

TESTING TRANSFORMERS ON UNPOWERED SYSTEMS

HP produces Unpowered Board Testers for those customers wishing to test just basic analog parts, and who don't feel it is necessary to go to the added expense of obtaining a powered system with more testing capability than what they currently need. While this is a good price/performance tradeoff, especially as all HP3x7x systems can be upgraded at a later date if desired, there are a few "powered" tests that customers with unpowered systems often wished they could do. An example is doing a coil ratio test on a transformer using an HP3272. Many of these types of tests are quite simple to create and run, EVEN ON UNPOWERED SYSTEMS!

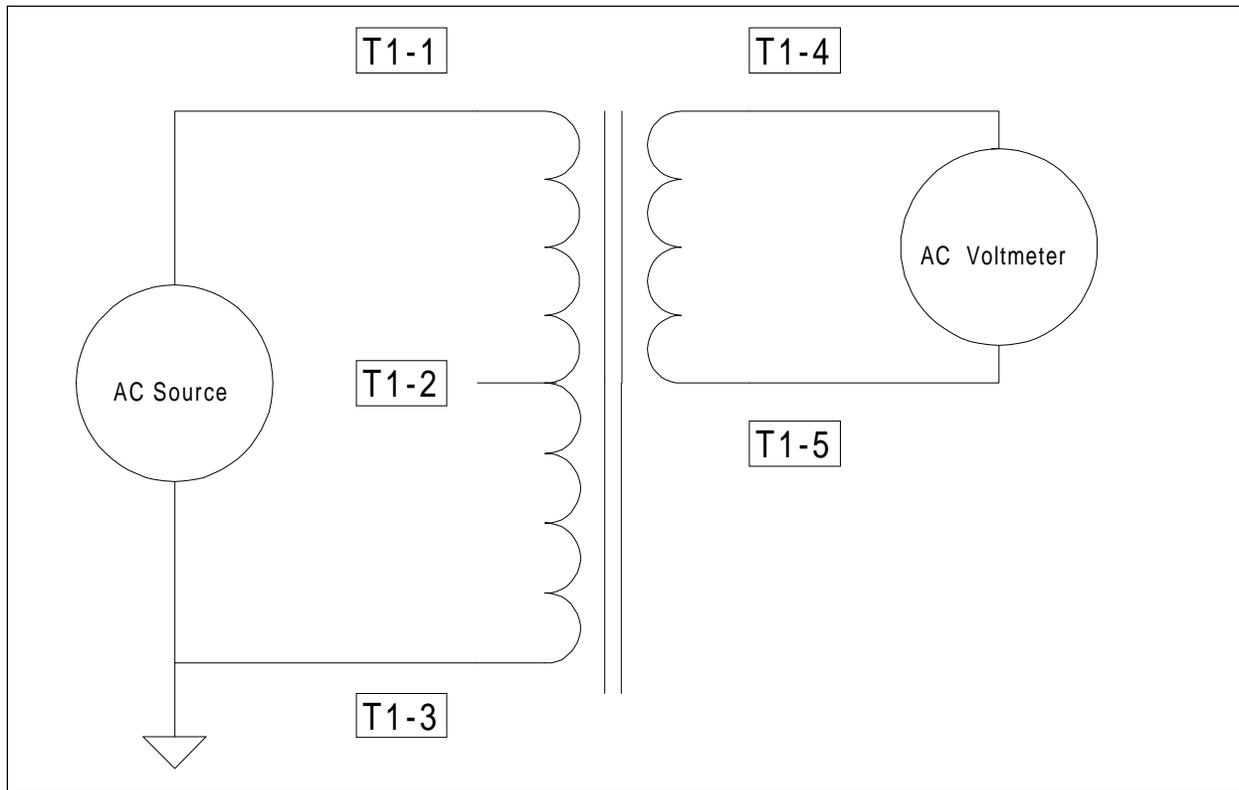
Any executable test that is capable of operating through analog pin cards, does not require the use of internal HP3070 DUT power supplies or Ports, and is created manually, can be compiled and run on any unpowered system.

So what is the difficulty? First examine the statement above carefully;

1. You must create an executable test. "Board" will not compile if it references a library with the words "test powered analog" in it.
2. Unpowered systems contain only analog pin cards, and no internal DUT Power Supplies. Any executable tests must take this into account (note this does not preclude the use of EXTERNAL power supplies).
3. As stated in step 1, YOU must create the test, it is not done automatically (note that these types of tests must be created manually even on powered HP3070 systems).
4. Finally it must be possible to perform the test using the systems ASRU card (or external equipment connected via the HP Performance Port or flying leads. Note that the systems "ext ports" can not be used on unpowered systems.).

Other than those few caveats things work fine. The test can be put in the testorder file. Then when compiling the new test produces a .r file, running Test Consultant will create a .o file as well as adding/updating all the other necessary directory files as it does for any other requirements file.

While quite a few "powered" tests exist that can be run on an unpowered HP Board Tester, a discussion of all of them is beyond the scope of this article. In general if the above four criteria are met, the test should run on an unpowered HP3x7x.



Example Test;

```

test powered analog
  connect s to "T1-1"
  connect g to "T1-3", "GND" !** if T1-3 not ground
  already
  connect i to "T1-4"
  connect l to "T1-5"
  source sine, amplitude 4, frequency 1000
  detector acv, expect 2
  measure 2.2, 1.8
end test

```