

Pin Mappings for Arduino UNO with Arduino Motor Shield

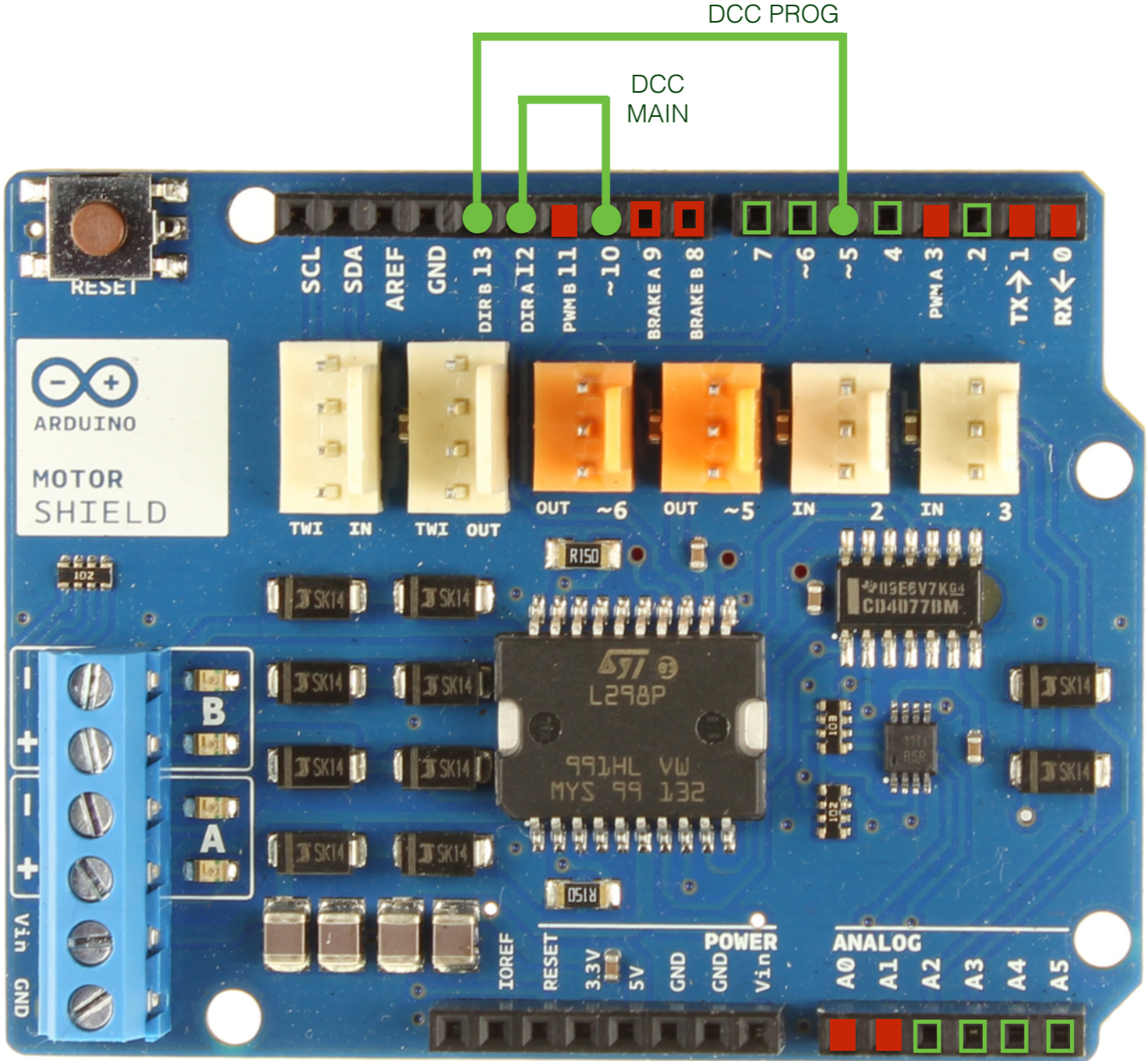
| DCC++ Base Station Signal Name | Arduino Motor Shield |
|--------------------------------|----------------------|
| SIGNAL_ENABLE_PIN_MAIN | 3 |
| SIGNAL_ENABLE_PIN_PROG | 11 |
| CURRENT_MONITOR_PIN_MAIN | A0 |
| CURRENT_MONITOR_PIN_PROG | A1 |
| DCC_SIGNAL_PIN_MAIN | 10 |
| DCC_SIGNAL_PIN_PROG | 5 |
| DIRECTION_MOTOR_CHANNEL_PIN_A | 12 |
| DIRECTION_MOTOR_CHANNEL_PIN_B | 13 |

