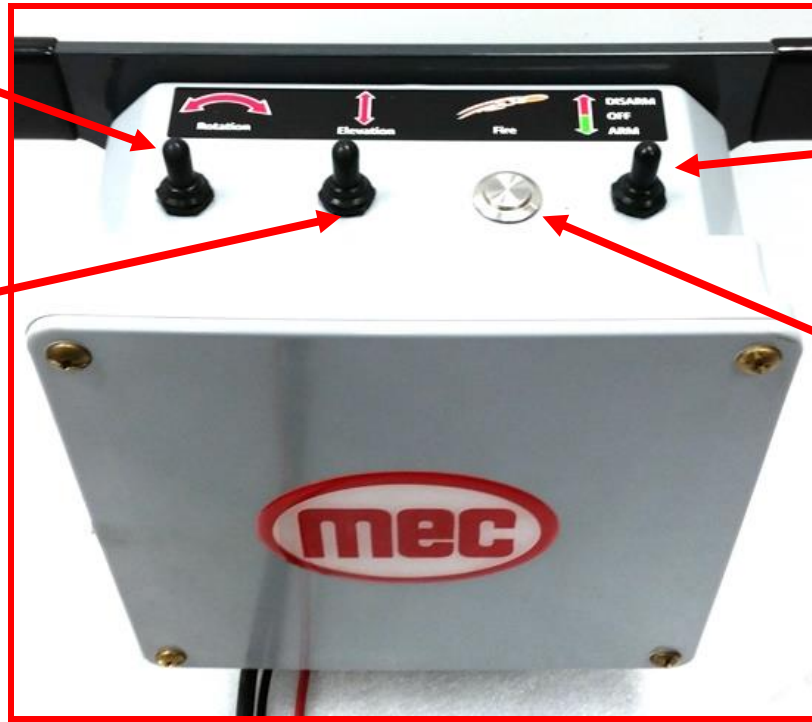
## UNDERSTANDING THE CONTROL BOX

ROTATION

ELEVATION

DISARM  
OFF  
ARM

FIRE  
BUTTON



REMOTE  
DISARM  
SOCKET

OSC. / ELEV.  
BREAKER

MAIN  
BREAKER







CLAY TARGET MACHINES

**Rotation Toggle Switch** – Pushing the switch downward will turn the oscillation motor on. Note that the oscillation motor will randomly start/stop when the machine is in operation. This prevents shooters from being able to predict the direction of the next target. Pushing the toggle switch upward allows you to nudge the oscillation motor which pivots the machine from one side to the other enabling you to check the angle of the clays flight.

**Elevation Toggle Switch** - Pushing the switch downward will turn the elevation motor on. Note that the elevation motor will randomly start/stop when the machine is in operation. This prevents shooters from being able to predict the direction of the next target. Pushing the toggle switch upward allows you to nudge the elevation motor which elevates the machine up and down enabling you to check the the clays flight.

**Remote Disarm Socket** – The remote disarm socket on the side of the control box allows the remote disarm box assembly and 10ft. of cable (not included) to plug in and then it can be placed by the opening of the trap house. This allows the user to disarm the machine before entering the trap house.

**Fire Button** – The fire button allows you to test fire the machine from inside the trap house.

**Disarm/Off/Arm** – Pushing the switch downward to the arm state will arm the machine. Pushing the switch upward will cause the machine to fire (if in armed state) and disarm when the switch is released. Note – holding the disarm toggle will continually fire clay targets. Please use caution!

**Breakers** – The breaker on the left is for the oscillation motor. The breaker on the right is for the cocking motor. If the breaker trips, it needs to be pushed back in to reset.

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**Step 6** – Check that the ARM/OFF/DISARM switch on the electrical box is in the **OFF** position.

**Step 7** – Visually check, from the rear of the machine, that the motion of the Throwing Arm is not restricted or blocked in any way.

**CAUTION: ALWAYS OPERATE THE MACHINE FROM BEHIND, NEVER FROM THE FRONT OR THE SIDES OF THE MACHINE. KEEP HANDS AND BODY PARTS AWAY FROM THE MACHINE WHEN ARMING, RELEASING AND DISARMING.**



CLAY TARGET MACHINES

**Step 8** – Standing at arm’s length behind the machine and making sure that all body parts are clear of the machine, push the ARM/OFF/DISARM toggle switch into the DISARM position and then release it as soon as the throwing arm fires. The toggle switch is spring loaded and will return to the off position as soon as the switch is released, stopping the machine from re-arming itself. If done correctly the arm will be pointing away from the left side of the machine when viewed from behind.

**Disconnect the power supply to ensure that the machine is not accidentally armed while adjusting and loading the machine.**

**Step 9** – Place a couple of clays in each of the carousel columns, for the purpose of testing the clay flight and trajectory.



