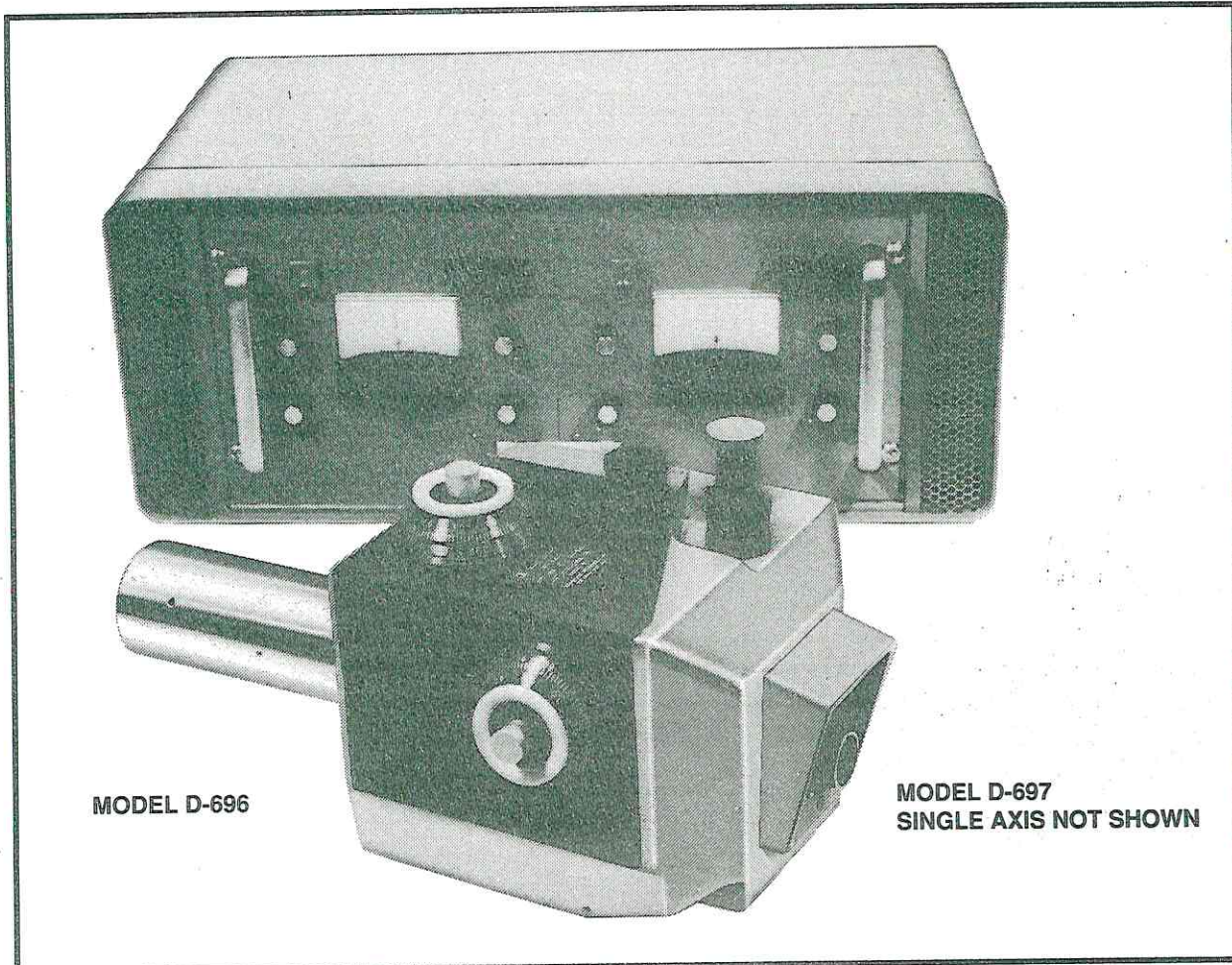


# Automatic Autocollimators



MODEL D-696

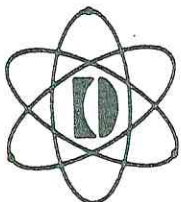
MODEL D-697  
SINGLE AXIS NOT SHOWN

- "Plug-In" circuit boards to facilitate field maintenance
- Versatile design provides full measuring capabilities in manual, electronic signal and automatic modes
- Extremely fast response time with improved stability
- Logic Option provides binary signal that may be fed directly into a computer

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## MODEL D-696 TWO AXIS AUTOMATIC AUTOCOLLIMATOR

This unique and highly advanced electro-optical instrument monitors angular changes of an external reflector simultaneously in both the azimuth and elevation axes. Accurate readings of these changes may be taken manually, automatically utilizing the dials for continuous reflection observations, electronically for accurate nulling or meter readout and electronically utilizing the optional logic option circuit board which provides a binary coded signal for direct input into a computer. Also AC and DC error signals are provided with outputs on the back of the electronics cabinet.



## DAVIDSON OPTRONICS INC.

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## DETAILED SPECIFICATIONS

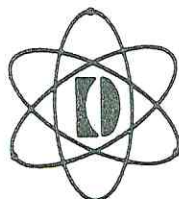
<b>Sensitivity</b>	± .1 second of an arc.
<b>Accuracy</b>	± .2 second of an arc over 10 second range. ± .75
<b>Automatic Position</b>	second of arc over 100 second range (with minimum 1.0 diameter reflector).
<b>Meter Position</b>	Accurate to within 20% in the analog range (± 6 seconds of an arc). AC Error Signal 20%. DC Error Signal 20%. (Meter in conjunction with dial for nulling). ± .1 second of arc over 10 second range. .75 second of arc over 100 second range.
<b>Measurement Range</b>	100 seconds of an arc.
<b>Cross Coupling</b>	± 1 second of an arc.
<b>Acquisition Range</b>	90 minutes, decreasing to approximately 100 seconds at a distance of 130 feet.
<b>Response Time</b>	
<b>Automatic Tracking</b>	40 seconds of arc per second of time.
<b>Meter and DC Error</b>	
<b>Signal</b>	Response varies with time constant control.
<b>AC Error Signal</b>	.05 second of time.
<b>Warm-up Time</b>	10 minutes to achieve normal sensitivity.
<b>Acquire</b>	The acquire lamp illuminates when image is within the acquisition range.
<b>Power Requirements</b>	120 ± 2 1/2 volts, 60 Hz, 80 watts.
<b>Analog Potentiometer</b>	Accurate to 0.75% of the total range.
<b>Electronics</b>	Solid State
<b>Lens Aperture</b>	2 inches.
<b>Overall Dimensions</b>	
<b>Autocollimator</b>	Length 18 5/16", Width 11", Height 9 3/8".
<b>Mounting Tube</b>	2.863" dia.
<b>Electronic Unit</b>	24" Width, 9 3/4" Height, 16 1/4" Depth.
<b>Support Stand</b>	Elevation adjustment only ± 3 degrees.
<b>Shipping Weight</b>	135 lbs.
<b>Finish</b>	Ivory and Black

**NOTE: The specifications and description contained in this bulletin also pertains to the Model D-697 Single Axis Automatic Autocollimator**

### Options

**D-239 INSTRUMENT STAND**  
**Digital Meter Readout**

**Voltage Regulator**



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