Getting Started

The DRV2700EVM comes with preprogrammed firmware to provide a 0- to 200-Vpp signal between OUT+ and OUT−.

1. Out of the box, the jumpers are set to begin demo mode using USB power. The default jumper settings are found in the table below.

2. Connect a mini-USB cable to the USB connector on the DRV2700EVM board.

3. Connect the other end of the USB cable to an available USB port on a computer, USB charger, or USB battery pack.

4. If the board is powered correctly, the 5-V LED is on.

5. Enable the output using the GUI or programmatically through the computer, see GUI Interface for additional assistance. If using an external input signal, EN the output by changing the jumper (JP9) or equivalent control signal.

6. Once the output is EN, the device allows for the high-voltage output.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Jumper Setting</th>
<th>Default</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>JP10 MSP</td>
<td>Open</td>
<td>✓</td>
<td>MSP not connected to either power supply</td>
</tr>
<tr>
<td></td>
<td>USB (top) (1)</td>
<td></td>
<td>MSP connected to USB power supply</td>
</tr>
<tr>
<td></td>
<td>VIN (bottom) (1)</td>
<td></td>
<td>MSP connected to VIN power supply</td>
</tr>
<tr>
<td>JP11 DRV</td>
<td>Open</td>
<td>✓</td>
<td>DRV2700 not connected to either power supply</td>
</tr>
<tr>
<td></td>
<td>USB (top) (1)</td>
<td></td>
<td>DRV2700 connected to USB power supply</td>
</tr>
<tr>
<td></td>
<td>VIN (bottom) (1)</td>
<td></td>
<td>DRV2700 connected to VIN power supply</td>
</tr>
<tr>
<td>JP5 and</td>
<td>Open</td>
<td>✓</td>
<td>Disconnected PWM± and I/O of MSP430</td>
</tr>
<tr>
<td>JP6</td>
<td>Connected</td>
<td></td>
<td>Connected PWM± and I/O of MSP430</td>
</tr>
<tr>
<td>JP9–EN</td>
<td>Open</td>
<td>✓</td>
<td>EN/G1/G0 pulled internally to GND</td>
</tr>
<tr>
<td>JP8–G1</td>
<td>MSP (top) (1)</td>
<td></td>
<td>EN/G1/G0 tied to I/O of MSP430</td>
</tr>
<tr>
<td>JP7–G0</td>
<td>PU (bottom) (1)</td>
<td></td>
<td>EN/G1/G0 pulled up to MSP power supply</td>
</tr>
<tr>
<td>JP13–DCIN</td>
<td>Open</td>
<td>✓</td>
<td>DC input not connected (PWM and AC input mode)</td>
</tr>
<tr>
<td></td>
<td>Connected</td>
<td></td>
<td>DC input connected (single ended input mode)</td>
</tr>
<tr>
<td>JP12–VBST</td>
<td>Open</td>
<td>✓</td>
<td>PVDD disconnected to VBST (boost only mode)</td>
</tr>
<tr>
<td></td>
<td>Connected</td>
<td></td>
<td>PVDD connected to VBST (normal operation)</td>
</tr>
<tr>
<td>I2C</td>
<td>Open</td>
<td></td>
<td>Always leave open. Never jumper together.</td>
</tr>
<tr>
<td>J2, J3, J4</td>
<td>Open</td>
<td>✓</td>
<td>Disconnects particular FB resistor (lowers VBST)</td>
</tr>
<tr>
<td></td>
<td>Connected</td>
<td></td>
<td>Connects particular FB resistor (raises VBST)</td>
</tr>
</tbody>
</table>

(1) In the table, (top) or (bottom) means the (top) or (bottom) is connected to the middle of the 3-terminal header.
Quick Reference Board Diagram

**Used for MSP430 Programming**

**Single Ended Input**

**Analog Input**

**MSP430**

**VBoost Disconnect**

**Outputs**

**HIGH VOLTAGE**

**DRV2700**

**Power Path Selection**

**EN Config**

**Gain Config**

**Boost Voltage Config**

**Power Path Selection**

**Texas Instruments**

**For evaluation only; not FCC approved for resale**

**HIGH VOLTAGE**

**DRV2700EVM AIP037A**

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Design Resources and References

TI E2E™
Community

E2E Haptic Forum
ti.com/hapticforum

Available on ti.com/drv2700
- DRV2700 datasheet
- Complete DRV2700EVM User’s Guide
- Schematics and layout
- EVM source code and binaries

Get more information on TI’s solutions for touch feedback-enabled applications at ti.com/haptics
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