

MAINTENANCE OF THE CLOCK MOVEMENT (the works)

Like all machines, clocks need to be serviced regularly. Even in perfect conditions lubricants deteriorate, particularly after three years. For this reason alone, clocks should be examined and re-lubricated every three years. After five years, and certainly no longer than eight years, the whole movement should be dismantled and 'cleaned' if excessive wear and expensive attention is to be avoided. This should be carried out by a professional as there is the potential to cause damage from the use of too much oil, or oil in the wrong place. Do not be tempted to use proprietary products to lubricate a clock.

If a clock, for no obvious reason, begins to keep erratic time or fails to run or strike for its full duration; this usually indicates that it needs attention and professional advice should be sought.

CARE OF THE CLOCK CASE

For safety and mechanical reasons, longcase clocks and wall clocks must be securely fixed to a wall if accidents are to be avoided and clocks are to run properly.

Clock cases, which come in many different materials, require special consideration and treatment in their own right. It is inadvisable to expose a clock to a heat source of any kind, including strong sunlight or a mantel over a working fire, as this can cause damage to cases and movements.

CONSULTING A CONSERVATOR

Accredited horological conservators possess qualifications in horology and in conservation, having met the rigorous standards of the PACR (Professional Accreditation of Conservator-Restorers) scheme. An accredited conservator will be able to:

- **Assess the condition of your clocks, and advise of any necessary treatment.**
- **Provide advice on methods of inspection as part of a programme of ongoing care.**
- **Provide advice on hand-setting, winding and regulation.**
- **Adopt a conservation approach towards any necessary repairs or restoration.**

Find a conservator by using the Conservation Register.

The Register is free to use; it provides detailed information on conservation-restoration businesses based in the UK and Ireland including contact details, referenced examples of previous work and the qualifications of members of staff. It is searchable by specialist skill and geographical location and each business has been required to meet rigorous criteria which include professional accreditation; the information is regularly updated.

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This article offers general guidance and is not intended to be a substitute for the professional advice of an accredited conservator. The views expressed are those of the author or authors, and do not necessarily represent the views of the Institute of Conservation. The Institute of Conservation would like to acknowledge use of the MGC publication 'Ours for Keeps' in the preparation of this text. The Institute of Conservation and its partners accept no liability for any loss or damage which may arise if this guidance is followed.

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Care and conservation of clocks



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Clocks are familiar objects which can not only be works of art but are also special-purpose machines requiring care and maintenance to perform their intended function. They exist on a variety of scales; from large turret or stable clocks, to grandfather (longcase) clocks, bracket clocks and carriage clocks. Well-maintained clocks will give years of pleasure, but even the best maintained clocks will experience wear and parts may eventually need repair or replacement if the clock is to continue to function. Fortunately, many of the most common causes of damage and deterioration to clocks can be avoided by following some simple guidelines. As the owner or custodian, you must decide whether the clocks in your care are to be static or working objects and whether to repair or replace worn parts, (compromising the object's integrity) or to stop the clock.

A horological conservator will be able to advise you on ongoing care and maintenance (winding, hand setting, lubrication, cleaning and regulation), and will work to principles of minimum intervention should repair or replacement of parts be required.

WINDING OF CLOCKS

Winding should always be done regularly and preferably at about the same time of day for day-running clocks (30-hour or less) or on the same day of the week for week-running clocks (8-day). Always use a well-fitting and appropriate key. For mantel clocks use a 'butterfly' key and for longcase clocks and other large mantel or bracket clocks use a crank key. Wind gently, steadily and fully, being especially careful not to bang the weights against the underside of the clock. If you are winding a spring-driven clock, be careful not to come to a sudden stop at the end of winding. While there is really no such thing as 'over winding' a clock, considerable and potentially expensive damage can be caused by not winding gently and steadily. It is helpful in this respect to count the number of turns it takes to fully wind a clock, and to use this number as a guide each time you wind the clock, particularly if it is unfamiliar.

Different types of clocks have different requirements; a horological conservator will be able to advise you on the number of turns appropriate to your type of clock.

HAND SETTING

Setting the hands and any other indicators such as day, date, month, moon phase, complex striking etc needs particular

care. If your clock has any additional indicators or unusual striking patterns it is advisable to seek professional advice before undertaking any adjustments. For timepieces or striking clocks, never turn the hands backwards without proper advice. Instead, stop the clock and wait until the time catches up with that shown on the dial, then re-start it. As with winding, hand setting should be done gently and slowly, always allowing a striking clock to complete striking before moving the hands on. Only the minute hand should be used for setting and never attempt to move or adjust the hour or seconds hands. Try to avoid moving the hands more than an hour or so forward. Rather than turning the hands forward through several hours it is better to stop the clock and re-start it when the time matches that on the dial.

Contact a horological conservator for advice on hand setting or if you encounter unexpected resistance when trying to move a clock hand.

Some clocks have a system of striking which can easily become out of synchronism with the hands. Adjusting the hands following the procedure above will normally ensure that the hands and strike remain in synchronism. However, if the strike does get out of synchronism it can easily be corrected. Although many clocks will run without the strike side being wound, this is not recommended as a means of silencing the clock.

A horological conservator can correct the striking sequence or advise you on the necessary steps. Advice on silencing or reducing the loudness of a striking clock can also be given.

DIALS

Care should be taken not to touch the dial. All types of dials can be affected by the moisture from hands, which is corrosive and may also remove painted or printed features. Fingers and hands also deposit grease and dirt, which builds up into unsightly and potentially damaging marks. For particularly vulnerable dials the use of cotton or surgical rubber gloves is recommended. Contact a horological conservator for advice on dial care and conservation.

STOPPING A CLOCK

Before going on holiday, or overnight in the case of a short-duration clock, it is best to stop a pendulum clock to prevent possible damage to the clock mechanism through loss of power.

It is inadvisable for clocks to be stopped for periods longer than a month. However, if this is unavoidable the clock should be professionally examined and, if necessary, re-lubricated before re-starting. If a clock has not had any attention for a considerable time, it may be necessary to have the clock dismantled, 'cleaned' and freshly lubricated.

A horological conservator can advise on the requirements for your particular clock.

REGULATION

Pendulum clocks

Regulation of pendulum clocks is normally done by moving the pendulum bob up or down. Many French mantel clocks have an adjustment on the dial and a small key is provided to adjust the length of the pendulum to bring the clock to time. In most other cases the pendulum bob is adjusted by a rating nut upon which the bob sits. Turning the rating nut to the right raises the bob and makes the clock go faster and conversely, turning the rating nut to the left slows the clock down. This adjustment should always be made by stopping the pendulum and supporting it so that it cannot twist as the rating nut is turned. Small adjustments (half a turn) are best, allowing two or three days between adjustments for the effect to be observed. Do not expect quartz timekeeping from a mechanical clock.

Pendulum clocks are not self-starting and the pendulum will need to be set swinging by moving the pendulum about one centimetre to the right or left before releasing it. If ticking can be heard then the clock has started. If not, repeat the procedure but move the pendulum a little more to the left or right before releasing it. Beware of moving the pendulum too far as this can damage the mechanism.

Balance clocks

Clocks that have a balance (a wheel that moves quickly backwards and forwards) rather than a pendulum have a different method of regulation and it is best to seek advice before attempting to regulate them. However, once you have been shown what to do, it is simple and requires nothing more than a gentle touch and a steady hand. Unlike pendulum clocks, balance clocks are frequently self-starting but, if not, then a gentle twist of the clock should set them going.