


# FILM-TECH

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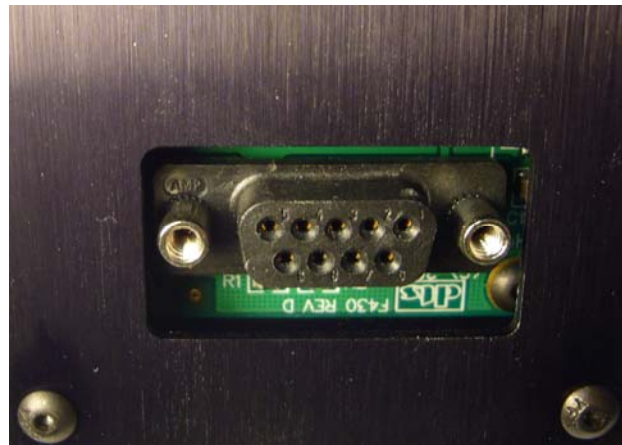
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	TITLE		NUMBER	REV	PAGE
	<b>Reader Head LED Voltage Calibration (D424 P.C. Board Only)</b>		<b>TN-E550</b>	<b>B</b>	1 of 4
DEPARTMENT Engineering	CREATED BY: K. Hultgren	EFFECTIVE DATE January 23, 2009	APPROVED BY: L. Brown		

This procedure applies only to reader heads with the D424 P.C. board. The D424 P.C. board was used in reader heads with a date code of May 2006 or earlier. Newer reader heads use the F430 P.C. board which is self calibrating and requires no adjustment. The P.C. board number can be viewed, without removing the cover, by tilting the reader and looking just below the 9-pin connector (see examples below).



D424 Board



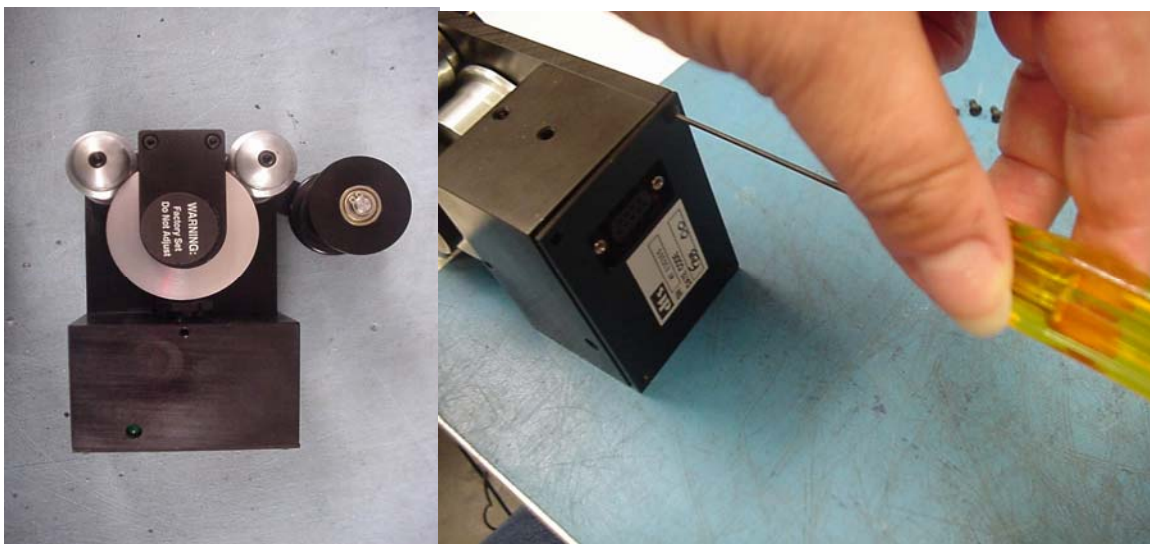
F430 Board


All reader heads, with the D424, must be periodically checked for proper gain. It is easily done using a multimeter and with **NO** film loaded through the reader. For demonstration purposes, the reader is shown removed from the projector.

