"Arduino has this magical combination of being simple enough that you don't have to be an electrical engineer to do it, but complicated enough where you can do very interesting things with it," says Michael Shiloh who along with partner Judy Castro used Arduino to create these movable art pieces.

Device

is proprietary, the design of the physical board is not, nor is the software. Therefore, dozens if not hundreds of smaller companies make Arduino-like boards for sale that do different functions. Many programs created by artists are available for free online.

The most basic Arduino programming takes as little as five minutes. An Arduino-made board comes equipped with a blinking light right out of the box. Plug the board into your computer through a USB cable, and the software offers several simple, text-based lines of programming to play around with. On two lines are numbers; one tells how long the light stays on and one tells how long the light stays off. Monkey around with those numbers and you can make the light on the board flash faster or slower within a couple of key strokes.

"Arduino has lowered the barrier," says Andrew Sliwinski, an interaction designer who will teach an Arduino 101 course Oct. 16 at the East Bay Mini Maker Faire. "It's not that the Arduino does anything you couldn't do before the Arduino. The real special thing about the Arduino is that it makes developing these projects easier."

For example, in the 1980s, programmer Sliwinski had to learn BASIC, a computer language, before he could make anything flash on his screen. Now, with Arduino, a person new to the field can see results quickly.

Arduino's profile grew last month with news stories about Brooklyn-based New York University student Matt Richardson, who used Arduino to hack his remote control to mute his television for 30 seconds every time "Jersey Shore" breakout star Snooki's name was

mentioned.

The code to do this project, Richardson says, was "really easy." In fact, it was a mashup between two projects he found using Arduino code. One decoded Closed Captioning, and the second showed how to make a universal remote. "I took what two people did and mushed them," he says. And that's one key to Arduino's success. Because it's open source, projects can build off one another without threats of copyright suits.

Artist and toy-maker Christopher Schardt used Arduino in his "Garden of Rockets" fire sculptures shown during the Labor Day Burning Man event. You can see how they work Sunday at the Burning Man Decompression Fair in San Francisco.

In his case, Schardt programmed Arduino to aim his sculptures' fire burners, which provide the thrust for the moving parts. When the piece is on, the fire creates patterns such as figure eights and flowers.

"I would not have had the time this year or last year to make 'Garden of Rockets' (using older methods), and therefore, Arduino was a tremendous boon," he says.

And while adults might have great uses for interactive art projects, kids — who are like flies to honey when it comes to robotics — also can see quick results using Arduino, Make Magazine's Woods says.

"Here a kid can say, 'I just programmed a board that automatically sent a tweet out.' That's when the brush fire starts. That's what Arduino is all about. It allows us to light the brush fire of creativity."

LEARN MORE

Arduino workshop locations:

Teach Me to Make, San Francisco (Treasure Island): www.teachmetomake.com

The Crucible, Oakland: www.thecrucible.org

Tech Shop, Menlo Park, San Francisco: San Jose, www.techshop.ws

Arduino events

East Bay Mini Maker Faire: Arduino workshops throughout the day from 10 a.m.-5 p.m. Oct. 16. Park Day School, 360 42nd St., Oakland. Admission: $7.50-$20. Purchase tickets at the door or at http://eb-makerfaire2011.eventbrite.com.

See Christopher Schardt's "Garden of Rockets" in action at Burning Man's S.F. Decompression Heat the Street Faire after sunset Sunday. The event, which runs from noon to midnight, is open to all ages, but only people 21 and older are welcome inside Club Cocomo. Admission gates are near 19th and Minnesota streets. Admission is $10-$20 at the door.

Online

www.arduino.cc

Barney

a mockery of Simon's claims that "X Factor" could challenge "Idol's" ratings supremacy. ("Idol" routinely pulls in more than 20 million

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Movie Listings

California Theatre
2113 Kittredge St., Berkeley 510-464-5980
- Contagion (PG-13) 4:45, 7:15, 9:30.
- The Help (PG-13) 5, 8.
- Tucker & Dale vs Evil (R) 3:15, 5:15, 7:30, 9:40.

