

## Violux Super Lighting System Trouble Shooting Chart

Problem	Possible cause or symptom	Test Procedure	Remedy
<b>Lighting System Does not Turn On</b>			
Main Power Contactor does not energized	No electrical power to equipment	Check power line fuses or circuit breakers.	
	Power is present but the main power contactor will not energized	<ol style="list-style-type: none"> <li>1. Check for 220 VAC at Coil terminals of K1 If not present Check F4, F5, F6 &amp; S1</li> <li>2. If there is voltage check the K1</li> </ol>	<ol style="list-style-type: none"> <li>1. F4 P/N is 63306 F5 P/N is 72202 F6 P/N is 72206 S1 P/N is 71304</li> <li>2. K1 P/N is 63725</li> </ol>
Main exposure lamp does not light but contactor Energizes	Exposure Lamp is too hot to restart	Allow Exposure lamp to cool down for at least five minutes before attempting to restart.	
	Exposure Lamp, E1, is defective or has reached end of operating life.	Check Exposure Lamp for glass or electrode damage.	If Exposure Lamp is defective replace with THS 8027
	Defective starter	Check igniter , GZ 501, on starter circuit board in Power Supply for proper firing. Replace igniter if it does not glow at all or glows steadily when the lamp is not lit. If problem still exists replace Starter circuit board A1	<ol style="list-style-type: none"> <li>1. GZ 501 is P/N 33309</li> <li>2. Starter Circuit Board A1, is P/N 56789</li> </ol>
	Main power transformer defective	On the main transformer (T1) <ol style="list-style-type: none"> <li>1. Check voltage between terminals 2 &amp; 4 for 220 VAC (+/- 10 Volts)</li> <li>2. Remove the wire on terminal # 6 Check voltage between terminals 4 &amp; 6 for 800 VAC</li> </ol>	If Main Transformer (T1) is defective replace with P/N 44028
	Reduced Power Choke defective	Check DC resistance of Choke Coils (L1), They should be approximately 1/4 w	Choke (L1) is P/N 44560
	Poor connection in lamp circuit	Check the following wire connections <ol style="list-style-type: none"> <li>1. K 2 Contactor</li> <li>2. The Lamp House connections</li> <li>3. The Lamp Holder connections</li> </ol>	

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<b>Lighting System Draws very High Current</b>	Defective lamp	Check lamp Current Max current is 14.5 Amps.	If Exposure Lamp is defective replace with THS 8027
	Defective power compensation circuit	Check power compensation Capacitors C1. normal current draw is 18 Amps, (180mf)	Compensation Capacitors C1, are P/N 20972 Quantity 6 Each
	Tap incorrectly set	Verify tap setting	
<b>Lamp Does Not Switch To Proper Power Level</b>	High / Low switch incorrectly set	Check switch position.	
	1. Defective exposure control relay, K3	1. Check that 220 VAC is present during Exposer # 23 on the K3 relay.	1. K3 is P/N 63717
	2. Defective High / Low switch	2. Check S2 for continuity.	2. S2 is P/N 71304
	3. Defective High / low power contactor	Check that 220 VAC is present at the contactor coil during Exposure.	a) High Power Contactor K2; is P/N 63725
<b>Light Problems</b>			
Low Light Output	Lamp is near end of operating life	Check for blackening or distortion of Exposure Lamp. Does the lamp have more than 1000 hours? Replace lamp.	If Exposure Lamp is defective replace with THS 8027
	TAP improperly set	Check tap setting	
	Reflector or glass dirty.	Clean reflector and glass	Use a good Quality Graphic Arts Glass Cleaner such as Theimoclean. P/N 85164

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Long Exposures do to Vacuum Frame Glass	Does your glass cleaner have a polymer wax or UV block in it?	Expose a step scale through a piece of 1/4" Plate glass on top of the Vacuum Frame Glass, Then expose the same scale through the Vacuum Frame Glass. The 2 exposures should be the same.	Clean glass with alcohol and than a Graphics Arts quality glass cleaner, such as Theimoclean. P/N 85164. If the the problem continues, replace the Vacuum Frame Glass with Select Quality 1/4" Polished Plate Glass.
<p><b>Warning UV HAZARD</b> When trouble shooting the shutter system or the cooling system the Exposure Lamp Should be disabled by removing the wire on terminal # 6 of the Main Transformer (T1)</p>			
<b>Shutter System</b>			
Shutter does not open or close	Problem with DC supply	<ol style="list-style-type: none"> <li>1. Check fuses F1 &amp; F2</li> <li>2. Check AC input to Bridge Rectifier (22 VAC between pins 2 &amp; 3 on A1 Board)</li> <li>3. Check DC output of Bridge Rectifier, A1 Board Should be (+) 32 VDC, pin 4 &amp; (-)32 VDC pin 1 in reference to terminal 9 on T1</li> </ol>	<ol style="list-style-type: none"> <li>1. F1 or F 2 is P/N 63306</li> <li>2. A1 Board, is P/N 56789</li> </ol>
Shutter Does Not Open	Expose relay K3 not actuating or providing a output to open shutter	<ol style="list-style-type: none"> <li>1. Check 110 VAC control input during exposure on coil terminals of K3.</li> <li>2. Check operation of K3 relay               <ol style="list-style-type: none"> <li>a. (+32) VDC out put of K3 at terminals 21X1 &amp; 20X1 of the main terminal strip</li> </ol> </li> </ol>	<ol style="list-style-type: none"> <li>1. If not present check integrator and interconnections to integrator.</li> <li>2. Exposure Relay , P/N is 63717</li> </ol>
	Limit switch defective or Limit switch sticking	Check operation of "open" sensing limit switch S101.	Limit switch, S101 is a. External P/N 72104 B. Internal P/N 60457
	Shutter motor defective	Check for 12 VDC at Shutter Motor, M3	Shutter Motor, M3, is P/N 1108640