- Jumper Wire
- Pin Available for Custom Use
- Pin Reserved for DCC++ System
- Pin Reserved for DCC++ System, Unless Brake Traces Cut on Back Board

Programming Track ←

Main Ops Track ←

DC Power Supply* →

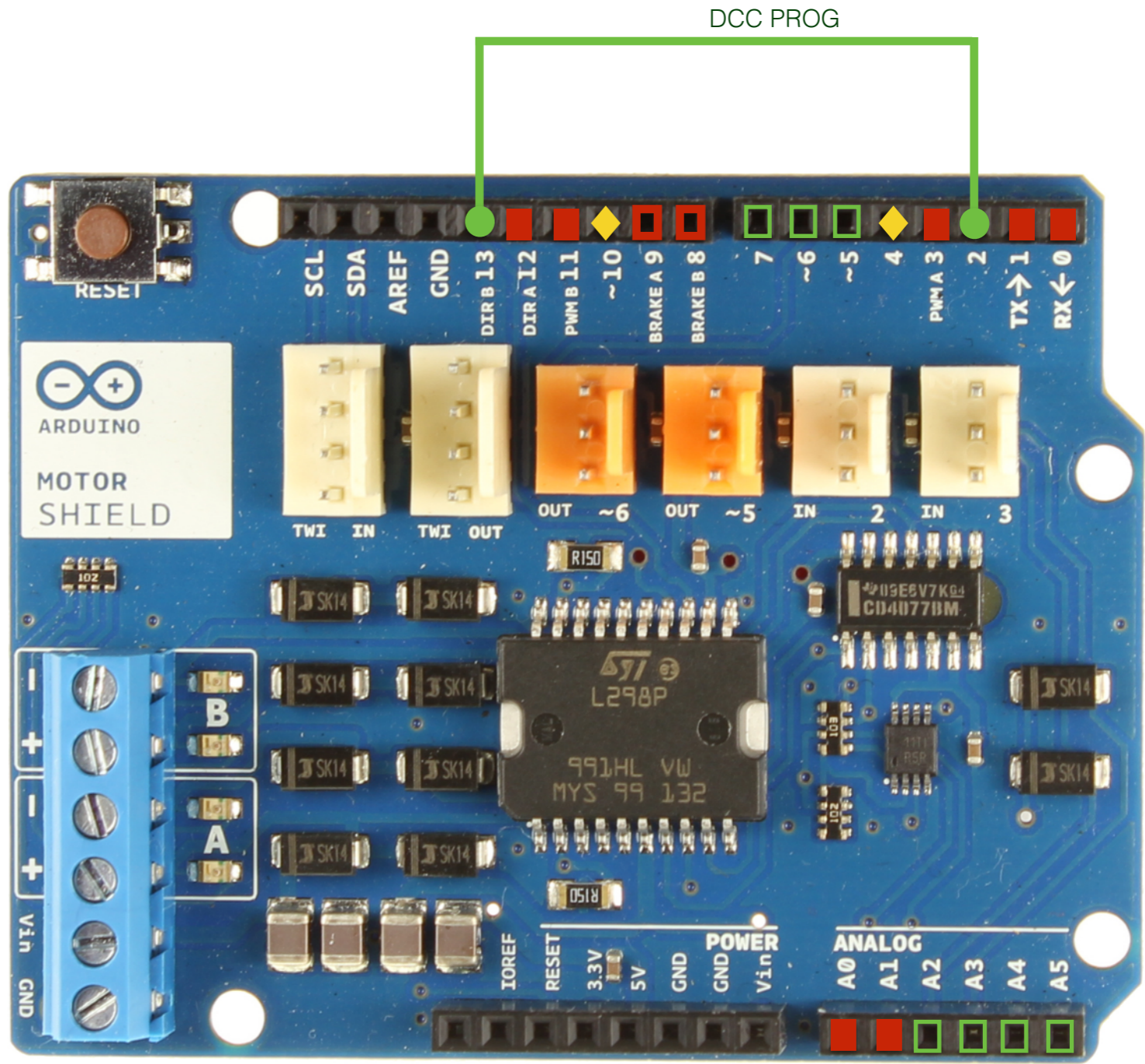
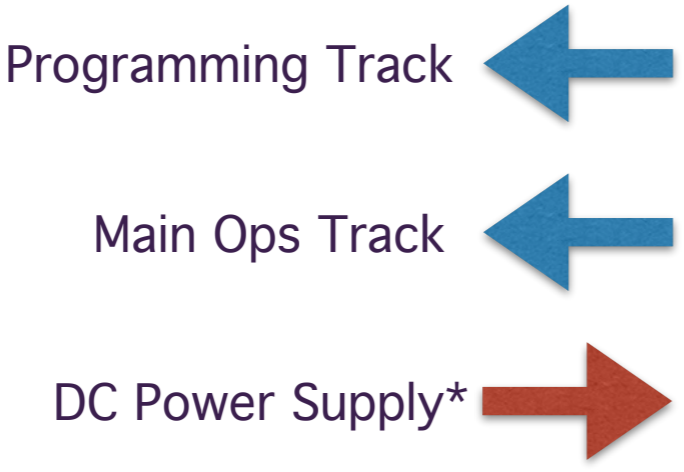


