

## CIRCUIT DESCRIPTION

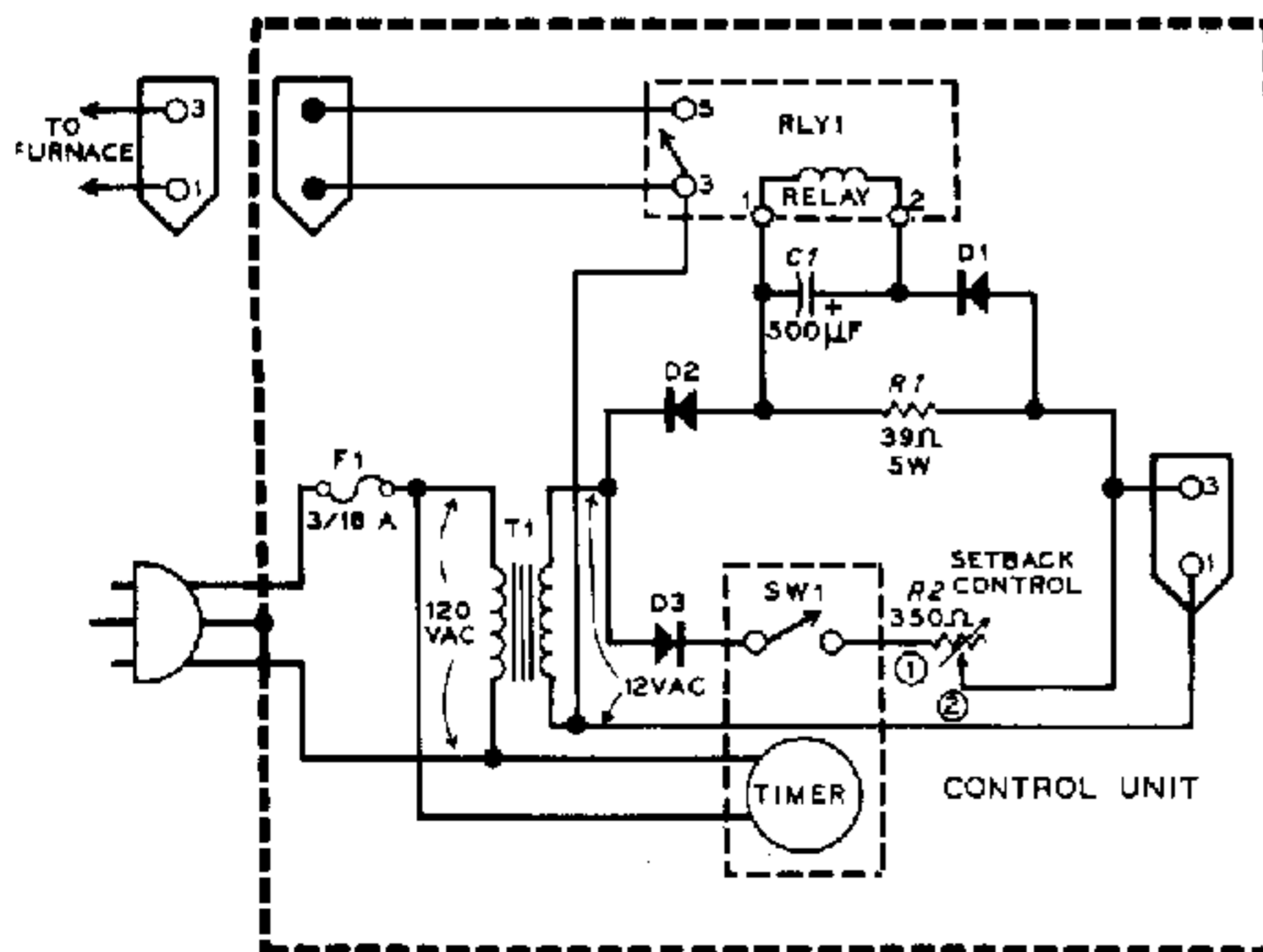
Refer to the schematic diagram below as you read the following description.

Typically, a thermostat operates furnace controls on a single AC circuit. The Programmable Home Heating Control provides two circuits and a relay to operate the furnace controls. In both switch positions, Econ or Norm, the thermostat operates the relay which turns the furnace on and off.

