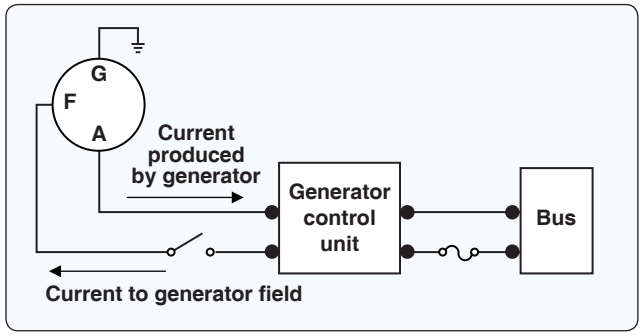

Figure 9-86. *Simplified generator control circuit.*

controlled by the pilot through the alternator master switch. The alternator master switch in turn operates a circuit within the alternator control unit (or voltage regulator) and sends current to the alternator field. If the alternator is powered by the aircraft engine, the alternator produces electrical power for the aircraft electrical loads. The alternator control circuit contains the three major components of the alternator circuit: alternator, voltage regulator, and alternator master switch. *[Figure 9-87]*

The voltage regulator controls the generator field current according to aircraft electrical load. If the aircraft engine is running and the alternator master switch is on, the voltage regulator adjusts current to the alternator field as needed. If more current flows to the alternator field, the alternator output increases and feeds the aircraft loads through the distribution bus.

All alternators must be monitored for correct output. Most light aircraft employ an ammeter to monitor alternator output. *Figure 9-88* shows a typical ammeter circuit used to monitor alternator output. An ammeter placed in the alternator circuit is a single polarity meter that shows current flow in only one direction. This flow is from the alternator to the bus. Since

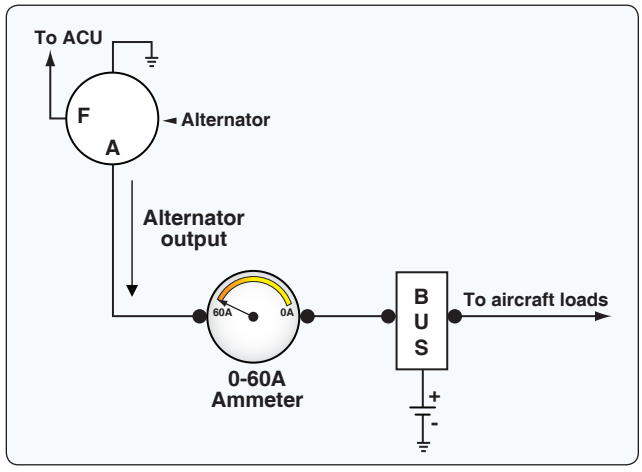

Figure 9-88. *Typical ammeter circuit used to monitor alternator output.*

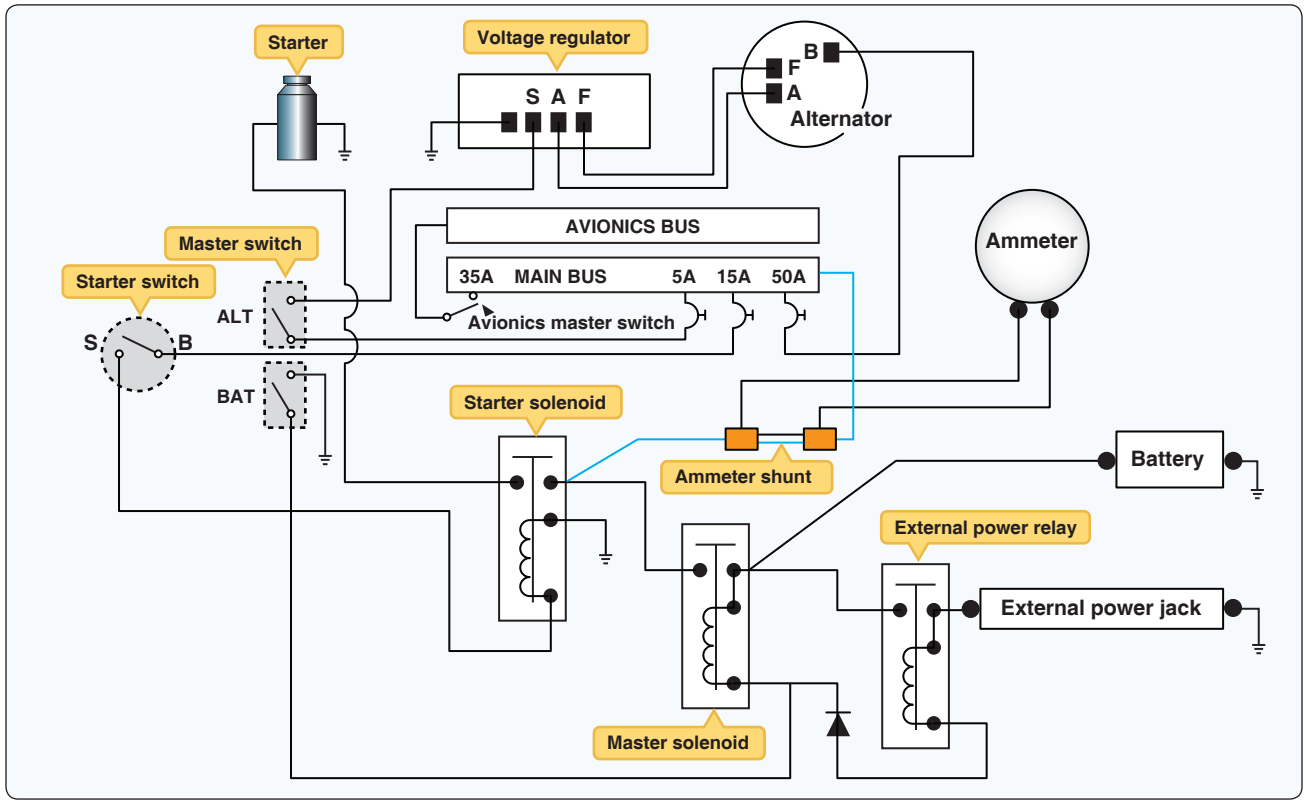

Figure 9-87. *Alternator control circuit.*