

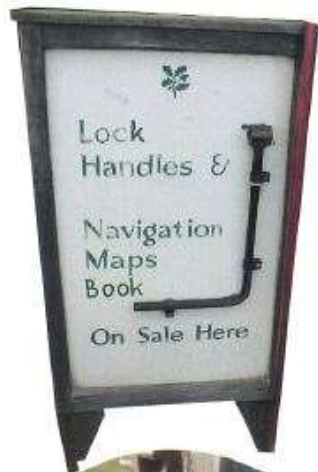
Operating different types of lock

Automatic or manual?

Automatic locks are hydraulic and have buttons to operate the sluice gates.

Most manual locks work by raising and lowering the sluices using a rack and pinion with a lock handle, often called a windlass.

You can borrow or hire these from the waterway authority.



A safety catch will keep the cogs in place and stop the chain from slipping back so check this is correctly in place before starting to operate.



The windlass winches the sluices up or down.





Once the sluices are opened and the water levels are equal, the gates are opened and closed using people power.



Manned locks

Some waterways like the River Thames have manned locks, operated by a lock-keeper. In the hours where there isn't a keeper you can usually operate the locks yourself; however it's best to check this beforehand with the navigation authority. If you get to one of these locks and a traffic light is on amber, it normally means the lock is on user-operation.

Guillotine locks

Some waterways such as the East Anglian ones have guillotine locks. These are different to normal pound locks in that they have a guillotine shaped vertical gate at one end and the normal pointed gates at the other. The gates may be powered or manual and the pointing gates may or may not have paddles.

If there are no paddles, to fill the lock chamber you will have to very gradually open the gates to let in the water – just a few centimetres at a time.

When leaving the lock you should normally make sure the pointing gates and sluices are shut and the guillotine gate is securely up.



Staircase locks

Occasionally you will come across a chain of locks forming a staircase where the upper gates of the first are the lower gates of the next.

Navigate through a staircase treating each chamber as you would a single lock but also being careful not to completely empty the lock chambers and making extra sure that all gates and sluices are closed after you've prepared the locks. As a general rule, in order to go up, the bottom level needs to be empty and the others full and to go down the top needs to be full and the others empty.

If in doubt, contact the local waterway authority for advice.



Going upstream

If the lock is full, boats should moor up at a sufficient distance to avoid any traffic coming out of the lock – there could also be a surge of water as the sluices open. Close the sluices on the upper set of gates and slowly open them on the lower gates to let the water out.

Open the lower gates and wait for the boats to enter the lock, then close the gates and sluices. If there are ground sluices for the upper gate, open them first and wait until the locks is half full before gradually opening the upper gate sluices. Always check the boat isn't being washed down too much by the flow of water.

When the lock is full, open the upper gates and allow the boats to row out.

Different navigation authorities have their own rules about leaving lock gates open or closed. Most canals where they rely on water being fed into summit pounds from reservoirs or pumped up from a river ask for both set of gates to be shut to conserve water. Rivers are more relaxed as there normally is a plentiful supply of water. Check with the authority before starting the tour.

Lock safety tips

- Ensure that the paddles and gates are closed behind you before opening the paddles ahead
- Open the paddles slowly and keep a look out in the lock to ensure all is well and be prepared to close them again quickly if there is turbulence or any kind of problem
- Ensure that the boats are well clear of the gates at either end of the lock before opening the paddles or gates
- Do not try to cram too many boats into the lock. If a boat does capsize, you need space to right it

Going downstream

If needed, close the lower gates and sluices and open the sluices on the upper level to fill the lock.

Open the upper gates and wait for the boats to enter the lock, then closing the upper gates and sluices.

Slowly open the sluices on the lower level to let the water out, then open the gates and wait for the boats to leave the lock.

If the gates seem stuck it will be because the water level each side of the gates is not yet equal.

Slowly open the relevant paddle again and wait until both sides of the gate are the same.

If there are still problems, you can try to check for debris with a boat hook and if this doesn't sort the problem you should contact the Waterway Authority.

More Lock Safety

If you let the paddles drop, their weight could break them. They should be closed gradually by winding them down.

To release the safety catch, wind the paddle up a little further, take the strain with the windlass, then remove the safety catch and wind the paddle down the other way.

When using the windlass, always hold it firmly.

Only use one that is a good fit on the spindle and make sure it's fully in place.

Always use the safety catch and be careful of anything that could get caught, such as baggy clothes.



If you think the boat has caught on anything or been damaged, stop the change in water level by closing the paddles.

If you are going upstream and the boat has caught on the top gate, slowly open the bottom gate paddles to lower the water level. Likewise, going downstream, if part of the boat or rudder has scraped the cill, carefully open the upper paddles to raise the water levels.

Check the boat over and if you have any doubts about the condition of the equipment, don't risk boating again.

In the very unlikely event that someone falls into the lock and there's no lock-keeper:

Keep calm

- > Close all paddles.
- > Throw a lifeline or lifebuoy or encourage them to hold on to your boat for buoyancy.
- > Keep the boat still and make sure any powered boats have shut off their engines.
- > If there isn't a way to climb out it may be necessary to very slowly raise or lower the water levels so you can pull the person out with the lifeline.
- > Don't jump in yourself to try and rescue them.

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