Keeping Your Clock Running

As a clock owner there are certain procedures with which you should be familiar and be able to do yourself. Other procedures are best handled by a professional clockmaker. Remember that just because a clock is running does not mean that it is in good condition. Like anything mechanical, clocks need regular maintance. You would never expect your car to continue to run without regular servicing nor should you expect your clock to do so. Having a professional clockmaker who is familiar with your specific clock is really the best way to keep it running as it should.

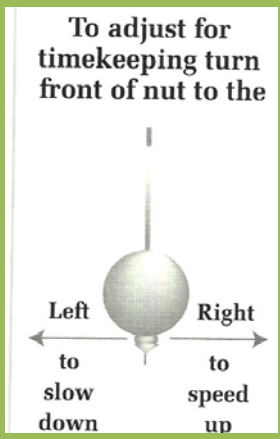
The following are some of the most common questions concerning the maintenance, adjustment and handling of clocks. They reflect general clock care, maintenance and running. Variations in the design of clock movements mean that not all of this information will be appropriate for every clock. A bit of horological trivia: A ***clock*** is a device that announces the passing of time audibly at selected intervals (usually the hour, half or quarter hour) using a bell, tubular chime, coil gong or tuned rods. The majority of clocks also have a readable dial with hands and numbers. A ***timepiece*** has only a going train and does not strike or chime but just tells the time. To help simplify the explanations below the term clock is used to denote both clocks and timepieces.

How do I maintain my clock so that it continues to be in good running order?

- Clocks should be lubricated every three to four years. It is best to have this done by a professional who knows the proper places to lubricate using quality clock oil. Never use any spray lubricant on your clock.
- Cleaning and oiling are done when necessary. This will vary depending of the type of clock movement, the condition of the case and location where it has been running. A proper cleaning involves taking the movement apart and cleaning the individual parts, reassembly and lubrication. New mainsprings are installed when the old ones are worn out. Keeping a regular lubrication schedule will allow your clockmaker to advise you when a cleaning is necessary.
- An overhaul or restoration is done when and if needed. The movement is completely disassembled and cleaned. Pivots are burnished and/or polished. Worn bushings are replaced, riveted, chamfered and broached smooth. Levers are straightened and adjusted and individual parts polished as needed. At this time mainsprings are replaced on spring driven clocks and cables replaced on weight driven clocks. The clock is cleaned again, reassembled, lubricated, tested and adjusted for timekeeping. This is a basic overhaul or restoration. Some clocks may have such extreme wear that parts need to be replaced or fabricated. Previous repairs that are inadequate or inappropriate should also be corrected at this time.

How do I adjust my clock to keep proper time?

- Most clocks are adjusted for timekeeping by turning the front of the nut below the pendulum bob to the left to slow down and to the right to speed up.
- Some clocks have a small square arbor above the numeral 12 or elsewhere on the center of the dial into which a regulating key is fitted. The majority of these are turned slightly to the left to slow and to the right to speed up the clock. Look for S-F (slow-fast) indicators on the dial near the regulating square. Some clocks have a tiny serrated wheel that is turned by a finger in the direction indicated. Setting the clock on time after making an adjustment and noting the amount of the adjustment allows more precise regulating as the clock gets closer to keeping good time.
- The diagram to the right gives a visual description of adjusting the rating nut.



How do I wind my clock?

- Although this may sound like a no brainer, it is particularly important with a key wound spring driven clock to do so properly to avoid damaging the mechanism. The first thing to know is that you cannot wind a spring driven clock "too tight". A clock needs to be fully wound in order to run the full duration for which it was designed as well as to strike and chime properly. However, it is possible to wind it too quickly. It is very important when using a key to wind a clock that you ease back on the key after each turn, letting the ratchet engage fully before releasing the key. Failing to do so can result in the failure of the ratchet to catch and the mainspring quickly releasing its power, damaging the clock mechanism, unsuspecting fingers, and one's pride.
- Weight driven clocks and some heavy spring driven clocks such as fusees are wound using cranks. This is much gentler on the movement as the ratchet only engages once in the winding process rather than at each turn. Just be cautious and slow down in the winding of the crank as the weight approaches the top of its journey so as not to ram the pulley into the bottom of the clock movement seat board on a long case or inside the case top on a shelf clock. Count the number of turns or watch the weights as they go up.
- A note on the fit of a winding key or crank: A key or crank must fit properly on the square winding arbor. Many clock owners have made the mistake of using a key or crank that is too large for the clock's arbor(s). Using a too large or badly worn key or crank will eventually round off the corners of the square arbor making it necessary to reshape the square to a smaller size. This results in a time consuming repair that might never have had to been done. A professional clockmaker can make sure that the key or crank you are using is a proper fit for your clock. Keys and cranks are inexpensive compared to the cost of corrective work.

