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

## The T**ADD-2 Mini Pulse-Per-Second Divider**

The **TADD-2 Mini (or "T2-Mini")** is a tiny frequency divider board that accepts a 1, 2.5, 5 or 10 MHz input signal and generates a 1 pulse-per-second ("PPS") output pulse. The pulse can be synchronized to an external source (such as a GPS receiver). The divider is implemented in a DIP-socketed PIC chip using software written by Tom Van Baak. The [source code](https://tapr.org/kits_t2-mini.html" \l "code) is freely available, and other software loads are available from Tom's web site to implement different division ratios.

Tests indicate that the jitter is in the range of 1 picosecond -- near the noise floor of the best test systems we've been able to configure. The input circuit is a wide-range design that works with signals from -20 to +13 dBm. The input may be high impedance, or terminated in 50 ohms via a jumper.

The T2-Mini has a single low-impedance output that delivers greater than 3.5 volts into a 50 ohm load, with rise time at the connector of less than 3 nanoseconds. In addition to the primary output, optional headers on the board provide either an LED or an auxiliary TTL-level output signal, and an inverted TTL-level pulse.

Power input is from 9 to 15 volts and current draw is from 20 to 50 milliamps, depending on output load.

An 8-pin header provides direct access to four of the PIC's pins; these may be used for configuration or additional input signals. The pre-programmed PIC that TAPR provides uses the 8 pin header to allow selection of four input frequencies -- 1, 2.5, 5, or 10 MHz -- and synchronization of the divider to an external clock source.

The board is only 0.75 by 2.0 inches and uses surface mount parts, although the PIC chip is a socketed 8 pin DIP to allow easy reprogramming.

Manual: <https://web.tapr.org/~n8ur/TADD-2_Manual.pdf>

Contact us at [**contact@tapr.org**](mailto:contact@tapr.org) for assistance, help or troubleshooting.

Best Regards, TAPR