

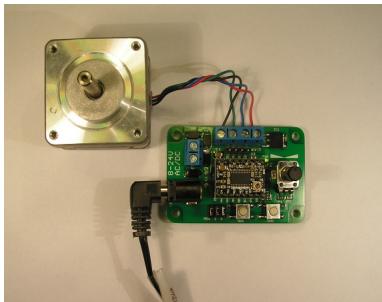
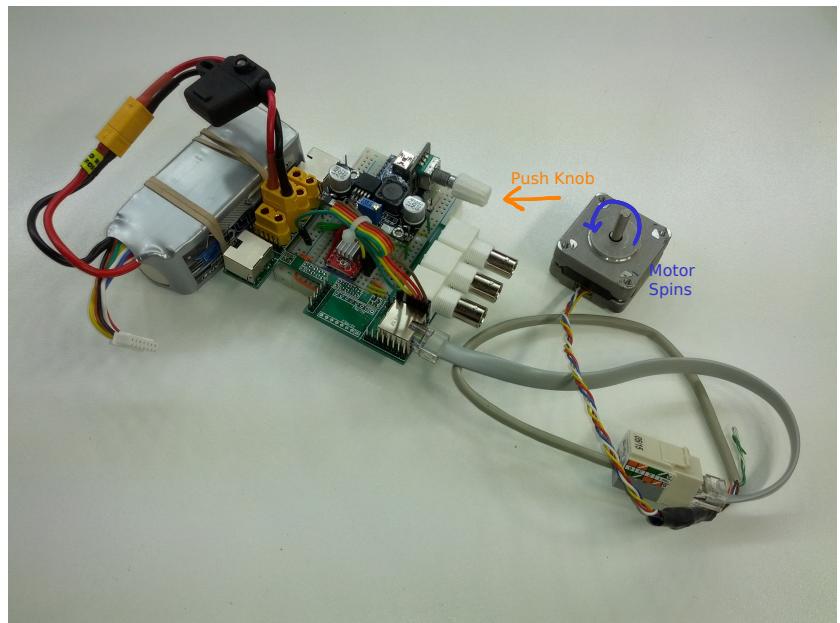
Stepper Tester with PatchRap

Stepper Tester implements a programmable Arduino compatible platform for testing stepper motors.

Integrating commodity modules, inserted into a solderless breadboard, repairs are quick and painless. This gives developers confidence to work with expendable hardware, before endangering expensive equipment.

Widely used connectors allow maximum flexibility. Accessories, including an automotive fuse holder, can be placed inline. Existing machinery may be connected to the motor test equipment as needed. Through the breadboard or BNC connectors, diagnostic metering equipment may be attached to resolve problems.

Quick connection to existing, comprehensive CNC machinery, was a primary driver for this technology.



EasyStepper
from reprap.org

For comparison, an off-the-shelf stepper motor tester circuit does exist. Inexpensive, versatile, simple to use for a specific purpose, and nevertheless quite relevant. However, through PatchRap, similar functionality is implemented without any specialized circuit board. Attachment of different power supplies (including batteries), in-line accessories, diagnostic equipment, additional motors, or comprehensive CNC machinery, might require wire splicing. Severe damage due to short circuit of systems outside the stepper motor driver module may be more difficult to repair in the field.

PatchRap also includes its own innovative features. For stepper motors, extra pairs in Ethernet/Telephone cabling are used for redundancy and power delivery. Diagnostic and protective components are integrated as well, notably optional LEDs at the RJ45 jacks, and surge suppressors. In some cases, these features may be repurposed for other common applications, such as conventional Ethernet/Telephone line protection.

