

# SkyBT Quick Start Guide

Please check Simulation Curriculum's web site for the latest SkyBT information, and troubleshooting tips. This quick start guide is only an introduction, and more recent information may be available on Simulation Curriculum's web site,

<http://www.skysafariastronomy.com/products/skybt/index.html>

These instructions assume that you are familiar with your own telescope equipment, and how to pair a bluetooth device with you computer or mobile device.

Because SkySafari will automatically configure the SkyBT with the appropriate communication settings for your telescope, leave the 4 configuration switches in their default position (all pushed towards the red button).

## 1. Turn SkyBT's Power On

You can power SkyBT from two AAA batteries (alkaline or rechargeable).

- Insert 2 AAA batteries into the battery compartment. Make sure they are oriented correctly. Battery life should be 8 to 10 hours for alkaline batteries under normal operating conditions.
- If you have an external power adapter, plug it into SkyBT's DC input jack. The input DC power requirements are 5 Volts @ 300ma or greater. SkyBT's DC input jack accepts a standard center-positive plug of size 4.0mm OD x 1.7mm ID. NOTE: Use only NiMH rechargeable batteries when externally powering the adapter. Applying power with alkaline batteries installed causes battery acid to leak and destroys the adapter.
- Turn on SkyBT unit. Depress the red power button for about 1 second until the green light begins flashing
- The status LED should light should flash green two times every second. If it does not, turn the power off for a few seconds, then turn it on again. See the Troubleshooting section below if the status LED still does not flash green.

Please note: batteries are not included, and the AC adapter must be purchased separately.

## 2. Pair SkyBT with your computer or mobile device.

Bluetooth devices need to be "paired" with the device controlling it. Please see your device's instruction manual if you do not know how to pair a bluetooth device with it. The PIN to use when pairing is 1234.

## 3. Connect Your Telescope

With serial telescopes, you'll need a serial cable to connect your telescope's RS-232 port to a standard PC DB9 Male serial port. Different telescopes require different serial cables. Contact your telescope manufacturer to obtain the correct serial cable for your telescope.

- Connect your telescope serial cable to the RS-232 port on your telescope. On most telescopes, the RS-232 port is a 4- or 6-wire modular ["telephone"] jack. On Meade LX-200 and LX-400 telescopes, the RS-232 port is located on the mount base. On almost all others (e.g. Meade telescopes with #497 AutoStar controllers, Celestron telescopes with NexStar controllers, Orion and SkyWatcher telescopes with Synta controllers), the RS-232 port is located on the bottom of the hand controller. See note below.
- Connect the other end of your telescope's serial cable to the DB9 male connector on SkyBT's.
- Turn on your telescope, and perform any telescope alignment procedures that you would normally perform. See your telescope user manual for instructions on how to align your telescope.

**IMPORTANT:** Do not connect SkyBT to the AUX port, handbox port, autoguider port, or any port on your telescope (or its hand controller) other than its RS-232 serial port. Doing so may damage SkyBT and/or your telescope hardware. Make sure you know where the RS-232 serial port on your telescope is located, and only connect SkyBT to that port.

## 4. Control Your Telescope

These instructions assume you are running SkySafari app on an Android mobile device, or SkySafari for Mac OS X on a Mac.

- Make sure SkyBT is still turned on and the green light is flashing two times per second. If it has automatically turned off, depress the red on/off button to turn the device on again.
- If you're running SkySafari on an Android device, go to Settings > Telescope Communication. Select the correct telescope type and mount type. Make sure the Connect via Bluetooth option is selected. Tap the Done button to accept changes and return to the main sky chart view. Tap the Scope button on the bar below the sky chart view. Tap the Connect button to establish communication with your telescope. If successful, the telescope's position should appear as a bullseye on the star chart.
- If you're running SkySafari for Mac OS X version 1.0 or higher on a Mac, select the Telescope menu > Setup. Select the correct telescope and mount type. Select "FireFlyBP" (or similar name) as the Connection. Click the OK button to connect to your telescope. If everything is working, the Telescope control panel should appear.

The green light should remain solid while SkyBT is connected to your telescope. A yellow LED will flash as SkySafari communicates with the telescope.

## 5. Turning the device off when done

When you are done controlling your scope, press the Disconnect button in SkySafari's scope control panel. The SkyBT will automatically turn itself off after about 3 minutes. To manually turn off the SkyBT, press and hold the red on/off button until the green and blue lights flash. When you release the button the device should turn off..

## Troubleshooting

- If the status light does not flash green when the on/off button is presses, the batteries are probably low. If the problem persists despite using fresh batteries or external power, contact Simulation Curriculum for help.

- If you can't connect to your telescope, make sure all cables are connected correctly to the RS-232 port on your telescope's hand controller or mount base, and not to the AUX port, HBX port, autoguider port, etc.
- Make sure you're using the correct serial cable combination for your telescope. A Celestron NexStar serial cable will not work with a Meade Autostar hand controller – even though it will physically fit into the Autostar's RS-232 jack – or vice-versa.
- Make sure cables are connected securely, and not kinked or bent. Make sure everything is turned on. Make sure your telescope control application is configured to connect via Bluetooth.
- Many telescopes will not respond to some (or all) external commands until they have been star-aligned. Did you remember to star-align your telescope before connecting with SkyBT?
- Celestron NexStar and Meade Autostar controllers may not accept "GoTo" commands until the scope been star-aligned. They will refuse to GoTo coordinates which they think are below the horizon. Is your telescope's location/date/time set correctly?
- Orion and SkyWatcher telescopes with SynScan controllers must not be in "PC-DIRECT" mode to accept external commands. Other models need to be in "RS-232 mode" to accept commands; check your telescope owner's manual for details.
- If you can connect, but experience frequent communication dropouts, try replacing SkyBT's batteries, or using external power. Also make sure your mobile device is well charged.
- Flaky communication can also be caused by a loose cable or connector; make sure all cables and connectors are fastened securely.
- If all else fails, turn SkyBT's power off, wait a few seconds, then turn it on again. Re-Pair SkyBT with your device, then restart your telescope control application.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference; and (2) this device must accept any interference received, including interference that may cause undesired operation.