The weights on my clock aren't coming down evenly.

- Occasionally on an antique clock this is normal. The clockmaker who knows your clock can advise you if this is the case.
- If your clock is designed so that the weights should be lowering at the same rate, as is the case with most modern floor clocks, having the weights drop at noticeably different rates (or not at all) is a sign that something is not working as it should. The time train weight is in the center. This weight moves down at a very precise and even speed. The strike train weight is generally on the left as you are facing the clock and the chime train on the right. If either or both of these are not moving there is a problem with one of these functions, and a professional clockmaker needs to examine the mechanism.
- Please note that some chiming and striking clocks are fitted with silencing features. If one of these features is enabled, then the clock will not strike or chime and these weights might be expected to stay fully wound or drop slower.

How do I move my clock?

- Shelf and wall clocks:
  - If your clock is spring driven, remove the pendulum and keep it with the clock.
  - If your clock is weight driven, remove the pendulum and the weights. Anchor the cable or chains so they are not hanging loosely in the case.
  - Always carry clocks by providing support under the base (for mantle clock) or back (for wall clocks). NEVER carry using decorative handles, protruding case tops, or any ornamental statuary.
- Floor clocks , Long case and Hall clocks:
  - Most of these are weight driven and the majority need to have the movement, weights and pendulum removed from the case. These parts and the case are then transported unassembled. More complicated clocks may also require the removal of gongs or chimes before moving. Preparation for or moving by a professional clockmaker is recommended.
  - Most modern grandfather clocks are designed to be moved with the movement in the case. However, the pendulum and weights will need to be removed and packed separately and the chains or cables secured.

My clock worked before we moved it, but now it won't run.

- Clocks that have been running but have not been serviced for an extended period sometimes will fail to run after they have been packed up and moved to a new location. Often this is because the clock had been running with little to almost no oil. As long as the clock was kept running the small amount of oil still present between the pivots and bushings continued to be utilized. However, as soon as the clock was stopped the remaining oil soon dissipated, and the clock will no longer run. At this point the clock needs to be serviced and at a minimum lubricated.
- The other possibility is that the clock is out of beat. Whether the clock is hanging on the wall, sitting on a mantle or other surface, or a long case clock standing on the floor, the tick-tock must be even. A clock ticking out of beat has a sound somewhat like a galloping horse rather than even and regular. Lifting on the left or right side or tilting the case may correct the problem but occasionally an internal adjustment must be made. Unless you have been given professional instruction on how to do so, it is best to let a professional clockmaker make any internal correction.

My clock only runs four days between windings and it's supposed to run seven.

- If this is a spring driven clock the most common problem is that the clock is not being fully wound. Many clock owners are afraid to wind their clocks up fully (see above to wind correctly). Simply put, your car cannot run as far on half a tank of gas, and your clock cannot run its full duration without being fully wound. Don't be afraid to properly wind the mainspring all the way.

Which leads us to…

Oh no! I wound my clock too tight and now it won't run.

- As explained above a clock should be wound tightly to run the full duration for which it was designed. This is actually a symptom of another problem. The mainspring could be sticky with gummed up oil. The clock could need lubrication. There could be enough wear in the clock that it simply can no longer run because the power cannot be transferred through the wheels and pinions. This clock needs evaluation by a professional clockmaker, but at least you can rest assured that you did not damage the clock by winding it too tightly.
- There are scenarios that may cause a weight driven clock to stop running after winding. This should also be professionally evaluated.

Why doesn't this clock run?

- If you have just purchased a clock, taken one out of storage, or just decided to start winding a dust catcher after seeing it sitting stopped for years, check the following:
  - Is it in beat?
  - Is it fully wound?
  - Has it been a long time since it was serviced?
- When in doubt, call a professional clockmaker.