Century 16 Bayfair Mall
Bayfair Shopping Center, San Leandro 510-481-0123
- 50/50 (R) 12, 2:30, 5, 7:30, 10.
- Abduction (PG-13) 11:25, 12:40, 2, 3:20, 4:50, 5:55, 7:25, 8:35, 10:10.
- Colombiana (PG-13) 2:15, 7:20.
- Contagion (PG-13) 11:20, 2, 4:55, 7:35, 10:25.
- Dolphin Tale (PG) 11:05, 4:30, 10:05.
- Dolphin Tale 3D (PG) 1:50, 7:15.
- Don't Be Afraid of the Dark (R) 11:30, 4:50, 10:20.
- Dream House (PG-13) 11:15, 12:35, 2, 3:15, 4:45, 6, 7:30, 8:40, 10:15.
- Drive (R) 11:40, 2:35, 5:10, 7:45, 10:15.
- The Help (PG-13) 1:30, 7:20.
- Killer Elite (R) 11:10, 1:55, 4:40, 7:20, 10:10.
- The Lion King (G) 1:20.
- The Lion King 3D (G) 11, 3:35, 6, 8:15, 10:30.
- Moneyball (PG-13) 11:25, 1, 2:25, 4, 5:25, 7, 8:30, 10:05.
- Shark Night 3D (PG-13) 11:05, 4:55, 10:30.
- Spy Kids: All the Time in the World in 4D (PG) 11:35, 4:35. 3D (PG) 2:20, 7:05.
- What's Your Number? (R) 11:45, 2:30, 5:05, 7:40, 10:20.

Century at Hayward
1069 B Street, Hayward 800-326-3264
- 50/50 (R) 12:15, 2:45, 5:15, 7:45, 10:15.
- Abduction (PG-13) 11:20, 2, 4:50, 7:30, 10:10.
- Colombiana (PG-13) 1:55, 7:25.
- Contagion (PG-13) 11:05, 1:50, 4:25, 7:10, 9:50.
- Dolphin Tale (PG) 11, 4:30, 10.
- Dolphin Tale 3D (PG) 1:45, 7:15.
- Dream House 11:20, 2, 4:45, 7:25, 10:05.
- Drive (R) 11:50, 2:25, 5, 7:35, 10:10.
- The Help (PG-13) 12:30, 3:45, 7, 10:15.
- Killer Elite (R) 11:10, 2, 4:50, 7:40, 10:30.
- The Lion King (G) 2.
- The Lion King 3D (G) 11:25, 4:30, 7, 9:30.
- Moneyball (PG-13) 1:20, 4:20, 7:20, 10:20.
- Straw Dogs (R) 11:15, 4:45, 10:05.
- What's Your Number? (R) 11:50, 2:30, 5:10, 7:50, 10:30.

Chabot Cinema
2853 Castro Valley Blvd., Castro Valley 510-582-2555
- Dolphin Tale 3D (PG) 4:15, 7.

Elmwood Rialto Cinemas
2966 College Ave., Berkeley 510-433-9730
- 50/50 (R) 5:15, 7:30, 9:45.
- Higher Ground (R) 4:50, 7:15.
- One Man, Two Guvnors (Not Rated) 7.
- Our Idiot Brother (R) 9:30.
- Sarah Palin: You Betcha! (Not Rated) 4:25.

Renaissance Grand Lake
3200 Grand Avenue, Oakland 510-452-3556
- 50/50 (R) 7:30, 9:35.
- Contagion (PG-13) 9:25.
- Dolphin Tale 3D (PG) 7:15.
- Moneyball (PG-13) 7, 9:45.

