Sky AutoTrack User Manual

Before Startup

Before opening the app, ensure that both a telescope and camera are connected to your computer. Plug in both of these devices to USB ports on your computer and install any necessary drivers to connect to the devices. If the drivers are not automatically installed, you should consult the manufacturer's documentation for further instructions. After connecting both of these devices, open the app.

Home Screen

On startup, you will see the screen below. Annotations on the screenshot correspond to the numbers in parenthesis in the following description.

Select your telescope driver from the ASCOM telescope picker by clicking "Choose" in the "Select and Connect Telescope" section of the app (1). Once you have made a selection, hit "Connect" (2). An ASCOM window displaying some telescope controls should appear.

Next, connect to the camera by selecting it from the "Select and Connect Camera" drop-down list (3). A live view of the camera should appear in the gray window on the right of the app.

Once the app is connected to your telescope and camera, you are ready to align! To do so, hit the "Automatically Align Telescope" button and wait for the app to align your telescope* (4).

After the telescope is aligned, you can use all other parts of the app freely. The "Slew to Coordinates" feature allows you to navigate directly to known coordinates in the sky (5). The search feature allows you to type in the name of a constellation, star, galaxy, solar system, etc. (6) and view search results for the specified celestial body and coordinates for the results (7). In addition, nearby stars will be shown for any result. To navigate to a search result, double click on it in the search results list. This will populate the slew fields with the coordinates of the selected object. Then hit "Slew" to navigate the telescope to the object.
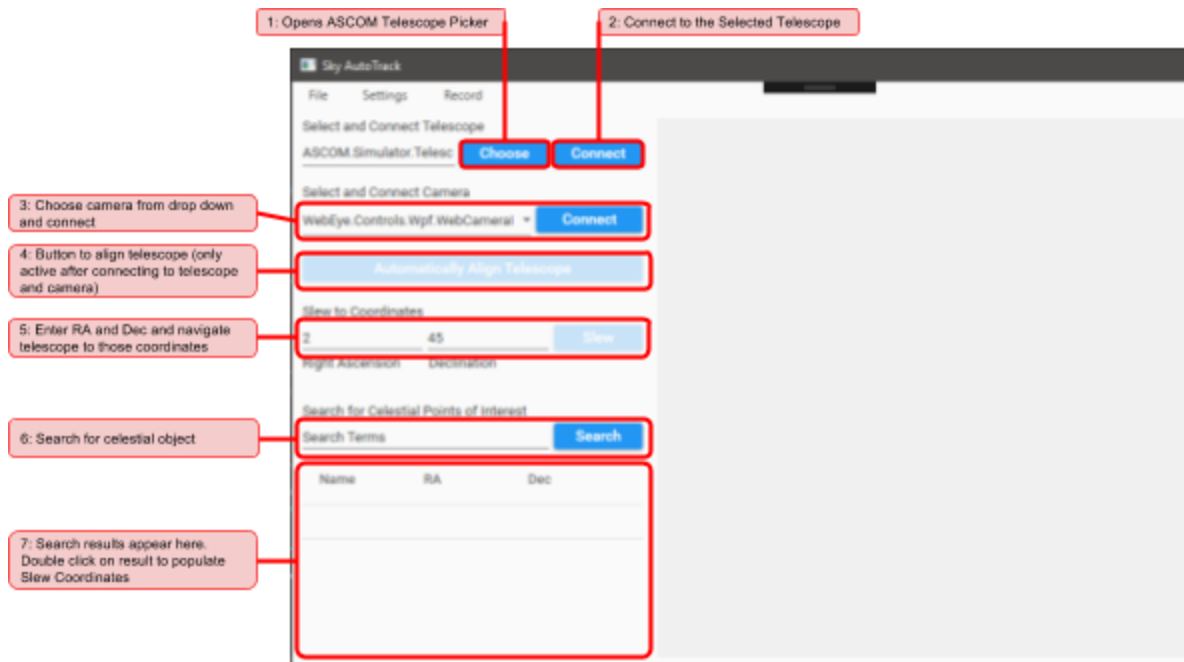

*See code repository RELEASE_NOTES.md for telescope alignment implementation status.

