

Running Hot

• I just finished building the “Low-Cost Function Generator” featured in the January 1988 issue and have two questions regarding the circuit in Fig. 2. Filter capacitor C11 on the schematic calls for a 220- μ F value, but the Parts List specifies it at 22 μ F. Which is correct? My second question concerns the 8038 chip used for IC3. The chip I have runs excessively hot and shuts down after 30 minutes due to internal thermal cut-out. I note that the

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maximum parameter for this chip is 30 volts. Therefore, my question is are the 15-volt bus rails set too high?

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The correct value for C11 is 22 μ F, though a larger value would improve filtering efficiency and energy delivery from the supply. Assuming no faulty wiring, the cause of your difficulty may well be that the 8038 chip is marginal. If either the +15- or -15-volt regulator or both is operating on the high side of its tolerance range, the potential on either rail may be a bit too high for safe operation of the IC. You can take voltage readings and/or try a different 8038 chip to determine the culprit.—Ed.