ASTRO-PHYSICS

KEYPAD RESETTING SOLUTIONS

If your keypad makes a clicking sound as it turns off for a second, then starts up again, it is resetting. Resets are due to an interruption of power to the keypad and can occur for a variety of reasons. If your keypad is displaying this behavior, please try the following suggested remedies.

Battery Voltage Drop

- **Resets when battery is losing power.** If your battery voltage is declining, the keypad will not receive enough power to operate. This can occur if the output falls below 11 volts after extended use. We suggest that you monitor your output with a voltage meter (some batteries have one built in).
- **Resets when other items are plugged into same battery as the mount**. Keep in mind that the meter reading is an average and will not show dips. Gel cells have internal resistance, which will cause a voltage drop when the load changes. If you connect a CCD camera, PC or Kendrick dew remover to the same battery (not recommended since each of these draws a significant load), the load will momentarily drop below 9 volts and the keypad will reset. If you plan to use a single battery to power multiple items, we recommend that you use a large marine battery that is not a gel cell and hook everything up to it before calibrating the GTO.

Break in Cable Connectors

Examine all of your power and motor cables to be sure that there are no broken connections. Also, wiggle the cables to see if you can initiate a reset.

Receptacle for Power Connector Too Close Together

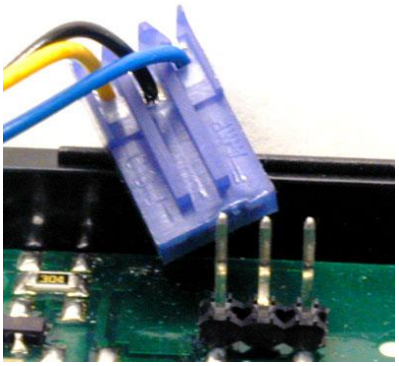
The prong of the power receptacle on the control box must be spread apart far enough to make contact with the cable. After repeated use, they may move closer together. Use a pointed object, like a pen tip or screw driver to spread them further apart. The arrow in the photo to the right shows the space between the prongs.

Oxidation of the Internal Connectors of the Keypad

Over time, oxidation of the connector pins inside the keypad can cause incomplete contact and momentary loss of power resulting in resets. If your keypad is more than 3 years old, it is beyond the 3-year factory warranty and you can try the procedure below. If the keypad is still under warranty, you run the risk of voiding the warranty if you open it up to attempt this or any other procedure.

1. Using a tiny Philips head screwdriver, carefully loosen the screws that hold the back cover in place. Lift the cover carefully and be sure that you do not lose the white spacers, one per screw.
2. Locate the four blue connectors.

3. Lift each connector carefully, one at a time, to reveal the pins beneath.
4. Clean the connectors using a cotton swab with alcohol on it and gently rub the contacts. In damp climates, you may have heavy oxidation (evidenced by discoloration) of the contact pins. Rub the pins gently with fine emery paper followed by an alcohol rub to clean off the oxidation.
5. Replace each connector firmly in its original orientation.
6. While gently positioning the cables, put the cover back in position and tighten the screws (with their white washers in place).



If All Else Fails

If you are unable to resolve the reset problem with any of the above procedures, please give Astro-Physics a call. We will ask about the results of these procedures before issuing a return authorization (RA) number. Please be prepared to discuss your results.

Further Comments

The mount will continue to track even if the keypad has reset. If you are in the middle of an exposure, you can continue as if nothing has happened. It will not affect the performance of the mount in any way.

Keypad version 3.0 or later (and C chip or above in the GTO control box). If the keypad resets, the chip in the GTO control box will remember the date, time and location set at the beginning of your session and the RA and Dec coordinates of where your telescope is pointing. The mount will track as if nothing has happened. If the keypad screen has changed to another menu, simply return to the screen that you were in to continue your session. Keypad resets are annoying with these keypad versions, but do not cause a major interruption of your session.

Keypad version 2.6 or earlier. If the keypad resets, the mount will continue to track normally. However, the keypad will return to the normal startup sequence, which will require that you chose your location and follow one of the calibration routines. Keypad resets are very annoying and disruptive with these early keypad and GTO control chip versions. We strongly suggest that you upgrade to the newer versions to gain the advantage of many new features. Please refer to the Technical Support section of our website for further information regarding upgrades.

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