**TOOLS REQUIRED**

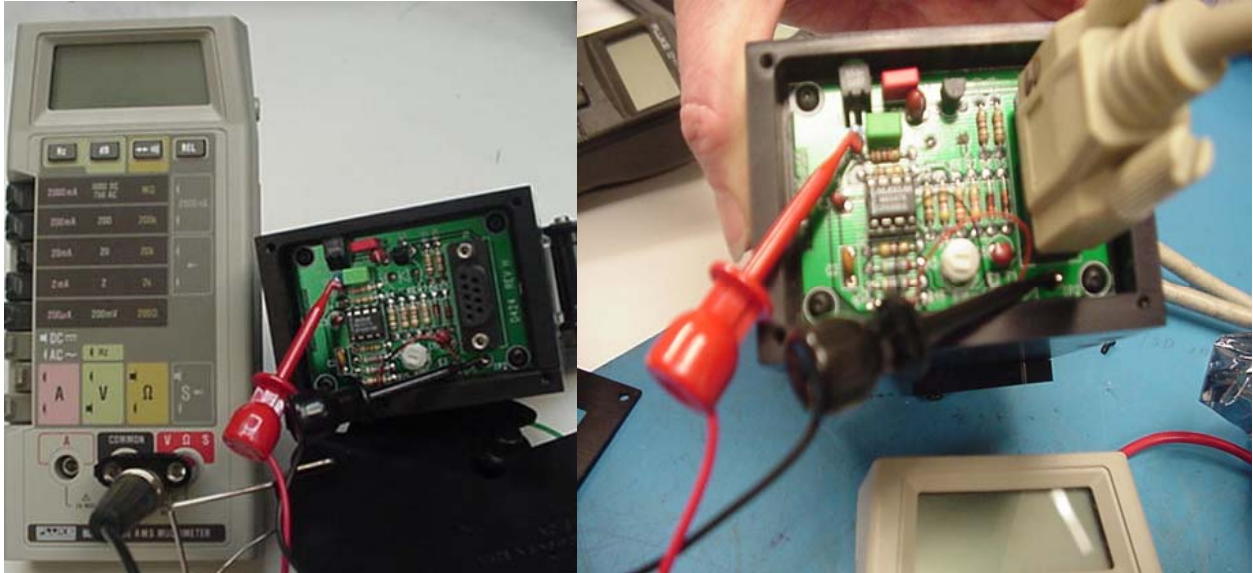
- DTS player
- Timecode cable
- 1/16" (1.58 mm) Allen-head (hex) screwdriver
- Small flat-bladed screwdriver
- Multimeter

① Remove the reader's back cover by removing the -4- hex screws. Save the screws.



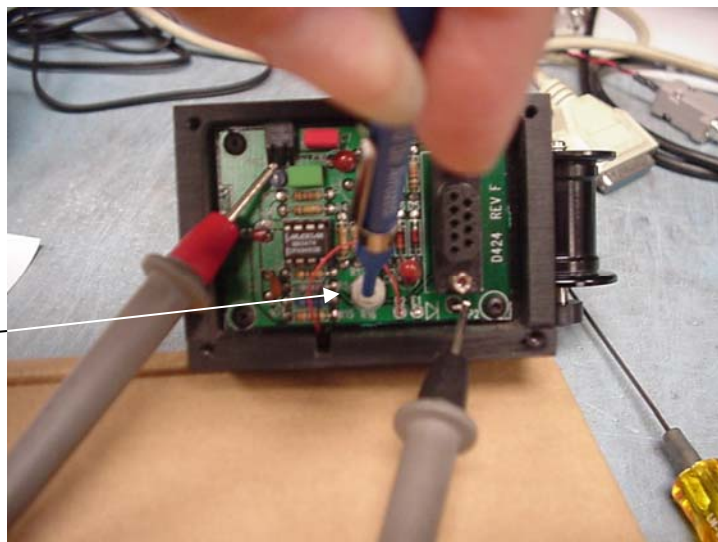
	TITLE <b>Reader Head LED Voltage Calibration          (D424 P.C. Board Only)</b>		NUMBER <b>TN-E550</b>	REV <b>B</b>	PAGE 2 of 4
	DEPARTMENT Engineering	CREATED BY: K. Hultgren	EFFECTIVE DATE January 23, 2009	APPROVED BY: L. Brown	


