

Frequently Asked Questions

How long to build?

It takes about an hour to build a section; there are 7 counters, a power supply, and 5 decoders. This totals about 15-20 hours depending upon your speed and cleverness. You don't want to hurry this kit.

Tools needed?

A soldering iron meant for electronic work, a diagonal cutter, and a small screwdriver.

How big is this monstrosity?

The PC board is 10 inches wide by 11.3 inches tall, and weighs about 14.5 oz. when completed, not counting the wall transformer.

Can a Beginner build this clock?

A beginner will need to be very careful to understand the instructions, which are aimed at a knowledgeable electronic hobbyist. When instructed to place a 10K resistor or a diode, you need to be able to pick the proper part and to notice that the resistor can go either way and the diode can only go one way (diodes are polarized). There is a section in the assembly manual with part details that can help the novice to understand the parts, but I expect most builders of this kit will not read that section.

Accuracy of this clock?

This clock counts the 60 Hz from the power company, so the only significant error is errors in detecting the 60Hz signal. This clock has a comparator->one-shot->integrator slope-> comparator circuit providing a brick-wall filter above 120Hz to prevent high frequency noise from triggering the counters so your clock will be quite accurate. There are no hard numbers on accuracy for this clock.

Any Warrantee?

No. This clock uses a two sided PC board and common components; it is very repairable by a hobbyist.

What if it doesn't work when I am done building it?

Ahh, this is where the learning happens. There is a thorough trouble shooting section in the manual. Your problem will be one or more of a small set of possible problems, all of which can be diagnosed and fixed by a hobbyist trained in trouble shooting, and my manual will train you. There are spare parts provided, along with de-soldering braid. The clock is built in steps and tested at each step, giving you a chance to learn what went wrong and not do that on the next section.

Run outside the US?

This clock runs on 9 volts AC at 60Hz. The supplied wall transformer steps the voltage down from 120 VAC to 9 VAC. Public power in the US is at 60Hz. If you are in a country with 60Hz power, you should be able to find a transformer to step your voltage down to 9 VAC at 60Hz. If you are in a 50Hz country, the divide-by-6 prescaler needs to be adjusted to a divide-by-5. The instructions for this are provided by Neil Harrison in the U.K. The link is on the Details Page.

What about the lead free initiative RoHS?

This kit contains lead, mostly in the supplied solder and perhaps some on the component leads. If your locality does not permit you to buy electronic kits with lead, don't buy this kit.