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	Shutter or Shutter motor Gears worn	Visual examination of Gears	A) Shutter Motor Gear is <ol style="list-style-type: none"> <li>1. New Style P/N 160432</li> <li>2. Old Style P/N 68607</li> </ol> B) Shutter Assembly <ol style="list-style-type: none"> <li>1. For external limit Switches is P/N 161729</li> <li>2. For internal limit Switches is P/N 60487 &amp; 60488</li> </ol> (Shutter gears are available separately, but require a pinning operation to attach them to the shutters. Shutter Gear P/N 68714 ) ( For older machines the brass studs have to be replaced with steel P/N 100503
Shutter Does Not Close	Expose relay K3 not deactivating or providing a output to close shutter	<ol style="list-style-type: none"> <li>1. Disconnect the integrator and make shore that the K3 relaxes.</li> <li>2. Check operation of K3 relay                             <ol style="list-style-type: none"> <li>a. (-) 32 DC t output of K3 at terminals 19X1 &amp; 20X1 of main terminal strip.</li> </ol> </li> </ol>	<ol style="list-style-type: none"> <li>2. Exposure Relay , P/N is 63717</li> </ol>
	Limit switch defective or Limit switch sticking	Check operation of "close" sensing limit switch S102.	Limit switch, S102 is <ol style="list-style-type: none"> <li>a. External P/N 72104</li> <li>B. Internal P/N 60457</li> </ol>
Shutter Opens Or Closes Noisily	Limit switches out of adjustment		Adjust limit switches
	Braking diodes defective	Check braking diodes. Located under heat shrink at terminal # 8 in Lamp House.	Breaking diodes are P/N 95516
<b>Lamp House Cooling System</b>			
Lamp swells	Lamp not cooled properly	<ol style="list-style-type: none"> <li>1. Check for obstruction at blower air intake. Remove obstruction, dust, dirt, paper ect.</li> <li>2. Is air intake over 95 deg F at blower</li> <li>3. Blower circuit defective</li> </ol>	<ol style="list-style-type: none"> <li>1. Remove Blower from Lamp House and clean thoroughly</li> <li>2. Ventilate room properly</li> </ol>
Exposure Lamp Blower not functioning	Defective blower control Board, A1	<ol style="list-style-type: none"> <li>1. Check lamp voltage at Blower Board, A1 Terminals #7 &amp; 8. If there is over 180 Volts the blower circuit should turn on. If the voltage is low check the Exposure Lamp for proper operation</li> <li>2. Bypass blower control card by removing the wire from terminal #5 of the Blower control board,A1, and attaching it to terminal #7. If blower work normally, the A1 board is bad.</li> </ol>	<ol style="list-style-type: none"> <li>1. If the lamp voltage is low, check lamp circuit for proper operation and than replace the lamp. (See lamp section for Info)</li> <li>2. The Blower Control board, A1, is P/N 56789</li> </ol>

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	Defective Low speed capacitors	Bypass the Blower Control Board, A1. Check the Blower Voltage at Terminals 27X1 & 22X1 of the main terminal strip 1) High Power Exposure 211 To 230 VAC 2) Low Power Exposure 120 to 140 VAC	If the voltages are wrong check the following 1) Voltage high or low on High Power Exposure Verify that the Tap is set Correctly, and Verify that the control circuit (F3) is on the 220 VAC terminal of the T1 Transformer. 2) Voltage high or low on Low Power Exposure. Low speed Cap. is defective. Check Cap. and replace if defective, with P/N 23321
	Defective Blower	With the Lamp disabled, the Blower Control card by passed, and the lighting system on High Power Exposure, check for 220 Volts at the Blower Motor. If present and blower does not run, the blower motor and or the starting cap are defective.	1. Exposure Lamp Blower Motor P/N 43401, Cap. P/N 23737
Lighting System turns off and power indicator Extinguishes.	1. Lamp house safety is sensing over temperature situation.  2. Transformer safety is sensing over temperature	1. Check for over heating of Lamp House  2. Check for cooling problem in power supply and check lamp for high current draw.	1. Correct Cooling system problem and replace lamp house safety thermostat, P/N 72202. 2. Correct Cooling system problem and or lamp problem and replace transformer safety thermostat, P/N 72206.