*cutting V-IN Connect trace on back of board is recommended

Pin Mappings for Arduino MEGA with Arduino Motor Shield

| DCC++ Base Station Signal Name | Arduino Motor Shield |
|--------------------------------|----------------------|
| SIGNAL_ENABLE_PIN_MAIN | 3 |
| SIGNAL_ENABLE_PIN_PROG | 11 |
| CURRENT_MONITOR_PIN_MAIN | A0 |
| CURRENT_MONITOR_PIN_PROG | A1 |
| DCC_SIGNAL_PIN_MAIN | 12 |
| DCC_SIGNAL_PIN_PROG | 2 |
| DIRECTION_MOTOR_CHANNEL_PIN_A | 12 |
| DIRECTION_MOTOR_CHANNEL_PIN_B | 13 |

- Jumper Wire
- Pin Available for Custom Use
- Pin Reserved for DCC++ System
- Pin Reserved for DCC++ System, Unless Brake Traces Cut on Back Board
- ◆ Pin Reserved if using Arduino Ethernet Shield or WiFi Shield; Otherwise Pin is Available for Custom Use



*cutting V-IN Connect trace on back of board is recommended

Recommended Modifications to Arduino Motor Shield

Brake Disable

Normally, pins 8 and 9 control the braking feature of motors connected to the output pins of the Arduino Motor Shield. This functionality is not applicable for DCC++ and pins 8 and 9 must be left open or always set LOW.

