

# **Astro-Physics**

## **Replacing Your GTO Keypad Battery**

### **Warranty considerations**

The manufacturer warrants the Astro-Physics GTO Keypad for three years. If your keypad is still within the warranty period, you may void the warranty by opening the keypad to make this repair.

### **Tools and parts needed**

- Small Phillips screwdriver
- Small screwdriver with tip wrapped in electrical tape
- Keypad with Keypad Protector removed
- New battery: Renata CR1632 (3V) or equivalent)

1. Leave the keypad connected to the power source with the power on. If the power is off, the database will become corrupted when the battery is moved out of position. If the database corrupts, the information (RA & Dec coordinates, magnitudes, constellations, etc) for all catalog objects will display incorrectly and you will be unable to slew to these objects. The stars and solar system objects will not be affected when the database corrupts.

You may remove the power from the keypad if you are unsure what you are doing. If you do so, the database will have to be reloaded to the keypad following the battery installation. Note, the maximum voltage is 12V and there is no danger of electrical shock.

**Screw with Washer**



2. Unscrew the 6 screws in the corners on the back of the keypad with the Phillips head screwdriver.
3. Carefully open the keypad, taking care to make sure that the white plastic washers on the screws are not lost. Lay both halves of the keypad with the wires still connected on your workspace.
4. Locate the CR1632 battery in its clip holder on the circuit board.
5. Carefully tip the bottom portion of the keypad housing on its side. You will need to support the other components, such as the display to keep them in position. It might be useful to have a helper who can hold the keypad as you work on it.
6. Using the small screwdriver with the tip wrapped in electrical tape (to prevent accidental shorting), gently lift up on the battery clip so that the battery will fall out of its holder. Be careful not to touch other components on the board with your tool. Do not bend the clip out of shape. The spring action of the clip is very important to hold the battery in place. You don't want to reduce the tension of the clip.
7. Reverse the procedure for installing the new battery by gently raising the metal clip and inserting the battery in the holder. It is very important that the positive side of the battery is facing up.
8. Carefully close the keypad. Make sure that the white plastic washers on the screws and the strain relief on the cable are in place.
9. Secure the 6 screws. Test your keypad to make sure the new battery works properly.
10. If your keypad has a rubber keypad protector (KEYPRO), install it now using the instructions available on our website. If you don't have a KEYPRO, we strongly suggest that you purchase one. Refer to our website for additional information.

