Thank you for purchasing a TAPR product. The associated software and directions can be obtained from the web. Here are some basic information and a link to the documentation:

## The TICC Timestamping/Time Interval Counter

The TAPR TICC is a two-channel timestamping counter with better than 60 picosecond resolution and less than 100 picosecond typical jitter. It has an Allan Deviation noise floor below 1e-10 for a one second measurement.

The TICC is designed to measure low-rate time intervals, such as the pulse-per-second signal from a clock or GPS, with very high resolution. The TICC hardware is a "shield" that mounts on an Arduino Mega 2560 processor board, and the TICC software runs on the Arduino. Data is sent via USB to a host computer for logging and analysis. The TICC can currently perform over 100 measurements per second; we believe that software optimization will ultimately increase the measurement speed.

The TICC can output timestamp data for each channel, or the time interval between the two channels. The channel inputs trigger with about 1.7 V and are safe to 5 V. Input impedance is 1 megohm. The TICC requires an external 10 MHz reference clock at nominally +3 dBm, though the input circuit operates over a wide amplitude range.

The TICC is powered by the Arduino to which i is attached, which in turn can be powered by the USB cable from the host computer. The TICC software is open source and available from [github.com](https://github.com/TAPR/TICC) The repository also includes documentation, data sheets, and other information on some of the hardware components. The software is undergoing active development.

TICC systems purchased from TAPR include the TICC shield and an Arduino 2560 Mega compatible board with TICC software loaded. The systems are tested for functionality prior to delivery.

TAPR kits can be complex depending on the kitting experience of each builder. We don't think you will have trouble with the kit, but it does require some knowledge and experience to successfully go from a kit to a finished, usable unit, depending on the mode of operations.

Manual: <https://web.tapr.org/~n8ur/TICC_Manual.pdf>

Contact us at **contact@tapr.org** for assistance, help or troubleshooting.

Best Regards, TAPR