My dew heaters are powered off 12VDC

Commercial dew heaters are sized so that with full 12V they would be way too hot, and thus require a controller, the idea being that by controlling the power down you preserve your battery (and heat). I saved the money on the controller (or the time building one) and sized the resistors to provide a nice low level of warmth at full 12V. I figure a car battery could power a 3 watt eyepiece heater about 200 hours, or three such for 66 hours.   If you choose to follow this route, plan to use 10 1/2 watt resistors for the eyepiece heater and 5 for the Telrad....makes the math easy and they sell 'em at Radio Shack in packages of 5 for about a buck. Wire them in parallel, and wrap them in cloth tape.

What I'm using is 470 ohm x 10 for the eyepiece heater and 680 ohm x 5 for the Telrad. There's plenty of info online, but here's the basic math so you don't have to go searching:

Total resistance of resistors in parallel is one resistor / # of resistors

Watts = (volts x volts) / Ohms

Ohms = (volts x volts) /Watts

Battery drain:

Amps = Watts / Volts

@12V

560 ohm x 10 for eyepiece heater = 2.57 watts 6.44 watts 18V (.2 amps)

470 ohm x 10 = 3 watts (.25 amps) 7.68 watts

350 ohm x 10 = 4 watts (.3 amps) (Might be a tad too much power, but in extreme conditions it'll warm a big eyepiece quickly)

680 ohm x 5 for Telrad and secondary mirror = 1.05 watt (.08 amps)

If I run the 3 watt eyepiece heater, and 1.05 watt secondary and Telrad heaters continually (and frankly it would be a rare condition to run the secondary heater...I don't know that I've ever had

a secondary dew up, I just installed it 'cause I could), my 50 AH battery should last 122 hours. That oughta make it through the night :-)