Macro Editor

      The following documentation explains the Macro Editor. For the full documentation on the macro language, see Macro_Manual.pdf in the docs folder on Github. This documentation can also be accessed by clicking Help in the menu bar.
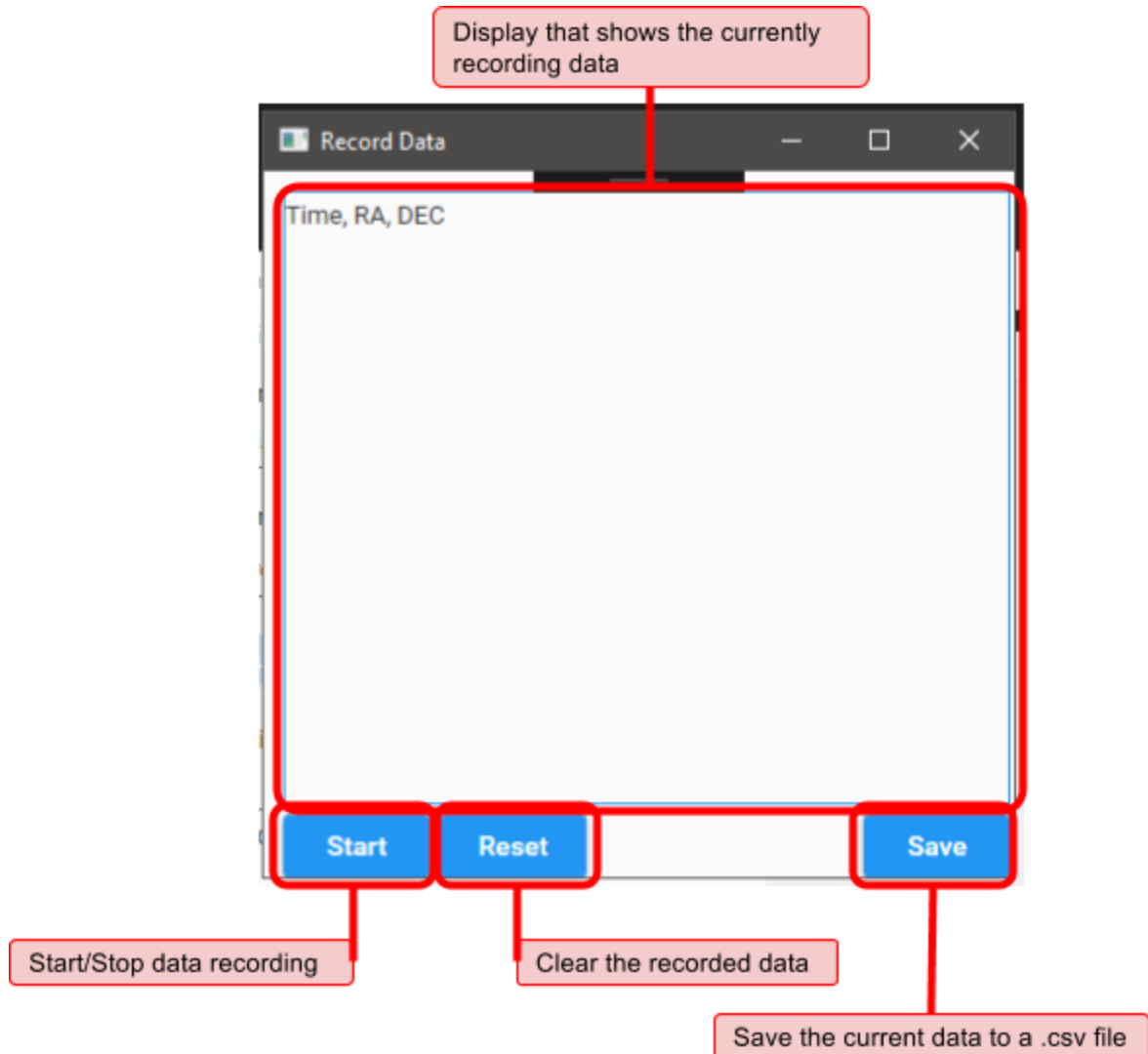
      The main editor window is where you can write new macros and edit existing macros. To open existing macros, use the File menu. To save or run the macro shown in the window, use the Save and Run buttons in the top right corner. If you would like to change the font and/or text size of the editor, you can do that using the controls above the top left of the editor.

