



The Charging Circuit

With a low battery voltage +12 flows from the voltage reference via D1, Q2, D2/D3 turning on the SCR1 & SCR2 thus applying full output of the alternator to the battery through D4/D5. As the battery voltage comes up, Z1 starts to conduct intermittently turning on Q1 which turns off Q2 causing the SCRs to turn off and skip half cycles (reduced charging).

The Charge Warning Light Circuit

When the key is turned on 12V from the reference supply turns on Q3 thus lighting the Charge warning light. As the engine revs, negative pulses from D6/D7 oppose the reference voltage and force Q3 to turn off extinguishing the warning light. If the alternator stops light will turn back on. Z2 doesn't really regulate but serves to protect the Q3 against over voltage.

Resistor values were taken by measurement rather than by colour code so there may be slight errors.

⬆ Regulator terminal
⬇ Ground to case

Notes:

- 1/ Voltage Reference and Warning Light share m/fm connector.
- 2/ Voltage can be trimmed by changing value of resistor pair, one of pair is accessible on circuit side of board.