Summary

The following explains how to modify the QED board to accommodate bipolar A/D sampling.

Description

If you are interested in modifying your QED Board to accommodate bipolar A/D sampling, this app note briefly describes how this can be accomplished.

Configuration of the onboard 12 bit A/D is handled by the function INIT.A/D12&DAC. This function sends a constant configuration byte to the 12 bit A/D to take unipolar samples. For unipolar operation, the least significant nibble (LSN) of the configuration byte is F. For bipolar sampling, it is necessary to modify this configuration byte such that the LSN is 7.

The 12 bit A/D configuration byte is located in the system PROM, thus the QED-Forth v2.01 PROM must be reprogrammed. This is accomplished by modifying two memory locations:

PROM Address	(Unipolar Mode) Prior Contents	(Bipolar Mode) New Contents
4B45	8F	87
4B49	0F	07

In addition to modifying the system PROM to configure the 12 bit A/D for bipolar sampling, the QED Board hardware must be modified. The 12 bit A/D chip is identified by its part number LTC1290CCS. Using a soldering iron, unsolder pin 12 of the LTC1290 and lift the pin away from its pad so that there is no connection between the pin and the QED Board. Connect an external -5V supply to the lifted pin 12. **Be certain the negative voltage does not touch the QED Board.**

Making these modifications to your QED Board voids your warrantee and if not performed properly could cause permanent damage to the board.

If you are interested in contacting a product design consultant who has demonstrated expertise with the QED Board hardware and software, I recommend you contact:

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