      In the bottom left of the window is the Macro Status banner. This is where syntax errors, runtime errors and other debugging information may be printed during macro execution.
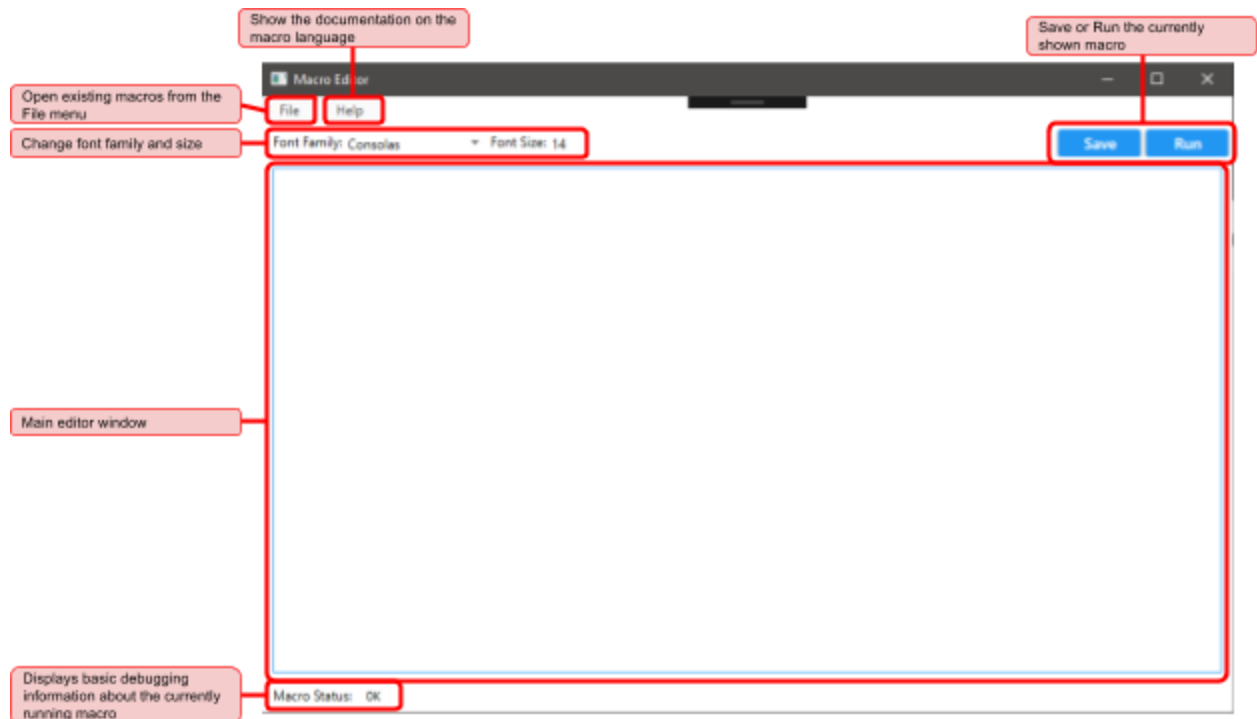
Recording Window

       This window allows you to record a history of the right ascension and declination that the telescope is pointed at throughout an observation session. It can be access by clicking on "Record" in the main window menu bar. While a recording is active, you can use the rest of the app as normal, but leave the recording window open! Once you are finished recording, the recording can be saved to a .csv file which can be easily interpreted in other software such as Microsoft Excel.

Display that shows the currently recording data

Start/Stop data recording

Clear the recorded data

Save the current data to a .csv file

Settings

       The settings menu allows you to change some properties of the app. Latitude and longitude should be set to your current location for the most accurate telescope navigation. RA and Dec rate control how fast or slow the telescope moves from one location to another. A rate of 1 is the default.