- ② First, set the meter to DC volts. Connect leads to TP1 (“+” signal) and TP2 (ground) on the D424 board. Then, connect the reader to a powered DTS player. The reader gets its power from the DTS player.



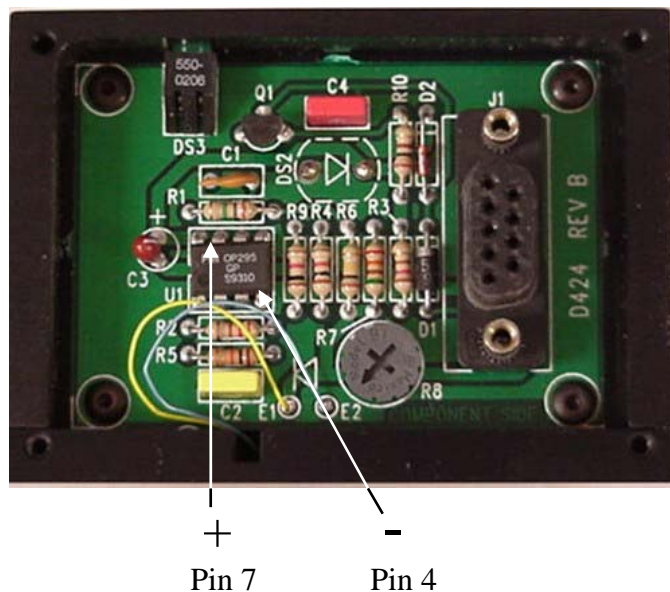
- ③ Adjust R16 trim pot (on **Rev. E** and higher D424 boards) for **4.0** volts DC on the multimeter. If you cannot achieve the correct voltage, the LED may be damaged or aged. Older version D424 boards may not have a trim pot. In that case, if the voltage is not between 2.5 and 4.0 volts DC, then you must do a repair-exchange on the reader. Contact your local DTS dealer.

Adjust trim pot until the volt meter reads 4 volts DC




	TITLE <b>Reader Head LED Voltage Calibration          (D424 P.C. Board Only)</b>		NUMBER <b>TN-E550</b>	REV <b>B</b>	PAGE 3 of 4
	DEPARTMENT Engineering	CREATED BY: K. Hultgren	EFFECTIVE DATE January 23, 2009	APPROVED BY: L. Brown	

- ④ On older versions of D424 boards that have a trim pot but no test points, carefully connect your meter as shown below and measure the voltage. Adjust trim pot for **4.0** volts DC on a multimeter.



Version "A" D424 boards do not have test points or a trim pot. In that case, measure the same as above and if the voltage is not between 3.5 and 4.0 volts DC, then you must do a repair-exchange on the reader. Contact your local DTS dealer.



	TITLE		NUMBER	REV	PAGE
	<b>Reader Head LED Voltage Calibration (D424 P.C. Board Only)</b>		<b>TN-E550</b>	<b>B</b>	4 of 4
DEPARTMENT Engineering	CREATED BY: K. Hultgren	EFFECTIVE DATE January 23, 2009	APPROVED BY: L. Brown		

- ⑤ After adjustments are complete, reattach the back cover using the saved hex screws. Tighten all set-screws on the reader and check that all rollers rotate freely and do not wobble. Check that the reader's mounting bracket is tightly fastened to the projector and that the reader is securely attached to the bracket.



One set-screw to secure auxiliary roller

Two set-screws to secure rollers

Please refer questions to DTS Cinema Technical Support

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