

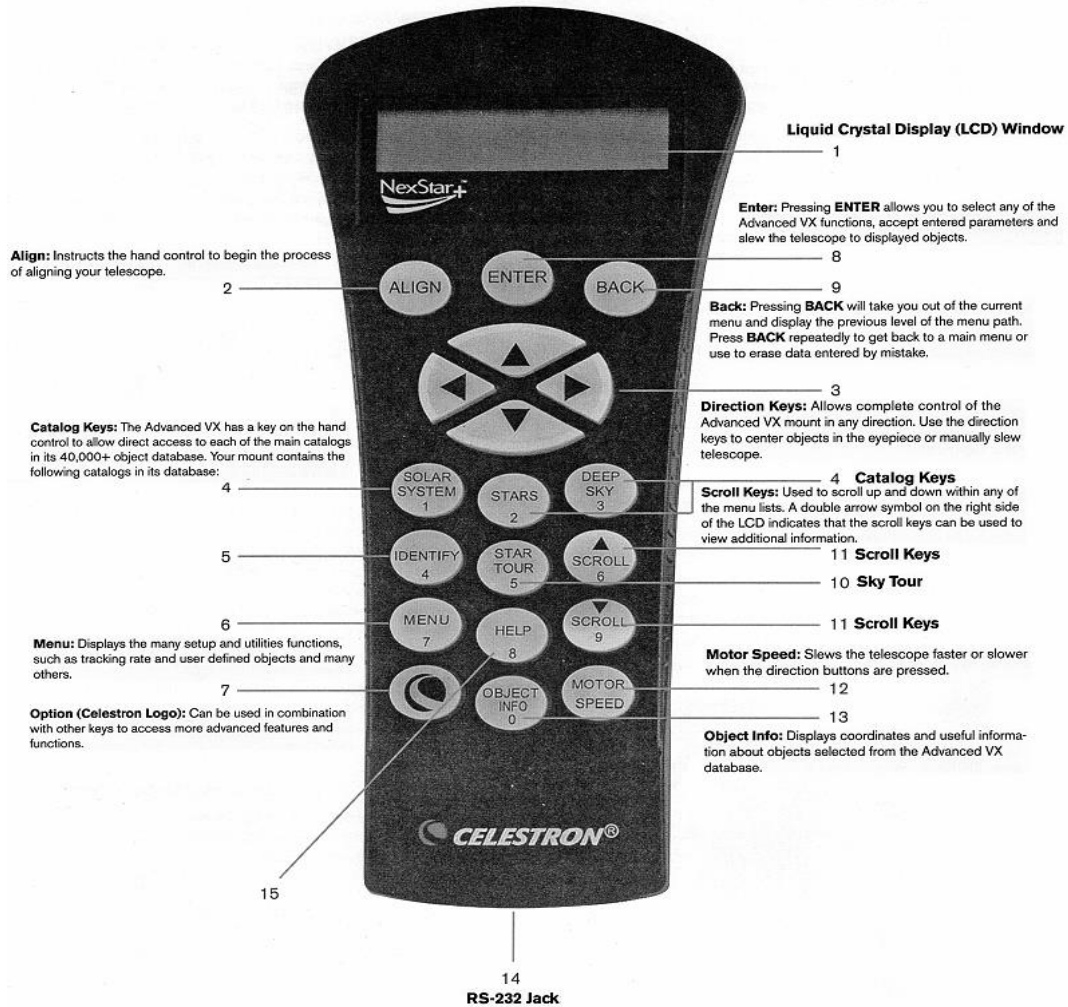
## Appendix-4: Syncing the Mount and Telescope to the Sky