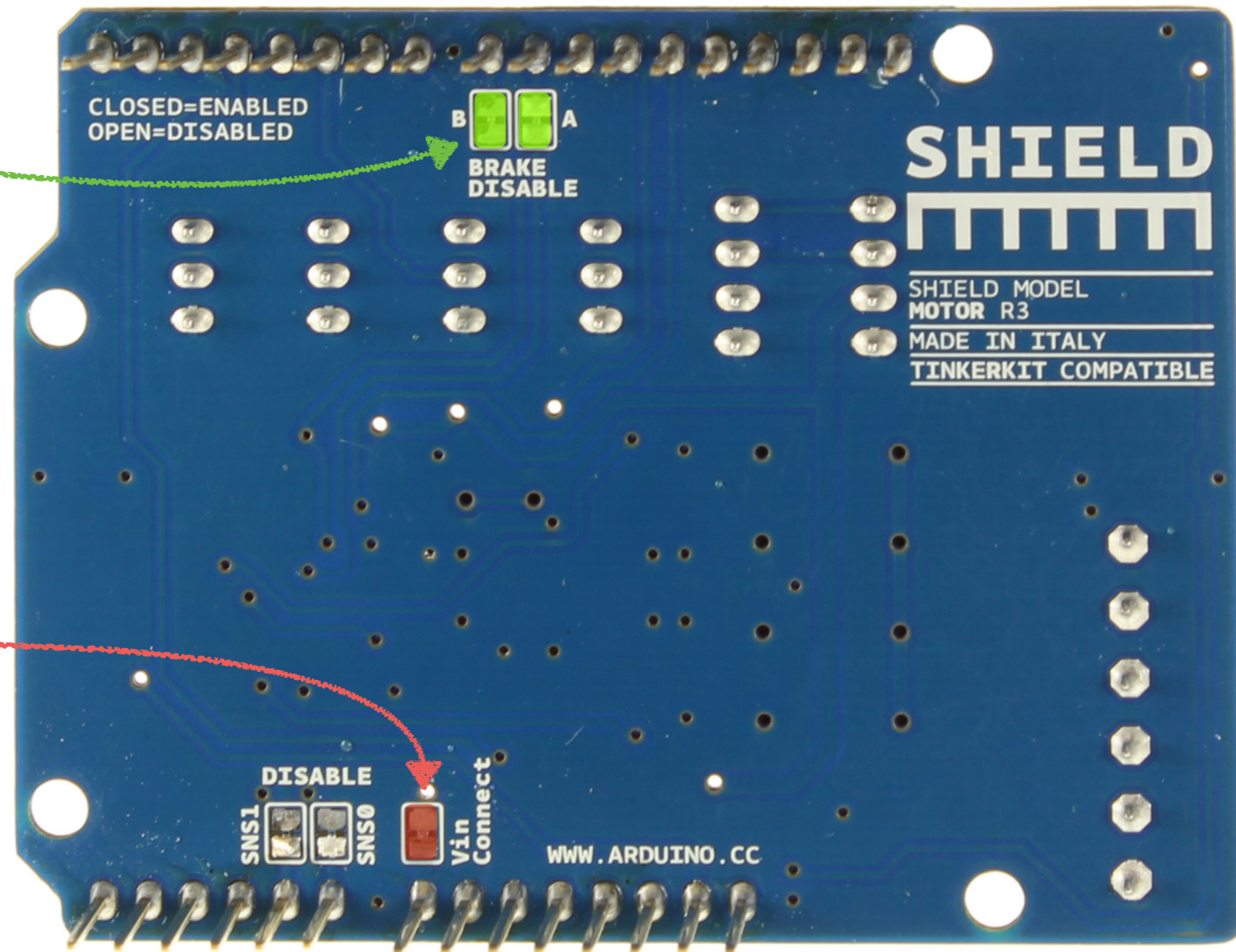
Cut these traces to disable the brake control circuit and thereby free up pins 8 and 9 for your own custom use.

