



*Setting Up
and Caring For
Antique
Mantelpiece Clocks*

A brief guide for owners
of French antique and art deco mantelpiece clocks
from 1860 - 1940



Packing for shipment, and unpacking

Whether packing your clock for shipment or unpacking one you have just received, use this checklist to make an inventory (make careful records whether you are packing or unpacking, using a digital camera):

- ♦ The clock itself, or the central piece in case there are garnitures or detached figures
- ♦ Pendulum - must always be detached for shipment
- ♦ Both garnitures (if relevant)
- ♦ Any detached figures
- ♦ Original key
- ♦ Brocot key (the small one used to regulate the clock's timekeeping), if relevant

Packing securely

Clock sets with large garnitures normally need to be packed and shipped in two or three boxes.



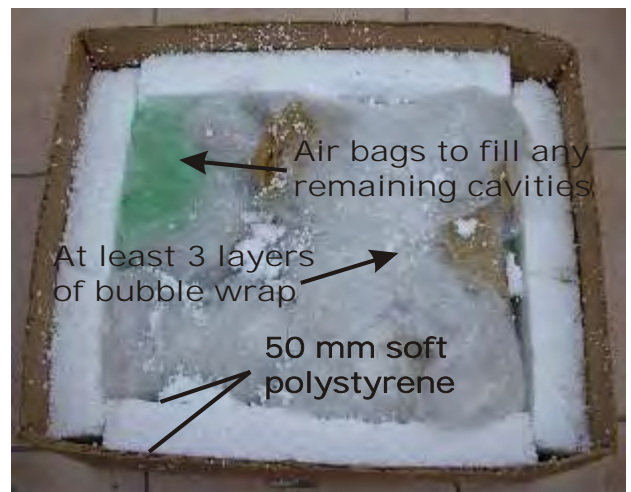
Clocks are packed in boxes made from heavy double cardboard (two fluted layers and three liners). A suitable box must be at least 15 cm larger than the clock on all sides to allow space for the required amount of shock-absorbing packaging material.

When packing your clock take into consideration that it will be dropped, handled and stored on all sides, be placed at the bottom of piles of heavy items, be transported on sorting and conveyer belts and hit by or against sharp items. Irrespective of how many 'This side up' and 'Fragile' labels you put on the box do not expect these to be respected so pack thoughtfully and defensively - and insure adequately. Document the packaging by taking several photos at various stages of the process, including

detailed photos documenting the condition of the clock before shipping. This only takes 2-3 minutes altogether and may underpin an insurance claim worth several thousand pounds.

When packing consider that the packaging must withstand two types of load: dynamic (shocks) and static (being at the bottom of a pile). To improve shock absorption use bubble wrap, a minimum of 5 cm thick for a 10 kg marble clock. For structural stability use soft but rigid polystyrene foam panels, another 3 - 5 cm at least on all sides (these sheets are readily available, e.g. on Ebay). Secure the bubble wrap with tape so it can't slide off and expose sides or details.

Ornaments and figurines pose particular problems and it is necessary to ensure that a free-standing ornament is not made to bear the weight of the clock case or absorb shocks from it. For this reason it is normally preferable to remove such ornaments and pack them separately if possible. Most art deco clock ornaments are fastened with square nuts on threaded rods carried through from the figure to the underside of the clock base or its top panel. The nuts can normally be unscrewed after the application of some penetration oil, e.g. WD-40, and the ornament carefully re-



moved (not always true for top-mounted figures). If the clock is being sent off for service there is sometimes no reason to include the ornaments at all.



Victorian and older clocks (e.g. black marble clocks) often have an ornament mounted atop and these can be difficult to remove. In such cases it is necessary to find a cardboard or metal box which is about 5 cm larger than the ornament on all sides, wrap the ornament carefully in bubble wrap and put the box onto the ornament, upside down, to protect it. The box is subsequently taped to the bubble wrap surrounding the clock case itself so it can't slide off or twist.

Pendulum and keys should be wrapped separately and taped to the bubble wrap surrounding the clock case or left inside the clock case. Garnitures and figurines, if shipped in the same case as the clock (and if the clock is heavy this is *not* recommended), must be carefully bubble wrapped and protected by hard foam in such a way that they sustain no damage if the

box is dropped in such a way that they are closest to the ground when it lands, and made to carry the shock imparted by the weight of the clock.

