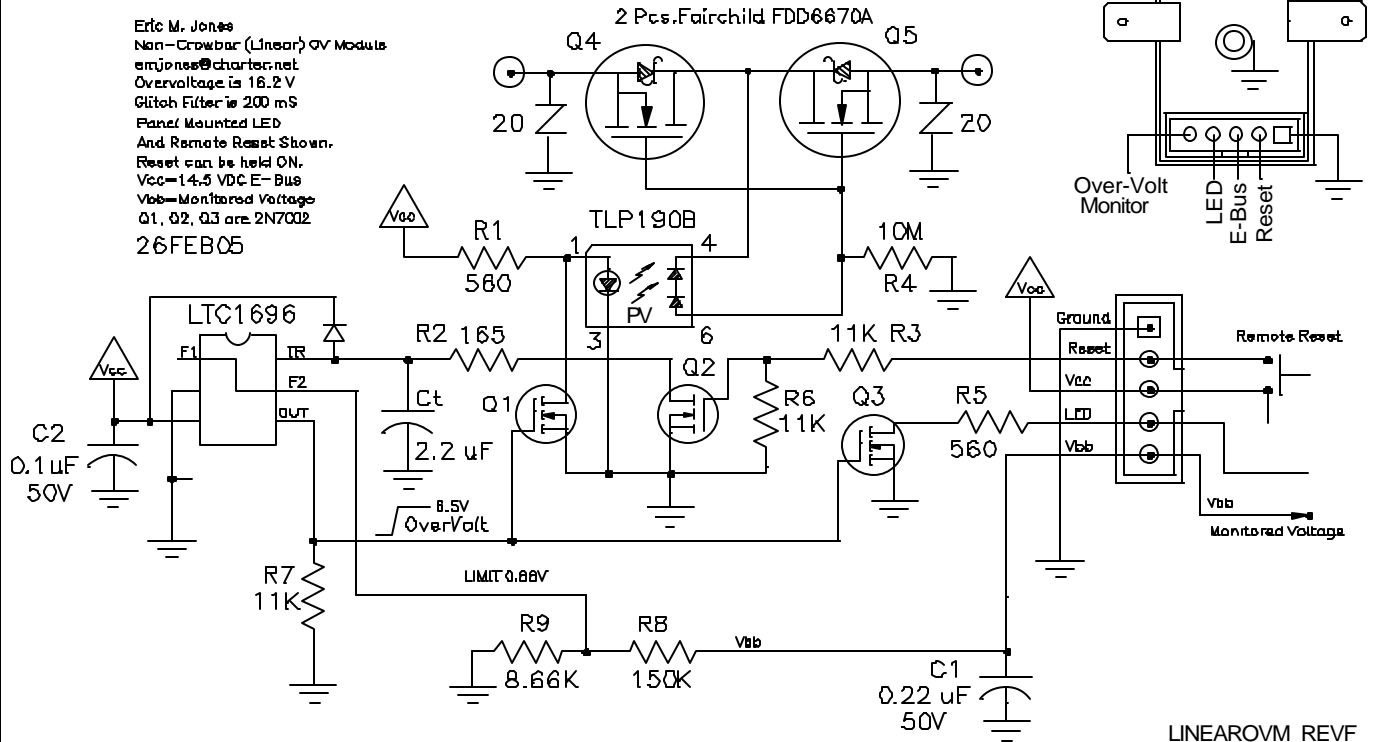


Linear OV Management Module

Eric M. Jones
 Non-Crowbar (Linear) OV Module
 emjones@charter.net
 Overvoltage is 16.2 V
 Glitch Filter is 200 mS
 Panel Mounted LED
 And Remote Reset Shown.
 Reset can be held ON.
 Vcc=14.5 VDC E-Bus
 Vbb=Monitored Voltage
 Q1, Q2, Q3 are 2N7002
 26FEB05



LINEAROV_M_REV F

Description of Operation—The LTC1696 monitors the voltage Vbb through the voltage divider R8, R9. Inputs F1 and F2 when used together cause the LTC1696 to react faster to large dV/dt. The LTC1696 trigger is delayed 200 mS by Ct

The Source-Source pair of FDD6670 mosfets assure switch symmetry. They are normally held on and isolated by the TLP190B photovoltaic driver. The ¼" fastons normally connect to the alternator field line for externally regulated alternators or to the B+ contactor coil in internally regulated alternators. These power mosfets are in "high-side" configuration.

After 200 mS of a voltage over 16.2 V on Vbb, the LTC1696 OUT goes high and turns on mosfet Q1 which holds off the TLP190B and thus turns off the large mosfets. At the same time, the LTC1696 OUT also holds the mosfet Q3 low, thus turning on the signal LED.

The LOVM is reset by a remote switch that turns on mosfet Q2 which drains the capacitor Ct, thus resetting the LTC1696 output. The 1N4004 diode from TR pin to Vcc resets the trigger when the Vcc goes low on intentional powerdown.

Eric M. Jones 30JUL05