

WC5 INSTALLATION

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These instructions are the final section of a package of drawings and instructions for the fabrication of Wood Clock WC5. They are written with the assumption that all of the parts for the clock have been fabricated as noted in the WC5 Parts Fabrication section and that all of the assembly steps outlined in the WC5 Assembly section have been completed.

This clock was designed to be wall shelf mounted as shown on arrangement drawing **WC5-A**, attached. The location selected for the clock is important. For reliable operation it should be placed in a location where temperature and humidity are reasonably constant, and where disturbance of the pendulum by drafts and traffic is minimized. The mounting height above the floor is not critical to clock operation, but changing the height will affect weight travel which determines run time between windings.

The assembled clock should be mounted, adjusted, and run in as follows:

- Pick a solid vertical surface on which to mount the wall shelf. If you plan to mount it on a hollow wall, it should be mounted on a stud for several reasons: 1) the finished clock will weigh about 12 pounds, 2) the clock must be mounted on a stable surface (movement will dampen the pendulum possibly causing the clock to stop), and 3) the clock will run quieter (wood clocks are inherently noisy and a hollow wall will act like a drum head to further amplify the noise).
- Position the shelf on the wall and insert a #8 wood screw through the top hole on the shelf back plate into the wall stud leaving it slightly loose. See arrangement drawing WC5-A for the recommended mounting height.
- Level the shelf; insert the second #8 wood screw; and tighten both screws. If the wall is uneven you may need to glue some small felt pads to the back of the shelf to steady it.
- Set the clock on the shelf using the blocks glued on the top of the shelf to locate it and hold it in position.
- Remove the suspension spring from the pendulum assembly and insert it through the slot in the pendulum support bridge.
- Carefully insert the pendulum up through the back of the clock frame and hang it from the suspension spring. Make sure the anchor assembly's impulse pin is inserted through the slot in the pendulum leader.

Note: As an alternate, the pendulum support bridge can be removed from the clock frame, attached to the pendulum, and then reinserted back into the frame along with the pendulum.

- Set the drive weight on the floor directly beneath the clock.
- Insert one end of the drive rope up thru the left hole in the shelf and knot it.
- Thread the other end of the rope through the sheave on the weight box, and then up through the clock as shown on the drawings. The rope goes over the arbor T-1 rope pulley.
- Next pull the slack out of the rope and continue to thread it through the sheave on the counterweight box and up through the right hole in the shelf.
- Finally pull the rope through the shelf until the counterweight almost touches the shelf, knot it and cut off the excess. The clock will now run until the drive weight touches the floor without crashing the counterweight into the shelf.
- Now wind the clock by pulling down on the rope on the right side of the arbor T-1 rope pulley until the drive weight is in the position shown on the arrangement drawing. This will load the gear train.
- With the gear train loaded you can now adjust the escapement so the clock will run with the proper beat. Do this by moving the anchor to a point where one of the escape wheel pins rest on one of the anchor pallets near the middle of its angled end. With the pendulum hanging straight down tighten the clamp on the impulse lever. It needs to be pretty tight.

- Move the pendulum to release the pallet and allow the escape wheel to turn and lock on the other pallet (one tick). With the pendulum again hanging straight down observe the position of the pin on the pallet. It should also be at about the middle of the angled surface.

You are now ready to start the clock.

- Move the pendulum to one side and release it. If you did everything right the clock should run at least for several beats. The bob only needs to move about two inches off center for the escapement to release.
- Allow a few minutes for the pendulum motion to stabilize.
- Listen for an even tick tock beat. If the beat is uneven you may need to make a slight adjustment to the angle of the anchor. With a little practice you will be able to adjust it correctly with ease.
- If the clock stops double check for binding in the gear train. If none is found add a small amount of lead shot to the drive weight box and try again. Your objective should be to use only the amount of weight required to make the pendulum travel just enough to release the escapement.

This escapement is what is called a dead beat escapement so a little over travel is okay and maybe even desirable, but using more weight than needed will cause the clock to tick louder and wear out quicker. The weights specified on the drawings should be more than adequate to keep a well built clock running.

- When you are satisfied that the clock is going to run okay start adjusting the speed with the adjustment nut at the bottom of the pendulum. If it is running too slow adjust the pendulum bob up until it runs too fast then back off in small increments until you have the correct speed. This process may take several days, even weeks.

Congratulations you are finished. All you need to do now is remember to wind your new clock every day.