CLAY TARGET MACHINES

## **ADJUSTING THE ELEVATION OF THE MACHINE**

**Step 10** – For ATA, set the angle of elevation, push the elevation toggle switch upwards to the nudge position and release when the correct elevation is achieved. See the ATA guidelines for correct rules regarding clay height and distance.

**Step 11** – The machine comes pre-set from the factory, but it is possible to increase the Wobble minimum angle of elevation in the following way. Loosen the  $\frac{3}{4}$ " jam nuts on the elevation crank assembly and then either extend or retract the threaded rod. You will need to remove  $\frac{3}{8}$ " allen bolt from the elevation clamp block to allow you to adjust the height setting. **NOTE: YOU WILL NEED TO SUPPORT THE FRONT OF THE MACHINE WHEN MAKING THIS ADJUSTMENT AS THE MACHINE WILL ROTATE DOWNWARD.**

**Step 12** – When shooting Wobble, push the elevation toggle switch down to the on position and the machine will automatically move up and down.

**Step 13** – The up and down angle of elevation is adjustable. Simply loosen the  $\frac{3}{8}$ " allen bolt and slide it out on the slot of the clamp block to increase the height of the clay flight. Retighten the bolt securely and test fire. Sliding the bolt in on the slot will reduce the height of the clay flight.



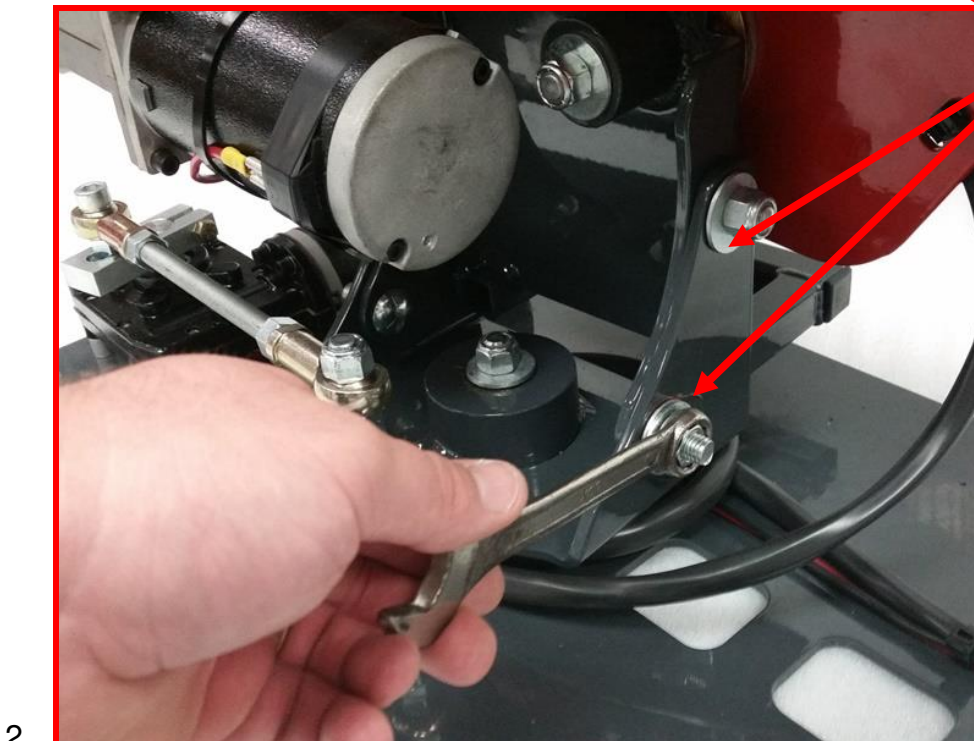
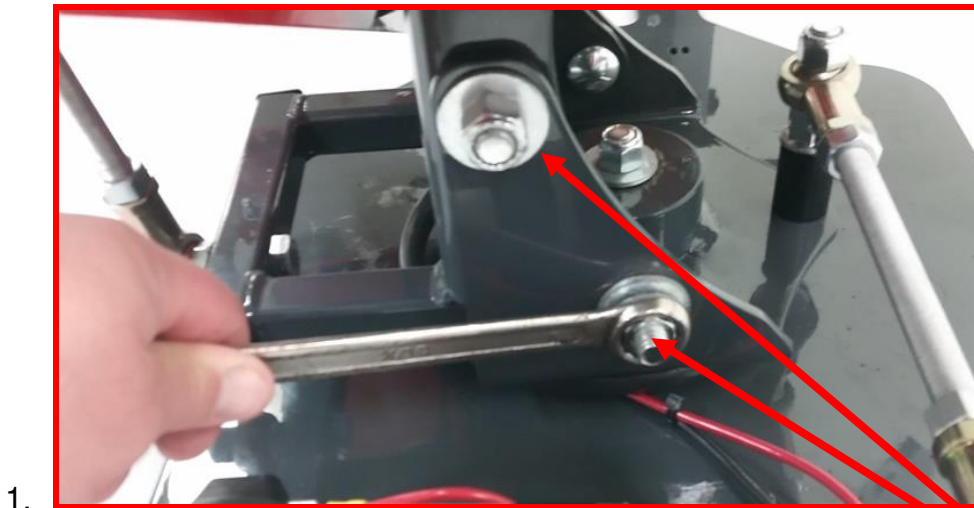


