



Figure 2-4. Poor Man's Battery Capacity Tester.

Figure 2-4 illustrates a simple test setup for tracking the condition of your battery. Remove your battery from the airplane after a flight that has put as much charge on the battery as it is going to get; say an hour or more. If you have 115 VAC in your hangar, you can do this test without removing the battery. Set the electric clock to 12:00 and connect the fixture to the battery. Press the START button. The relay will energize and apply power to the clock and the 55W lamp. When the battery is depleted the relay will drop out, stopping the clock and disconnecting the lamp.

Come back in a few hours and you will find the battery depleted and the clock stopped. Keep track of the time that it takes to discharge the battery. Repeat this test every 6 months or so. When depletion time falls to one-half of the time a new battery runs, it's time for a replacement. Or if at some point the battery's ability to crank the engine is noticeably diminished, then you can use the last time recorded on your capacity tester to raise an advanced warning of impending replacement. Of course, the battery should be recharged shortly after this test is completed.

This is a self-calibrating system that works with any battery. It doesn't measure actual ampere-hours of your battery but it does measure the amount of degradation since new of any battery, a sort of "dipstick" into its inner workings. I like to use a 55W lamp because it puts approximately a 4-amp load on the battery . . . about the same load as a full-up essential bus. The measured run time with this tester is in the same ballpark with useful run-time for alternator-out ops. More on "essential busses" later in this book.