For overseas or long distance transport the box should be placed in a larger box lined with hard foam and air cushions for added protection.

Even so there is no guarantee against transport damage and adequate insurance is very important.

Unpacking

Remove the clock and all its components carefully from the box(es) and place everything on a table with enough working space, on a towel or some other soft material. Remove any foam peanuts and foam dust adhering to tape or bubble wrap.

Remove tape and bubble wrap carefully, cutting at a shallow angle with a knife, or even better, using scissors, avoiding hitting or cutting any clock parts.

Find the pendulum and the keys whenever this is possible (discarding them with the packaging materials is not the preferred scenario). Make sure not to miss small components like Brocot keys - don't assume that whoever sent you the clock knows anything about packaging antiques.

As you unpack parts, place those on the towel. These often very heavy clocks sometimes like to topple over while being unpacked, e.g. because they are supported by uneven layers of bubble wrap, so go slowly and work on the soft underlay.

Once liberated from the packing materials the clock can be inventoried, making sure everything is there, and photographed for documentation of the state in which it was received. Wipe or brush any polystyrene powder off the clock, get rid of the used packaging materials and prepare to set up the clock.

Setting Up Your Clock

Assembly

In case ornaments need to be installed or parts assembled it is time to do so now.

The photo to the right illustrates how an art deco figurine is installed onto a clock case. The nuts should be tightened - but not over-tightened - with a suitable adjustable spanner. If you have received the clock from a dealer the threads will already have been oiled so no further action is required.

Installing the pendulum

IMPORTANT NOTE:

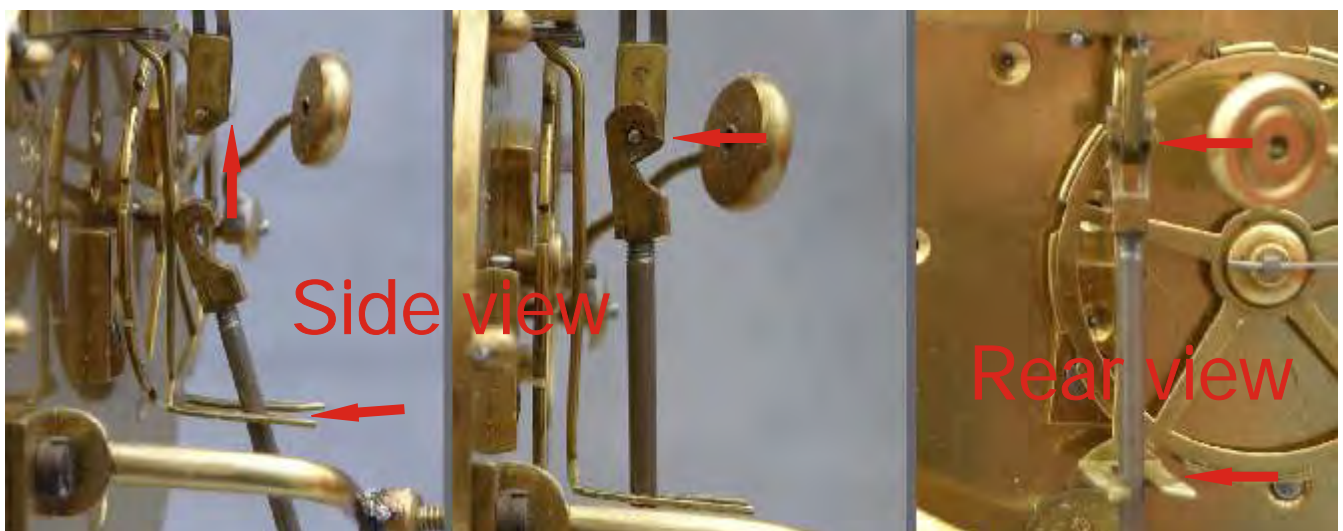
No operations on your clock requires the use of force. Treat it very gently. If something appears to be stuck or require force, stop doing it and find out what is stuck and why. In particular, do not ever turn the clock hands counter-clock-wise.



Open the back door of the clock and identify where the pendulum is supposed to hang, mostly from a suspension spring fitted with a small pin onto which the suspension hook can be latched.

On clocks fitted with a bell it is often necessary to unscrew and remove the bell. It is most often held in place by means of a small knurled brass nut that can be unscrewed without using any tools (see photo left). Do not drop it into the clock case.

