Service Department Bulletin

CRITERION MANUFACTURING COMPANY
331 CHURCH STREET HARTFORD, CONNECTICUT
Manufacturers of Quality Optical Instruments

SUBJECT: Electric Drive Operation #ED3

In order to achieve accurate following of astronomical objects with telescopes equipped with electric drives, the following conditions must be rigidly met.

1. To follow equatorially, you must have mount set for equatorial motion. Therefore, THE EQUATORIAL MOUNT MUST BE ACCURATELY ALIGNED TO THE NORTH STAR. This will be equal to the latitude at your observing session station. If this is not done correctly or no attention is given to it, the telescope will not follow and objects will appear to drift in various manner depending on the extent of error in the direction to which the telescope points and to where it should be pointed. To align correctly, follow closely the instructions on the attached sheet, which describes the setting of an equatorial mount.

2. Do not align the optics of the telescope after the mount has been set for proper equatorial action. Optics of telescope should be in alignment when the mount setting is being made and if necessary, should be done BEFORE adjusting mount.

3. It is impossible for the drive to vary its speed, however a drop in your local current supply would affect it slightly but in no way would it be as great as that caused by improper latitude setting as described in (1).

4. It is a good idea to come onto object from West to East as in this way, drive takes over precisely at time you have object in field, and any movement of fits is overcome.

5. Make sure that counterweight on mount is adjusted so that telescope is in good balance. If weight is set too "light", telescope will have tendency to run ahead when on downside.

PROBLEMS
Drift in Declination faster or slower.
Cause.....Improper latitude setting.

Drift in right ascension faster or slower.
Cause.....Telescope not properly balanced. Clutch tension is too light.

IMPORTANT....Drive rate has been checked before shipment on all DynoMatic Drives. If telescope does not follow properly, review the foregoing taking particular care in setting the equatorial mount for your latitude by adjusting to the North Star. This must be done every time mount is moved to new location.
If drive is attached by owner rather than by factory, instructions for attaching should be carefully followed.
Do NOT expect to see the telescope moving when the drive is in use. This movement is so slow it will not be apparent.
Turn drive on at beginning of session and do not connect or disconnect while looking for new objects.

CRITERION

NEW!!! LATEST ELECTRONIC CRITERION VARIABLE SPEED CONTROL FOR TELESCOPE DRIVES



This new CRITERION development makes all telescope drives variable and in addition provides instant "fast" and "slow" motions for correcting and centering. Solid state construction. Simply connect this unit to regular 110/120 V AC current or 12V DC and the telescope drive speed can be varied to any rate.. Lunar, Solar, Sidereal, or PLanetary. Also by using the fast or slow buttons for instant corrections, you can achieve accurate vibration-free centering of object under study. Since all adjustments are electronic, they are far superior to any mechanical type. Convenient hand held remote control has adjusting dial, plus instant buttons situated so that you need not take your eye from telescope while using. Excellent for long exposure photography and for correcting refraction errors, drive errors, and current variations.

Considerable engineering and testing was necessary to develop this fine professional control so that it would have the features of units presently costing as much as $200. No complicated hook-ups, no converters. Everything in one compact unit. And all controls are remote. Works on both AC or DC. A pilot light indicates when in use. When you have your object in the field at its rate, telescope will "lock on" and track precisely. Stability is excellent and quickly reached.

Frequency range 41-80 cycles. Will handle up to 6 watt motor on AC and 12 watt motor on DC. Stability 0.2c/s Main control box is 6" X 3" X 4". Weight 4 lbs. Remote control houses all controls, weighs a mere 8 ozs. and is the smallest such yet. Fits hand nicely. No special knowledge needed to operate. With eye in telescope, vary speed as you desire. Makes your telescope drive more versatile. Now available at modest cost for owners of any make telescope using synchronous motor drives.

MODEL RC6-E6 DynaTracker Complete with remote control, etc. $89.00 Complete

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INSTRUCTIONS FOR CRITERION DYNA-TRACKER

Patent Pending

The Dyna-Tracker operates on 110/120 volts AC or 12 volts DC. Terminals on the rear of the Power Box E-6 are marked for the appropriate input and output plugs. Car batteries are generally 12 volt DC and regular house current is generally 110/120 volts AC.

TO CONNECT TO TELESCOPE

First make sure that the fine adjustment control on the remote control unit is in the "OFF" position. After making sure of this, connect to socket on front of Box E-6.

Next, connect the power cord from your telescope motor into AC output socket located at rear of box E-6. A special power cord is provided that can only fit one way into a special socket at rear of box. After connecting this cord correctly to box, connect other end to your 110/120 AC current outlet house current. In case of DC operation, connect DC socket to automobile battery or other DC source.

STARTING

When the electric current is "ON", circuit is charged and indicator lamp will flash-glow intermittently depending on cycle output. Always make sure to turn dial to "OFF" after use. It should always be left in "OFF" position until after the unit is connected to AC or DC current.

OPERATING

For best results, be sure that the polar axis of the telescope is correctly aligned with the north celestial pole. This insures excellent results in long exposure photography and observing programs.
Use the instant fast and slow buttons, located at side, to bring object into field and then use the fine adjustment to keep it there. The range of the fine adjustment is extremely wide as will be noted by the speed changes.

COARSE ADJUSTMENT

This adjustment is not used except initially to balance the unit to a telescope motor. It may not have to be adjusted at all as received from the factory. In case of adjustment, it can be done as follows:
Set the fine adjustment at zero. With a high power eyepiece in the telescope, position a bright star in center of field by means of the fast and slow buttons. If star drifts from center, change the coarse adjustment be means of screw driver until object is stationary and steady. Thereafter this adjustment need never be done again with the same telescope, and all adjustments can be made by fast and slow buttons and the fine adjustment control.

IMPORTANT

Do not alter any of the plugs supplied to fit sockets. Rotate them to fit the socket. In that way all connections will be correct. They are designed so that you cannot make a mistake and put wrong plug into any socket on the unit.
Be sure to turn unit off after use. If left "on" and connected to power again for next use, unit may not start.

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