CLAY TARGET MACHINES

## ADJUSTING THE TILT/ANGLE OF THE MACHINE

**Step 14** – Adjust the machines tilt by loosening the ½” nuts on the front and rear side (Photo #1 and #2) of the upright of the machine as shown below. Adding tilt allows the machine to throw a flat target with no curl. Once the correct tilt has been achieved tighten up the ½” nuts.

**RETIGHTEN ALL (4) NUTS TO KEEP THE MACHINE FROM SHIFTING OVER TIME.**



**LOOSEN/TIGHTEN  
THIS NUT TO  
MAKE YOUR TILT  
ADJUSTMENTS.**





CLAY TARGET MACHINES

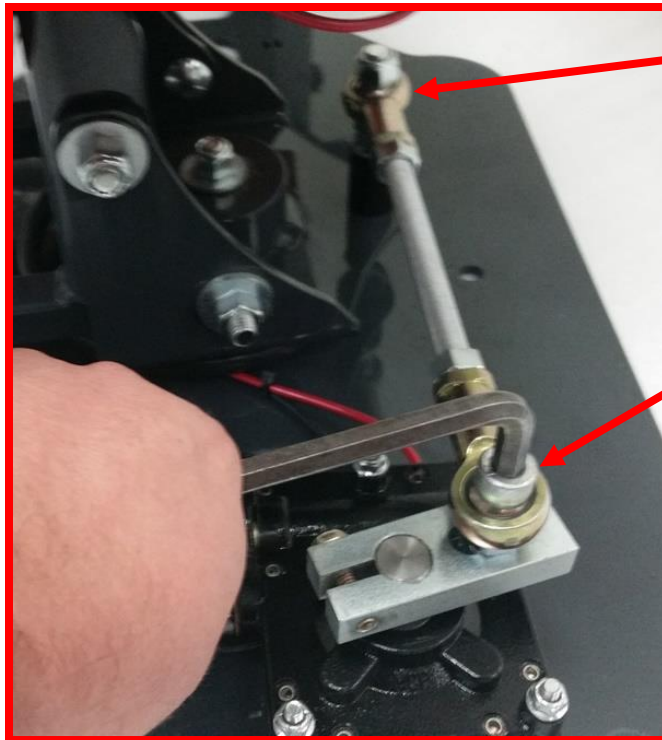
## ADJUSTING THE ROTATION ANGLE

**Step 15** –To center the field, nudge the rotation motor so that the clamp block shown below is pointing straight out to the left side of the machine when viewed from behind. Notice the photo is shown to the right as picture is from front of the machine. This position should have your machine perpendicular to the house window thus throwing the clay straight down the center of the field.

**Step 16** – Next, if the clay is not traveling straight away down the center of the field, simply loosen the nuts on the threaded rod and either extend or shorten the threaded rod to get the machine to fire the clay on center. Extending the threaded rod will move the field to the right and shortening the rod will move the field to the left when viewed from behind. In order to adjust the threaded rod, you will have to remove one end of the crank assembly to wind or unwind the rod end for this adjustment.

**RETIGHTEN THE NUTS SECURELY ON THE THREADED ROD TO HOLD THE CORRECT ADJUSTMENT!!!**

**Step 17** – Once centering the clay is achieved, check the flight angle of the clay. To open up the flight angle, loosen the 3/8" Allen bolt and slide it out on the slot of the clamp block. Retighten the bolt securely and test fire. Sliding the bolt in on the slot will reduce the angle flight of the clay.



