

QuickWriter™ Target Voltage Enable Signal (TVDDEN)

Purpose:

When programming MCUs in-circuit, it is sometimes desirable or even necessary for the circuit to supply its own power. When the circuit supplies its own power, we have to be concerned with voltage sequence and timing requirements of the MCU.

The programming algorithms for some devices require that the device's VDD be enabled/disabled several times during a programming cycle. In self-powered target boards, this requires that we ask the operator to do the power cycling for us. This can become tedious for the operator. Even with devices that only require a single power up and down, it would still be nice to free the operator from this burden.

To enable full automation of in-circuit programming, without violating programming specs, we added a new control signal to QuickWriter called TVDDEN. TVDDEN can be used to control your target's power supply (through an appropriate driver circuit).

QuickWriter's TVDDEN signal will help automate control of the target's power and make it possible to meet these programming requirements.

Availability:

QuickWriter's TVDDEN signal is available with all versions of hardware using software version 2.6 (or higher) and firmware version 9.8 (or higher).

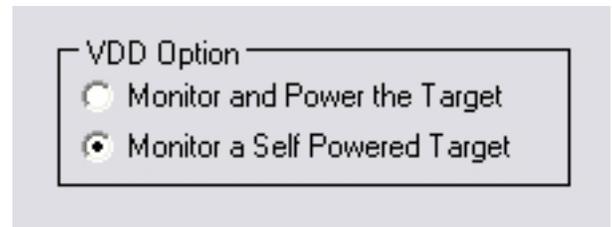
To obtain the latest version of software go to the following URL and follow the links provided:

<http://www.tech-tools.com/qwupdate.htm>

Implementation:

Software:

1. Verify that you are using version 2.6 or higher by selecting "Help - About QuickWriter". The software version will be displayed next to the QW logo at the top of the window.
2. Open the "Advanced Options" window by selecting "Options - Advanced ...".
3. Under the "Target Voltage Option", change the VDD Option to "Monitor a Self Powered Target".

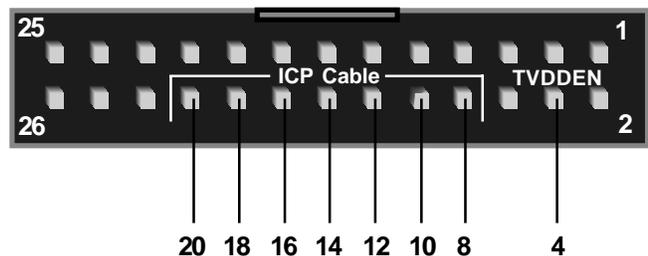


Hardware:

1. TVDDEN is a new signal, available on QuickWriter's 26 pin interface connector. It is not available in the standard ICSP cable included with the unit. You may need to customize your in-circuit cable to make use of the new signal (and add your power control circuitry).
2. TVDDEN is an active high, logic level (+20ma) signal. Typically, one would use it to drive a current limited LED within a solid-state relay to control your target's power supply.

Programming Connector

4	TVDDEN (active High)
8	VPP/MCLR
10	VDD/Monitor
12	GND
14	RB7/DATA
16	RB6/CLOCK
18	NC
20	RB3/RB4/RB5/LVP (active Low)



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