V-IN Connect

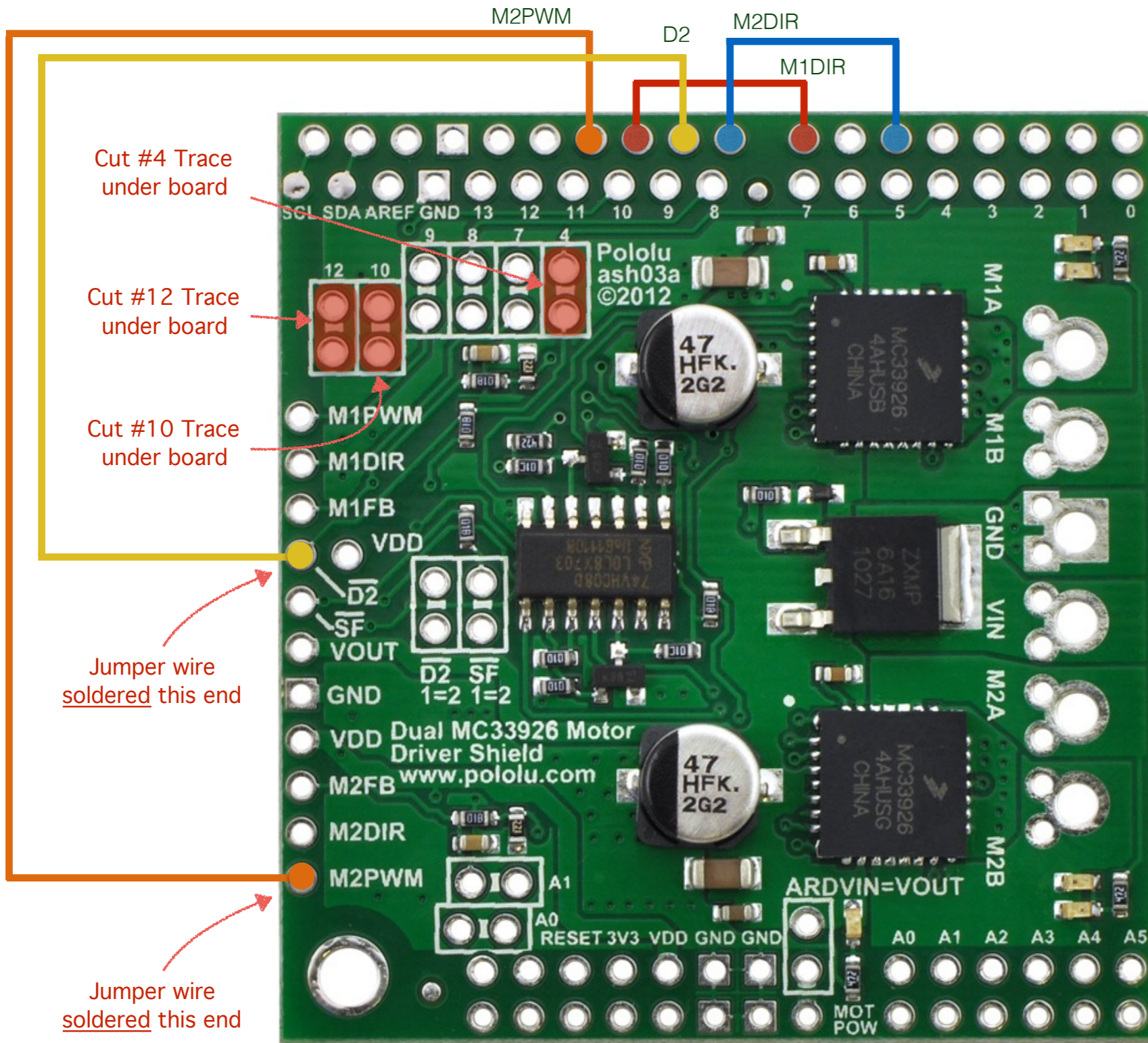
Normally, DC Voltage supplied to the input terminals of the Arduino Motor Shield will be passed through to the Uno or Mega as well.

Cut this trace to break the linkage.

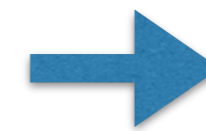
Highly recommended if you are using more than 12V to power the Arduino Motor Shield outputs.



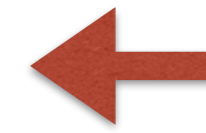
Jumper wires inserted (not soldered) into header



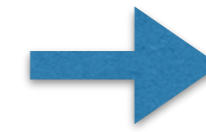
| DCC++ Base Station Signal Name | Pololu Motor Shield |
|--------------------------------|---------------------|
| SIGNAL_ENABLE_PIN_MAIN | 9 |
| SIGNAL_ENABLE_PIN_PROG | 11 |
| CURRENT_MONITOR_PIN_MAIN | A0 |
| CURRENT_MONITOR_PIN_PROG | A1 |
| DCC_SIGNAL_PIN_MAIN | 10 |
| DCC_SIGNAL_PIN_PROG | 5 |
| DIRECTION_MOTOR_CHANNEL_PIN_A | 7 |
| DIRECTION_MOTOR_CHANNEL_PIN_B | 8 |