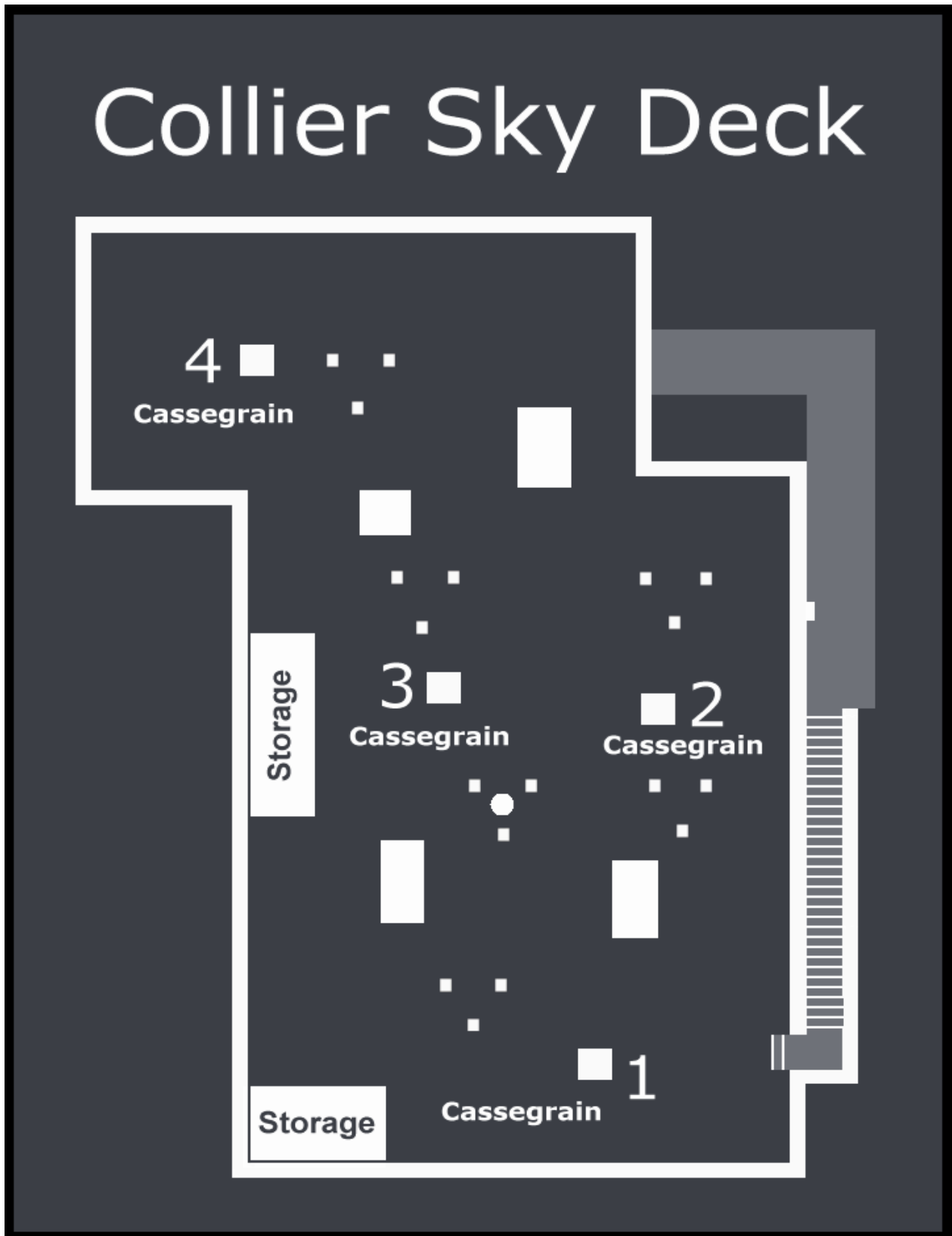
1. **Turn on the power switch of the telescope.** The Power Tank should have been turned on previously.
2. **Set the time and date:** Follow the instructions displayed on the hand controller to set the time and date. Your latitude and longitude are already inputted into the system. **Use atomic time for best precision.**
3. **The hand controller will display “2-star alignment.”** Press ENTER, and it will pick a star. Press ENTER again, and the telescope will begin slewing to that object.
4. **Center the star in the finder scope:** When the scope stops and the propeller on the right side of the hand controller stops twirling, look through the finder. Move the telescope using the Up-Down-Right-Left arrow keys on the hand controller, so that the bright alignment star is centered on the crosshairs of the finder telescope. Press ENTER.
5. **Center the star in the main telescope:** Perform the same procedure with the hand controller; but this time, look through the main telescope. The telescope will move more slowly. Position the star in the center of the eyepiece. **Press ALIGN.**
6. **The controller will suggest a second alignment star.** Press ENTER. The telescope will slew to that star. The procedure for the first star alignment using the finder scope first will be repeated. When centered in the finder, press ENTER. Center the star in the eyepiece of the main telescope and then press ALIGN.

- 7. Calibration stars:** The hand controller will then ask if you would like to repeat the procedure for several calibration stars. Press ENTER, and the hand controller will select the stars for you. Follow the same procedure. Press ENTER for the finder scope alignment. Press ALIGN when the star is centered in the main telescope. This will be repeated for three or four stars.
- 8. Telescope ready:** When the internal computer believes the telescope to be properly aligned, the hand controller will display “**Advanced VX**” or “**CGEM ready.**” You are now set to take control of the universe.

### Computerized Hand Control

The Advanced VX uses the NexStar+ hand control that is designed to give you instant access to all the functions your mount has to offer. With automatic slewing to over 40,000 objects and common sense menu descriptions, even a beginner can master its variety of features in just a few observing sessions. Below is a brief description of the individual components of The NexStar+ hand controller:





September 22, 2020

## Telescope Observations in a Nutshell

1. The post on your tripod must point north.
2. Vibration suppression pads must be in alignment with the white circles on the Sky Deck.
3. Level your tripod.
4. Check to make sure that your telescope is balanced.
5. Don't turn the telescope on until you find Polaris (North Star).
6. Set the alignment markers. Use the azimuth knobs (right-left) and altitude knobs (up-down) on your telescope to center Polaris in your finder and main scope.
7. Turn on the telescope.
8. Input atomic time into the hand control when asked.
9. Find and center two alignment then find and align four calibration stars using the **“enter”** button for the finder alignments and the **“align”** button when object is centered in your main scope.
10. When hand control says Advance VX or CGEM ready, you are set to discover the universe.
11. If the moon is bright, concentrate on finding double stars.

## **NOTES**