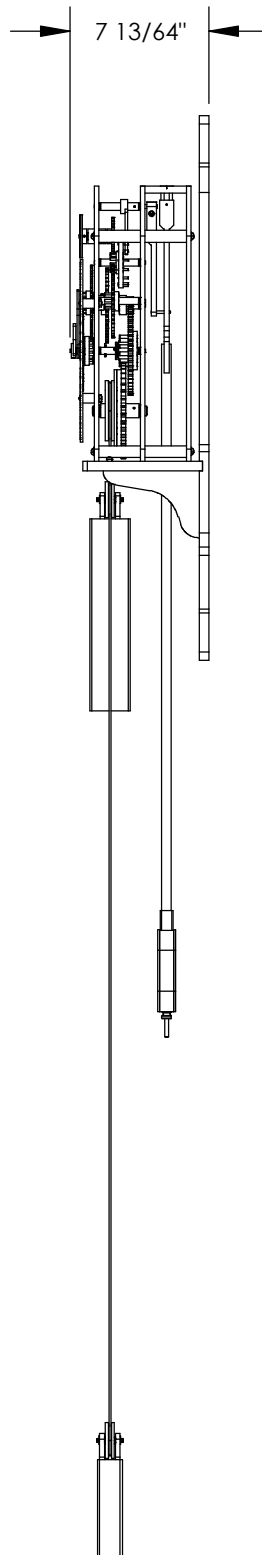
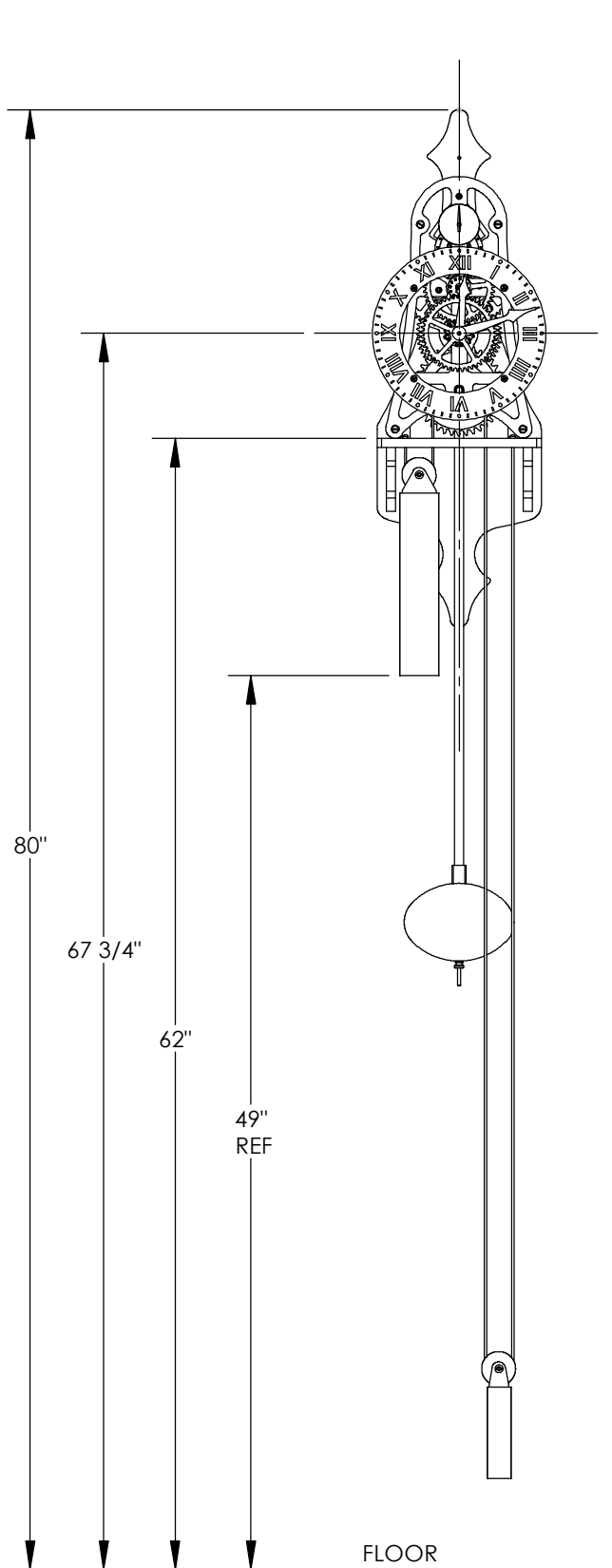
Winding instructions:

Most clocks have a maintaining spring built into arbor T-1 to keep power on the gear train during winding. This clock does not, but it can be wound very easily by placing a finger on a tooth of the arbor T-1 wheel and pressing down to keep it turning counterclockwise while using the other hand to pull down on the drive rope on the right side of the rope pulley to lift the drive weight.

General care:

You should get in the habit of winding your clock at about the same time every day. You should stop it any time you will be away for more than 34 hours after it is wound to avoid letting it run down. No clock should be allowed to run down or forced to run backwards by turning the hands backwards while it is running. This one is especially susceptible to crashing the escapement if power is taken off of the escape wheel. The un-powered escape wheel will likely stop midway between ticks while the pendulum is still swinging allowing the tip of a pallet to crash into one of the escapement pins. When this happens, the impulse lever will be knocked out of position and you will have to realign the escapement to get the clock to run again.

The bearings in this clock do not need oiling. You may need to put a single drop of good clock oil on each pallet every two or three years. Otherwise just keep it clean and enjoy watching it run.



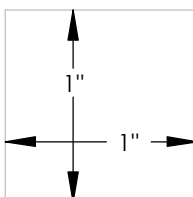
NOTE: WHEN MOUNTED AS SHOWN,
CLOCK WILL RUN APPROXIMATELY
34 HOURS BETWEEN WINDINGS.
MOUNTING LOWER THAN SHOWN
WILL SHORTEN RUN TIME.

Drawn By: J. Randle
Drawn Date: 09/12/05
Drawing Scale: 1:10

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All dimensions are in inches
Tolerance +/- .005" typical.
OK to scale drawing only if
box to right is full scale.

Third angle projection.



Description:

ARRANGEMENT

Project:

WOOD CLOCK WC5

Drawing No:

WC5-A

Sheet 1 of 1