Main Ops Track



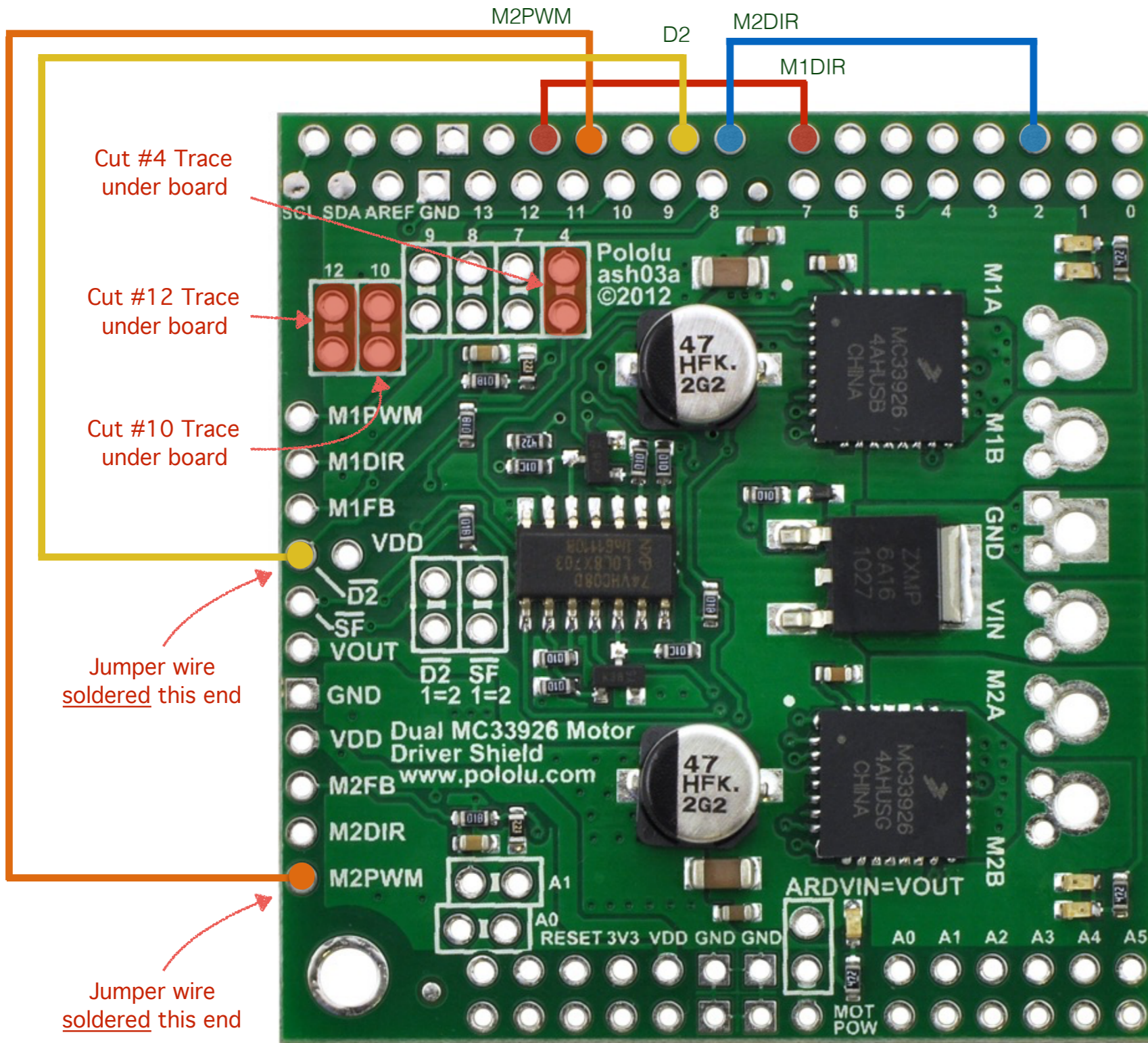
DC Power Supply



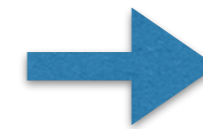
Programming Track

**Pin Mappings for
Arduino UNO
with
Pololu MC33926
Motor Shield**

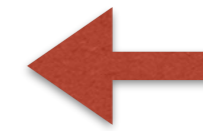
Jumper wires inserted (not soldered) into header



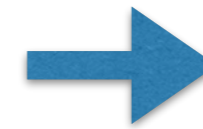
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Main Ops Track



DC Power Supply



Programming Track

**Pin Mappings for
Arduino MEGA
with
Pololu MC33926
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