Once the bell has been removed carefully hook the pendulum onto the suspension spring (or silk suspension in some cases) and guide it into the crutch fork (there is supposed to be a tiny amount of oil on the fork and pendulum arm where it rests in the fork, so don't wipe it off). See the photos below. The Rear View is the one you will have as you look into the clock case. Be careful not to distort the suspension spring.



If the clock is fitted with a coiled gong rather than a bell it can be a bit fiddly to install the pendulum and a pair of suitable long-nosed pliers may have to be used. Some clocks don't strike at all but only show the time, making this easy.

With the pendulum in place, refit the bell and carefully put the clock back in its place if you had to move it to install the pendulum. In case you need to move or carry the clock with the pendulum in-

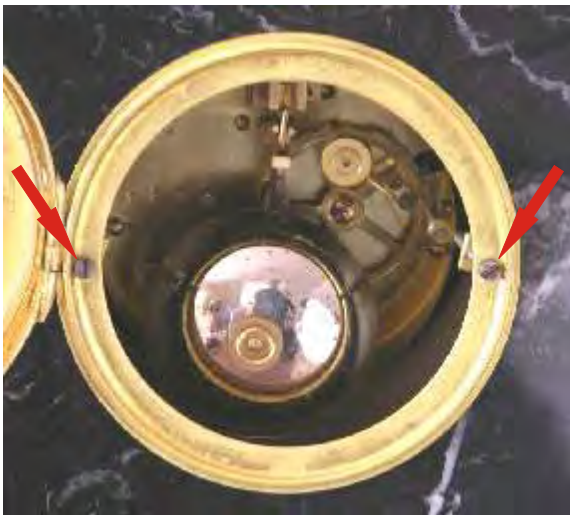
stalled, do so very gently and hold the clock tilted slightly forward and to one side so the pendulum doesn't swing freely inside the case (allowing this can easily damage the pendulum suspension).

Setting the clock in beat

Antique clocks only work correctly if they are level, so the next thing you need is a small spirit level. Using this, level the clock case both sideways and in the front to back direction.

Depending on where the clock is situated this can be done by levelling the support it sits on, or by levelling the clock case itself by means of some sort of underlay, wooden shims or whatever is convenient and looks good. Some clocks are more sensitive than others when it comes to tolerating deviations from level but they all function best when level within a degree or two.

Once the case is level start the clock by moving the pendulum 10-15° from vertical and letting it go (this presumes that the clock is wound up - if not, see Winding the clock below). The clock should now start and keep going. Wait for a minute for it to stabilise, then listen to its beat. The beat should be completely even: tick-tock tick-tock, not tiick-tock tiick-tock or tick-toooock tick tooock. If the beat is uneven carefully lift one side of the case a little and see if it gets better or worse. In case it gets worse lift the other side until the beat is even. Support the clock in the position that produces an even beat. The deviation from horizontal should be very small.



In case you need to tilt the case more than a degree or two to set the clock in beat one of two different methods needs to be used to correct this, only one of which will be described here - the second one is best left to a professional.

You can carefully rotate the clock movement inside the case to set the clock in beat by loosening the two screws holding the movement in place by means of a suitable screwdriver (see photo left). Loosen the screws just enough to allow you to gently turn the front bezel together with the rear ring, using one hand to turn the bezel, the other the ring.

Once you have an even tick-tock sound tighten the screws again. Do not over-tighten them! On most French clocks the screws are made from steel and the thread you

screw them into cut into a thin strip of brass so it is very easy to damage the thread by over-tightening the screws.

Winding the clock

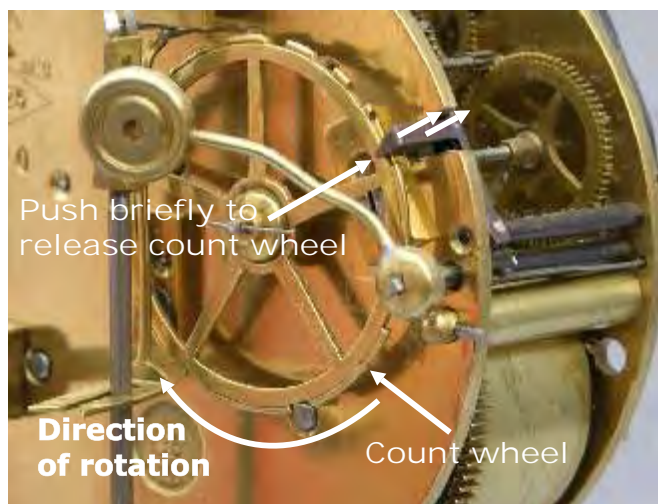
Most French mantel clocks are fitted with 8-day movements, thus they need to be wound up once every week. It is best to choose a particular day and time every week to do this, e.g. Sunday at noon, or whatever is convenient. Likewise, it is best not to wind up the springs fully and not to let them run down fully.

