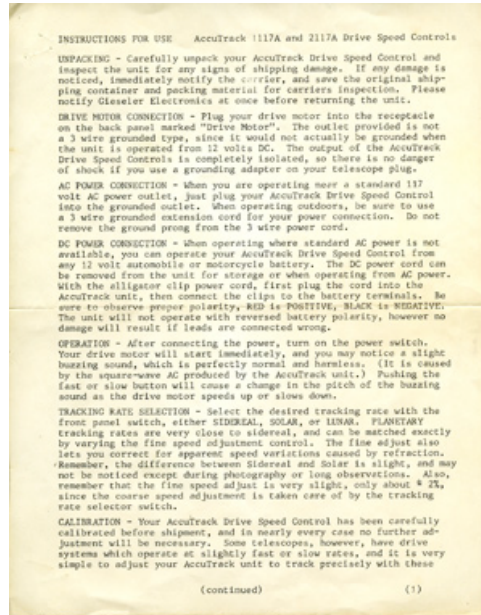


# Company Seven

## Astro-Optics Division



## AccuTrack 1117A/2117A Drive Speed Control Instructions

by Gieseler Electronics, circa 1975

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UNPACKING - Carefully unpack your AccuTrack Drive Speed Control and inspect the unit for any signs of shipping damage. If any damage is noticed, immediately notify the carrier, and save the original shipping container and packing material for carriers inspection. Please notify Gieseler Electronics at once before returning the unit.

DRIVE MOTOR CONNECTION - Plug your drive motor into the receptacle on the back panel marked "Drive Motor". The outlet provided is not a 3 wire grounded type, since it would not actually be grounded when the unit is operated from 12 volts DC. The output of the AccuTrack Drive Speed Controls is completely isolated, so there is no danger of shock if you use a grounding adapter on your telescope plug.

AC POWER CONNECTION - When you are operating near a standard 117 volt AC power outlet, just plug your AccuTrack Drive Speed Control into the grounded outlet. When operating outdoors, be sure to use a 3 wire grounded extension cord for your power connection. Do not remove the ground prong from the 3 wire power cord.

DC POWER CONNECTION - When operating where standard AC power is not available, you can operate your AccuTrack Drive Speed Control from any 12 volt automobile or motorcycle battery. The DC power cord can be removed from the unit for storage or when operating from AC power. With the alligator clip power cord, first plug the cord into the AccuTrack unit, then connect the clips to the battery terminals. Be sure to observe proper polarity, RED is POSITIVE, BLACK is NEGATIVE. The unit will not operate with reversed battery polarity, however no damage will result if leads are connected wrong.

OPERATION - After connecting the power, turn on the power switch. Your drive motor will start immediately, and you may notice a slight buzzing sound, which is perfectly normal and harmless. (It is caused by the square-wave AC produced by the AccuTrack unit.) Pushing the fast or slow button will cause a change in the pitch of the buzzing sound as the drive motor speeds up or slows down.

TRACKING RATE SELECTION - Select the desired tracking rate with the front panel switch, either SIDEREAL, SOLAR, or LUNAR. PLANETARY tracking rates are very close to sidereal, and can be matched exactly by varying the fine speed adjustment control. The fine adjust also lets you correct for apparent speed variations caused by refraction. Remember, the difference between Sidereal and Solar is slight, and may not be noticed except during photography or long observations. Also, remember that the fine speed adjust is very slight, only about  $\pm 2\%$ , since the coarse speed adjustment is taken care of by the tracking rate selector switch.

CALIBRATION - Your AccuTrack Drive Speed Control has been carefully calibrated before shipment, and in nearly every case no further adjustment will be necessary. Some telescopes, however, have drive systems which operate at slightly fast or slow rates, and it is very simple to adjust your AccuTrack unit to track precisely with these

## CALIBRATION (continued)

units. Please do not attempt to calibrate your unit until you are certain that your drive motor system is operating incorrectly. The calibration adjustment is accessible through a small hole in the bottom panel of your AccuTrack unit. Use only a small screwdriver, and be very careful not to use excessive force when making the adjustment. Turn the adjustment clockwise to decrease the drive motor speed, or counterclockwise to increase the drive motor speed. The adjustment is quite sensitive, and a very slight adjustment (less than  $\frac{1}{2}$  turn) is all that will be necessary.

INTERNAL FUSE - The output stage of your AccuTrack Drive Speed Control is protected against accidental damage by a 1.5 amp standard fuse, located under the cover of the unit. If for any reason the drive motor output connections should be shorted together, the fuse will blow, protecting the expensive output transistors. If your unit ever stops operating, disconnect the unit from any power supply, and remove the top cover by unscrewing the four rubber feet and sliding the cover off. The fuse is in a holder above the battery input jack. If the fuse is blown, replace it with the original type only, (AGC 1.5) and replace the cover. If this does not correct the problem, contact Gieseler Electronics for instructions.

### IMPORTANT

Your AccuTrack Drive Speed Control is a precision unit designed only for use with telescope drive motors. Although it will operate any 117 volt AC device rated at 15 watts or less, we do not recommend attempting to use the AccuTrack unit to power any device other than your telescope drive motor. Your AccuTrack unit is designed to give trouble-free operation with no maintenance for many years. Please treat it as you would treat any precision electronic device, and you will own it for many years. Do not allow the unit to get wet when operating outdoors, to protect the circuitry and avoid the possibility of electric shock.

### REPAIRS

In the unlikely event that your AccuTrack Drive Speed Control should require some repair, please pack it very carefully and return the unit to Gieseler Electronics by United Parcel Service or Parcel Post. If your unit is no longer covered by the one-year guarantee, we will contact you with the exact repair cost before repairing the unit. Our repair charges are very modest, and usually reflect only our costs.

YOUR ACCUTRACK DRIVE SPEED CONTROL IS COMPLETELY GUARANTEED AGAINST FAILURE OR DEFECTS FOR ONE YEAR FROM THE DATE OF PURCHASE. IN THE EVENT OF A FAILURE, WE WILL REPAIR OR REPLACE YOUR UNIT AT NO COST TO YOU, PROVIDED YOU SHIP THE UNIT PREPAID TO GIESELER ELECTRONICS.

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