

## Welcome

Big Ben is the most famous example of a turret clock.

Turret clocks is the technical name for any large exterior clock made to be seen by many people at the same time. They do not need to be in a clock tower. Examples are churches, town halls, libraries, parks and squares, supermarkets, banks, and are often seen hanging over pavements outside jewellers, and other commercial premises.

Whilst the public only sees the face and hands, behind the face is a mechanism which drives the hands. That mechanism can be a very old mechanical device, often hundreds of years old, or more modern electric motors.

### Mechanical flat bed



Turret clocks are often on quality buildings, old clocks and their clock towers could have cost up to one third of the entire cost of the building. They were not cheap, and should be looked after.

### Handy Hint

Hands are made of metal, often copper but sometimes other metals, to stop them swinging down to the 6 o'clock position, they have counterweights. Look at the hands and see if there are extensions opposite the hands, if so you are likely to have a modern clock with electric motors, if no extensions can be seen you could have a traditional mechanism with counterpoises behind the dial connected to bevel gears.

## Looking after your clock

### Mechanical birdcage



### Handy Hints

Small electric motors are not worth rewinding, replace them.

Many clocks have a clutch to enable the hands to be moved independent from the mechanism DO NOT OIL THE CLUTCH OR IT WILL SLIP AND THE CLOCK WILL LOSE TIME.

If you have a mechanical clock and it is serviced regularly you can lightly oil the gear wheels, but if it is not serviced regularly and in a dirty place, keep the gear wheels dry to avoid dirt mixing with oil to make a grinding paste which will prematurely wear the gear wheels.

### ENEMY No.1 DIRT

Mechanical clocks can last centuries, and a dirty clockroom is the equivalent of cancer, slowly working the dirt into the bearings, changing into a grinding paste and wearing away metal. Lost metal is lost clock, CLEAN CLEAN CLEAN the clockroom.

### ENEMY No. 2 LACK OF CARE

Do not forget your clock, think of it at least twice a year. Would you run your car without a service, without oil, without repair. Then do not expect your clock which works every second of every day of every year to work without the same and more attention. CARE FOR IT OR LOSE IT.

**Electric motors need very little maintenance, but the gear box, connecting rod ends which have universal connectors and bearings to the hands and dial will need cleaning and lubricating.**

**Mechanical clocks need every bearing and pivot to be cleaned and oiled, sliding surfaces greasing, and most other parts wiping over with an oily cloth.**

## Secrets or what clockmakers know and don't tell you

Old clocks are made in old measurements, feet and inches, with screws in BA and Whitworth. Clockmakers use tools which fit without breaking parts which can be very expensive to repair.

Old grease and oil can become very hard particularly if the wrong kind of grease is used. Clean off old oil with white spirit but use plenty of rags to ensure that the parts are dry afterwards. You do not want to have a fire hazard in your clockroom. Dispose of the rags and do not leave any in the clockroom. Once clean you will only have to wipe it with an oily cloth to keep it clean. Do not use water based solvents they cause rust and do not leave an oily residue which is what you want.

Feel the wire rope when winding up the barrels, put a glove on and you can check for breakages by feel. Forewarned is forearmed, any breakages call in a professional firm of clockmakers and do not use the clock until given the all clear.

Never throw away clock parts, even nuts and bolts, keep them next to the clock, they are perfect templates for future repairs.

### Handy Hints

Scour car boot sales for old imperial tools.

Use marine light oil and grease for lubrication.

Do not use penetrating oils, they spread and carry dirt into the bearings. Keep oil in the oil sinks and grease on the bearing surfaces.

Old wire rope had a hessian core, soaked in linseed oil. It is still available but better to replace with galvanised wire rope which does not work harden as quickly as stainless steel a common replacement.

Use a mobile phone to get an accurate time check when setting the clock and keep a written record.

# Links

## Professional Help (no link)

Very few clockmakers actually make clocks. Most are repairers and most are enthusiasts not commercial businesses. Beware of high street jewellers and one man bands, most lack the breadth of experience of turret clocks and often have very limited resources. Because of that, they offer what they can do, and not what a clock might need. The level of work can be close to DIY and ignorance of health and safety regulations which are different from common sense. Try the Museum Services Directory if you are looking for serious quality.

## [Best Practice \(BCD link\)](#)

More jargon. One useful definition is it is the quality of work and the way of doing it, needed to qualify for grants for conservation work. It is an international standard and for old clocks precludes the use of modern fixings except for safety reasons, no modern fabrication techniques such as high performance glues and high tech welding etc., and takes into account the building and use of the clock. Ask yourself the question how did the original clockmakers do it, and copy that. It is very easy to "improve" on old clocks, resist the temptation, and be a good custodian for the future.

## [Who To Use \(BHI link\)](#)

Who indeed. Use a search engine for key words such as a famous clock near you, like any other service, local recommendation is still the best but do not be afraid to use clockmakers from outside the area, some of the big firms operate nationwide. This site is for information only but if you want to email comments feel free to email administrator@turretclocks.com

## Still not clear ?

Here is a simple checklist

Make access to the clock easy. Put in good lights, and make the ladders etc safe.

Keep the clockroom clean, take a Hoover up once a year.

Lubricate the clock twice a year.

Wind it regularly.

If the clock is electric or electronic put some money aside as the new electronic clocks last as long as your desktop computer.

Every time you have scaffold to the roof or similar, ensure you clean the dial and lubricate the hands.

Clockmakers are a dying breed, if you find a good one, keep him and do not tell any one else.

Do not try to do heavy clockmaking work, call in a professional firm and be prepared to pay the same as you would for a top class car service and allow for exterior access to double the price.