There is always a risk that the movement turns in the case if the clock is wound up hard. To detect if this happens hold your thumb as illustrated in the photo while winding. That way you can feel any movement.



Once you are familiar with the clock you will know how many turns to wind it to keep it going, with a reserve, for the whole week, and you can just count the turns while winding.

Synchronising hands and strike



Many antique clocks automatically sound the correct number of strikes corresponding to the time shown by the hands (if the hands are correctly installed). A particular type, however, don't, and they are very common. They use a "count wheel" to control the number of strikes each half and full hour. On standard French movements the count wheel is located behind the rear plate of the movement, just behind the bell and/or hammer (see photo to the left), so it is normally very easy to tell whether or not your clock is of this type.

If a clock fitted with a count wheel has been wound down or one of the springs allowed to run down the time indication and strike mostly falls out of synchronisation and need to be re-aligned.

To do this wind both springs normally and set the clock so that it has *just* struck a full hour (always by turning the minute hand carefully clockwise). If, when you let the clock strike the hour, the number of strikes turns out to be correct there is nothing more to do, except to re-start it at the right time (or re-start it and set the time correctly).

If not, the count wheel needs to be forwarded to the position giving the right number of strikes. You release the count wheel by briefly pushing the knife edge indicated by the arrows, aside, preferably using a wooden object, e.g. a long matchstick. It is often easier if you remove the bell. Gently pushing this lever upward to the right a short distance and immediately letting it drop back onto the wheel will cause the count wheel to be released and to turn for the duration of the next strike, half hour and full hour alternatively.

Continue this process, each time waiting until the striking has stopped and counting the number of strikes until the number corresponding to the setting of the hour hand has just been struck. This way the synchronisation between the time indication on the hands and the number of strikes will have been re-established.

Adjusting the time

Setting the correct time on your clock is *always* done by gently and carefully moving the minute hand clockwise, pausing at each half and full hour to allow the full strike to complete. Do not push the hand inward when moving it. Be patient. Do not rush and do not use force.

Thus, at the start of summer-time the clock just needs to be moved one hour forward, while it needs to either be stopped for an hour and re-started or slowly moved through 23 hours at the end of summer-time.

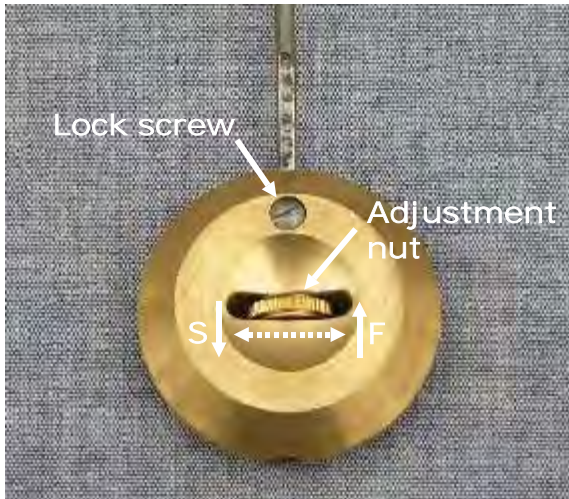
Regulating the clock

An antique mechanical clock is not nearly as accurate as a modern clock. It will normally gain a bit when just wound and lag a bit towards the end of the week when the springs are down. These clocks are also quite temperature sensitive, tending to lag if in a warm place and gain when the weather is cold, so don't expect them to go at the same speed summer and winter.

Even so it is normally possible to get them to show the correct time with a fair degree of accuracy. Whenever a clock is moved from one place to another it normally needs to be regulated anew.

This is the way to proceed:

Don't start until the clock has been in its future position for a few days. The parts need to have attained a uniform temperature. Start by winding the clock almost fully - stop when the resistance to turning the winding key increases. Make a note of the time shown by the clock and the correct time, e.g. as shown by a radio or Internet controlled clock (most Internet-connected computers show the right time).