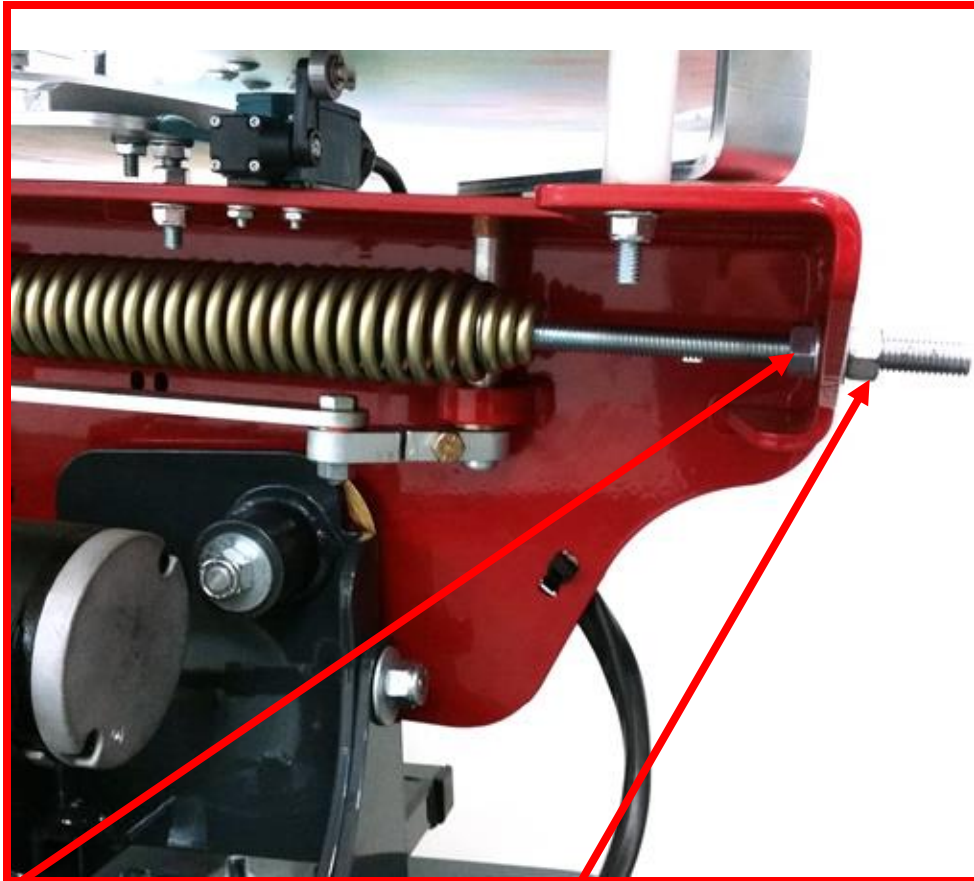
REMOVE THIS END  
TO ADJUST THE  
THREADED ROD  
LENGTH IF  
NECESSARY!

TO ADJUST FLIGHT  
ANGLE, SLIDE THIS  
BOLT IN THE SLOT  
IN THE CLAMP  
BLOCK!



CLAY TARGET MACHINES

**Step 18** – You can adjust the distance that the clay is thrown by extending the spring. This is achieved by winding tension on or off the main spring using a 3/4” wrench or the optional 3/4” extended socket which can be attached to an impact drive. This should be done with the machine in the disarmed/safe condition for small adjustments. **AFTER ADJUSTING THE MAIN SPRING FOR THE CORRECT THROWING DISTANCE, THE NUTS ON THE SPRING STUD MUST BE TIGHTENED SECURELY AGAINST EACH OTHER.**



1. LOOSEN NUT

2. TIGHTEN OR LOOSEN NUT  
TO DESIRED SPRING TENSION

**3. RETIGHTEN BOTH  
NUTS SECURELY  
WHEN DONE!!!**

**Step 19** – The pull cord or optional radio release can now be connected to the machine.

**Step 20** – Now that the machine is set to the correct ATA standards, carefully fully load the carousel with clays, removing any clays that show signs of damage. Load clays as evenly as possible and do not over load.

**Step 21** – The machine can now ready for use by pressing the ARM/OFF/DISARM toggle switch, down to the “ARM” position.



CLAY TARGET MACHINES

**Step 22** – Press the fire button on the pull cord or radio release. This will cause the machine to fire a clay target and then reset to the firing position. Pressing the fire button again will do the same as above. Pressing and holding the fire button will continuously fire clays continuously. Your machine is now operating smoothly and ready for use. **It is critical that you never load or make adjustment to the machine unless it is disarmed and the power disconnected.** While in storage, the machine must be left in the disarmed state and the power/battery disconnected. Any spring tension does not need to be released.

Thanks for choosing MEC! Every machine is hand set and tested prior to leaving our shop to ensure quality. We take PRIDE in our products, so you can have a better experience in the field. Your patronage is very much appreciated!

For any questions regarding setup or use of any MEC Clay Target Machines, please give us a call or you can visit us on our website for video footage showing how setup and adjustments are made.

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For all ATA rules and guidelines please see the link below.  
[https://www.shootata.com/Portals/0/pdf/ata\\_rulebook\\_web.pdf](https://www.shootata.com/Portals/0/pdf/ata_rulebook_web.pdf)



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### CORRECT POSITION OF MACHINE BASE IN TRAP HOUSE

