

DICK CHAMBERS OBSERVATORY GUIDE

Version 5

2023 Mar 13

These instructions cover the use of our observatory.

GENERAL ADVICE:

- We do not have access to the pavilion so remember; warm clothes, torch and a bathroom visit before you leave home...
- **Please do not touch any glass parts of the telescope or eyepieces.** If you accidentally do, do not try and clean them, it is not the end of the world, but we do need to know, so please tell a Committee member.
- The official Meade telescope manual can be found here http://www.astro.gla.ac.uk/observatory/sixteen_inch/16lx200.pdf
- If you experience problems using the telescope or dome and need immediate advice, please ask on the 'Telescope' whatsapp group.

OPENING THE OBSERVATORY

OPERATING THE ALARM:

1. Open the Observatory with your keyfob.
2. This will release the outside door.
3. Enter the Observatory.
4. You now have 20 seconds to enter and turn off the alarm. The alarm code box is on the wall of the observatory by the steps on your left hand side as you enter the Dome.
5. Turn on the lights - the main switches are on the wall behind the black curtain.
6. Look at it, and then **press 'unlock' button** - this is the third button down on the right hand side of the alarm keypad. It has a picture on it of an unlocked padlock.
7. Tap in the Code into the alarm box.
8. Ignore the message beeps - the alarm is in memory check mode.

OPERATING THE ELECTRIC DOOR LOCK:

1. If you wish to leave the observatory door unlocked whilst using it (i.e to prevent you accidentally locking yourself out) then disable the lock by flipping the switch on the small white box, to the right of the alarm panel - **remember to turn back on when you leave!**

OPERATING THE LIGHTS:

1. Observatory lights are controlled by dimmers in the warm room and in the observatory.

OPENING THE DOME:

1. **Inspect the dome** from the outside check for any obvious damage, snow or other debris which might fall onto the telescope when the slit is opened.
2. Check it is not raining or snowing.
3. Confirm the telescope's lens cover is **on** and the plastic sheet cover is in place.
4. **Disconnect the Battery Charger:** On the left hand side as you walk up the steps to the observatory you will see a small 12v battery, this is charged by cable which needs to be **unplugged**. **Remember to plug the cable back in when you finish observing.**
5. Release all 5 black straps which hold the dome and shutter in place.
6. Remove all 4 wooden wedges from under the dome wheels.
7. Turn the shutter controller on then use the 'open shutter' toggle switch, positioned to the left of the shutter to open the upper shutter.
8. Open the lower shutter cover and let it hang on its hinges outside - **NOTE:** You will not be able to open or close the upper shutter cover whilst the lower part is open.
9. Inspect the 3 sand bags to make sure they are not damaged - these engage the dome motors with the dome.

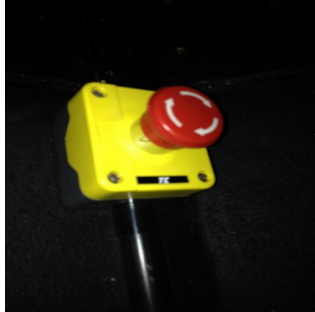
PREPARING TELESCOPE:

NOTE: The telescope should not be uncovered until the dome is fully open.

1. Remove the waterproof sheet covering the telescope.
2. Remove Finderscope lens cover - and place in top drawer of cabinet.
3. Remove Telescope cover - and place on top of the cabinet.
4. Remove Eyepiece cover - and place in top drawer of cabinet.

EMERGENCY STOP SWITCHES:

Emergency stop switches are located on the wall opposite the steps in the observatory and the warm room. Make sure you know where these are. These cut all power to the telescope and equipment.



POWER UP DOME:

Please follow the attached **Dome Buddy Guide**

POWER UP TELESCOPE:

1. Make sure the telescope power panel is switched **off**.
2. Insert the 12v power plug into its socket on the telescope panel - it is tied to the rail.
3. Insert the mains socket into the floor from the extension lead and switch to on.
4. Switch on the mains extension on the telescope pillar
1. Slide the on/off switch on the telescope panel to 'on'



You will hear a reassuring bleep. If you do not, check that you have turned all the switches to on, in the order above.

The red lights on the panel and the keypad hand controller will illuminate. After about 10 seconds it will display the home menu - "TELESCOPE OBJECT LIBRARY" meaning the system is up and running.

The telescope is now tracking. :-)

UPDATE THE LOG BOOK

Start an entry in the Observatory Log Book to show you have arrived .

CLOSING THE TELESCOPE AND DOME

1. Park the telescope:

Park the telescope using either the 'park' button in NINA / Sky Safari or if using the hand controller manually position the telescope **horizontal** and pointing due **south** on the local meridian - (**Declination 0, Altitude 0**) This can be done by unlocking the RA and DEC locks, moving the telescope, and then relocking the RA and DEC locks.

2. Replace Equipment as you found it:

- Please replace the eyepiece or camera as you found them. If the eyepiece was in place when you arrived and you have used the camera please replace the eyepiece and vice versa. If left with the eyepiece in the focuser remember to leave the diagonal and eyepiece in the upright position.



- Hook the Keypad Hand Controller back onto the stand, make sure all the three power switches are 'off' and unplugged.
- Remove the plug from the floor socket and put the floor cover back over the socket.
- Place power leads on the pier base to remove any trip hazards
- Replace all the three lens caps/covers

3. Cover the telescope: Replace the plastic sheet over the telescope

4. Close the shutter

1. lean out of the dome and pull up the lower shutter to close the flap.
2. Press 'close' on the open/close shutter switch to operate the upper shutter, once closed turn off the shutter control.

3. If the shutter mechanism fails, cut the plastic straps attaching the shutter to the chain and manually close it with the pole standing in the observatory for that purpose. Cutters can be found on the tool bag under the Dome Room floor by the steps.

5. Lock the dome

1. Rotate the dome back to its original home position.
2. Re-connect the 5 canvas straps on the shutter and dome.
3. Replace the wooden wedges under the dome wheels.

6. Charge the Dome Battery

1. Reconnect the dome battery cable.

UPDATE THE LOG BOOK

Finish the entry in the Observatory Log Book to show your evenings activities.

CLOSING THE OBSERVATORY

1. **Turn on the Automatic door lock**, flip the rocker switch on the side of the power ASEC box to 'on' if you turned it off.
2. **Arm the alarm** - tap the 'lock' button and enter the code. Turn off all lights, and leave the building shutting the door behind you. Listen for it closing and the lock turning. Pull it to see that it is properly engaged.
3. If the door system fails, then manually lock the door using its upper bolt (**DO NOT USE THE LOWER ONE**) and use the big padlock located on the top shelf in the warm room. The key is kept in the padlock. As soon as possible inform Andy Barber - 01322 525007 - of the door system failure or any other issues