After a week (or a month in case your clock is fitted with a 30-days movement) read the time shown by the clock as well as the correct time. This will show whether the clock goes at the correct speed or whether it gains or lags.

In case the clock lags you need to adjust the position of the bob on the pendulum upwards to reduce the effective length of the pendulum, thus increasing the speed of the movement and vice versa if it gains. The bob is often fixed onto the rod by means of a lock-screw which needs to be loosened before moving the bob. Subsequently the bob can often be moved by turning an adjustment nut. In some cases this is not present and the bob is simply pushed along its rod and the lock-screw tightened in the new position. Initially, move the bob by around 1 millimetre, upwards in case the clock needs to run faster, downwards in case it needs to run more slowly (see

photo). To avoid risking damaging the pendulum suspension it is most prudent to remove the pendulum from the clock before the procedure.

Re-install the pendulum, wind, set and start the clock. At the end of the next winding cycle repeat this process. You should now have an idea of how much the pendulum needs to be moved on the rod to produce the correction you need.

Once the clock runs accurately within a few minutes per week it can be fine-adjusted by turning a small square rod sticking out through the bezel at the top of the dial using a so-called Brocot-key (see photo). This has to be done with great care as these adjustment systems are very delicate and not always functional (they are not often repaired after breaking because all parts must be hand-crafted at considerable cost). The other end of this system can be seen at the top of the block holding the pendulum suspension and you can observe whether or not it moves correctly and without the use of force by carefully turning the Brocot key while observing the action through the rear door of the clock.



As indicated on the photo the clock will go faster if you turn the key clockwise, more slowly if you turn it counter-clockwise.

Clock case care

The cases used with French mantel clocks between 1850-1940 are normally made from wood, marble, porcelain or metal. Additionally, they often display metal or porcelain details or figurines.

General for all of them is that they should be cleaned with a soft brush and/or soft cloth to remove dust. Unfortunately many mantel clocks are placed above fireplaces of different types and thus often subject to dust and even sticky smoke.

It is good practice to lightly dust them every week when they are wound anyway. In case of complicated shapes such as figurines it is best to use a soft brush, while a soft cloth is just as good in case of regular surfaces. If a clock is subject to dirty air leaving residues, especially in the details of figurines, it should be cleaned regularly using a small amount of mild soap solution in a spray bottle. Give this a few minutes to work, then rinse off with clean water in a similar spray bottle and wipe the cleaned area dry with soft cloth. Do not use ready-mixed commercial cleaners. They are normally too harsh. Under no circumstances use abrasive cleaners such as brass polish or the like.

Wooden cases are often treated with either waxes or oils, depending on the shine you want. Which oil to use depends on the type of wood. The same guidelines apply as apply to furniture in general. For a more shiny surface beeswax is normally good.

Black marble cases (often called slate although few are actually made from slate) should only be treated with beeswax and polished up. In case they have become gray a different treatment (with carbon) is needed and you should seek professional assistance.

Other marble and alabaster cases may be treated with *Renaissance Wax* and polished up, following the directions on the tin.

Metal cases are best left alone but some are treated with beeswax. *Ormelu cases and figurines must under no circumstances be polished using abrasive polishing agents.* These are gilt and the layer of gold is extremely thin and easily damaged. Dirt can often be removed by using stronger solvents on cotton buds but if in doubt leave it alone and call it patina.

Never use abrasives on gilt or chrome-plated bezels and gates irrespective of the type of clock.

Do not clean hands or dials. If they are unprotected they may be dusted using a soft brush.

Regular service

Antique clocks must be serviced regularly. Complete service and lubrication should be carried out every five years, more often in case they are subject to dust or smoke and in case the dial is glass-less and/or the case has no protective rear door.

A service includes complete disassembly, cleaning and inspection of each individual part under magnification, repair of worn bearings and other parts, replacement of the spring(s) if required, complete lubrication (including of springs), re-assembly and alignment of the movement; disassembly of the case, removal and cleaning of ornaments if required, repair of damage, colour correction if required (e.g. applied to black marble which has gone gray), surface treatment and polishing; final re-assembly and testing, normally through two winding cycles (i.e. two weeks in most cases).

Enjoy your antique clock and take good care of it!



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