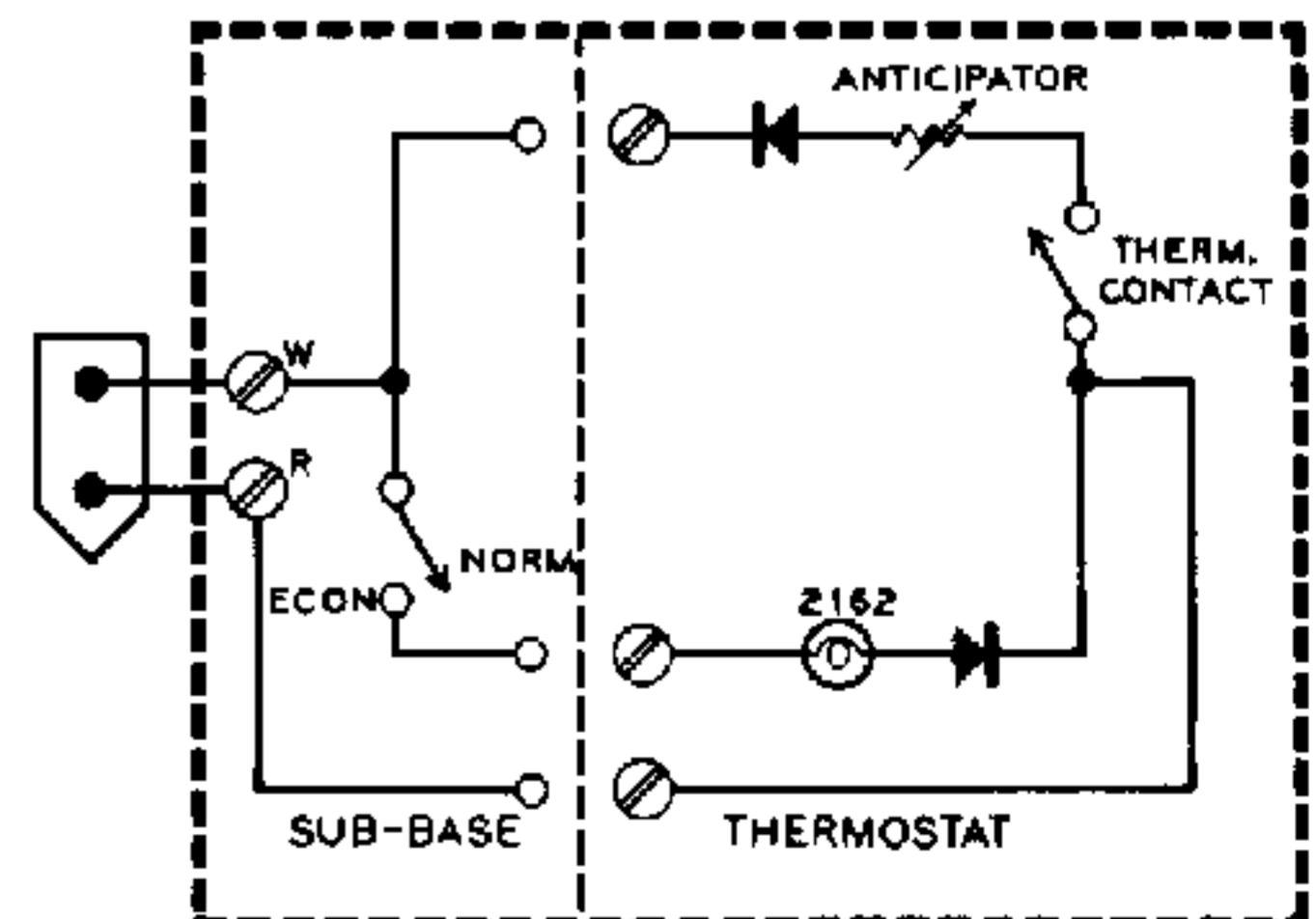
The Econ circuit provides a variable heater (lamp) that raises the ambient temperature near the thermostat at the programmed times by a preset amount. When either the Norm/Econ switch or Timer switch is open, the heater circuit is turned off, and there is no setback.

The Norm, or main circuit, half-cycle flows from the transformer through the thermostat contacts, anticipator, a steering diode, load, diode D2, and back to the transformer. Load resistor R1 simulates the primary control current for proper anticipator operation. The voltage drop across the load activates the relay which operates the furnace controls. Diode D1 and capacitor C1 filter the circuit to prevent relay chatter.

The Econ circuit half-cycle provides a path from the transformer through diode D3, the timer-controlled switch, setback control R2, the NORM/ECON switch, a "heater" lamp, a thermostat steering diode, and back to the transformer.



SCHEMATIC OF THE  
HEATHKIT®  
PROGRAMMABLE HOME HEATING CONTROL  
MODEL GD-1776



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