Livermore Cinemas
2490 First Street, Livermore 925-443-7469
- 50/50 (R) 12:05, 2:25, 4:45, 7:20, 9:40.
- Abduction (PG-13) 1:25, 4:35, 7:15, 9:45.
- Contagion (PG-13) 12:10, 3:45, 6:10, 8:30.
- Dolphin Tale (PG) 12:30, 3:20, 6:05, 8:40.
- Dolphin Tale 3D (PG) 1:10, 4:05, 6:50, 9:35.
- Dream House (PG-13) 12:25, 2:45, 5, 7:15, 9:30.
- Drive (R) 12, 2:20, 4:40, 7, 9:35.
- The Help (PG-13) 6:15, 9:20.
- Killer Elite (R) 12:55, 4:15, 7:05, 9:55.
- The Lion King (G) 12, 2:20.
- The Lion King 3D (G) 12:20, 2:40, 4:50, 7:05,

Century 16 Bayfair Mall (right column, partial)
- Killer Elite (R) 2, 2:30, 4:55, 7:45, 10:35.
- The Lion King (G) 1:30, 3:45.
- Lion King 3D (G) 12:30, 2:45, 5:15, 7:35, 9:55.
- Moneyball (PG-13) 1:10, 2:10, 3:10, 4:15, 5:10, 6:15, 7:25, 8:15, 9:25, 10:25.
- Real Steel: IMAX (PG-13) 12:01.
- Star Trek: IMAX (PG-13) 3.
- What's Your Number? (R) 1:35, 4:20, 5:20, 7:05, 8, 9:50, 10:45.

United Artist
6330 Christie Ave, Em
- Colombiana (PG-13) 10:20.
- Courageous (PG-13)
- Crazy, Stupid, Love 10.
- The Debt (R) 1:50,
- Dolphin Tale (R) 1
- Dolphin Tale 3D (P 10:15.
- Force (R) 12:40, 3:5
- I Don't Know How S 9:30.
- Mausam (Not Rated
- The Smurfs (PG) 12
- Spy Kids: All the Tim 12:10, 2:20, 4:50.

Vine Twin Th
1722 1st Street, Liverm
- Crazy, Stupid, Love
- The Debt (R) 2, 4:20
- The Guard (R) 4:45,

Contra Co

Brenden Cone
1985 Willow Pass Rd.,
- 50/50 (R) 1:45, 4:20
- Abduction (PG-13) 1
- Contagion (PG-13) 1
- Dolphin Tale (PG) 1
- Dolphin Tale 3D (PG
- Don't Be Afraid of th
- Dream House (PG-1
- Drive (R) 1:15, 3:30
- The Help (PG-13) 1:
- Killer Elite (R) 1:05,
- The Lion King (G) 1.
- The Lion King 3D (G
- Moneyball (PG-13)
- Rise of the Planet of 6:15.
- Straw Dogs (R) 6:20
- Warrior (PG-13) 1:5
- What's Your Number

Brenden 16 P
4085 Century Blvd, Pitt
- 50/50 (R) 2:50, 5:20,
- Abduction (PG-13) 1
- Colombiana (PG-13)
- Contagion (PG-13) 3
- Dolphin Tale (PG) 2:
- Dolphin Tale 3D (PG
- Dream House (PG-13
- Drive (R) 2:20, 7:55,
- The Help (PG-13) 4:4
- Killer Elite (R) 2:45, 5
- Moneyball (PG-13) 2:
- Saving Private Perez 8:05.
- Shark Night 3D (PG-1
- Straw Dogs (R) 6:50.
- What's Your Number?

Century 16 Hil
3200 Klose Way, Richmo
- 50/50 (R) 12:25, 2:50,
- Abduction (PG-13) 11 5:10, 6:45, 7:45, 9:20,
- Colombiana (PG-13)
- Contagion (PG-13) 12 10:25.
- Dolphin Tale (PG) 11,
- Dolphin Tale 3D (PG)
- Dream House (PG-13) 4:30, 5:20, 7:05, 7:55, 4
- Drive (R) 12:10, 2:40,
- The Help (PG-13) 11:
- Kevin Hart: Laugh at
- Killer Elite (R) 11:15,
- The Lion King (G) 10:
- The Lion King 3D (G) 10:10.
- Moneyball (PG-13) 12
- Spy Kids: All the Time (PG) 11:30, 1:55, 4:20,