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Get the most out of your TOMY i-Sobot

A versatile humanoid struts its stuff

We had so much fun reviewing the TOMY i-SOBOT for the Fall issue that we arranged for a return match, only this time, TOMY was kind enough to give us access to two of the black, U.S.-versions, final production robots with the completed manuals and packaging. This enabled us to dig deeper into programming the i-SOBOT and gave us some up close and personal experience playing some really fun, and sometimes competitive games with the robots. We were supposed to be seriously evaluating the i-SOBOT, but frankly speaking, we had a blast!

PROGRAMMING THE I-SOBOT

The Program Mode allows you to combine any of the i-SOBOT actions into long sequences. For example, you can program the robot to do a couple of karate punches and then a guard motion and then a kick or two. Each action, no matter how long it is, takes up one program memory block. i-SOBOT has three memories, and each can store up to 80 blocks. In total, by combining all three memories, the robot could execute up to 240 actions in sequence if you wanted to create a program that long.

Entering a program is very straightforward. You select the program mode using the Mode button, and then key in the code for your first action. The code appears on the LCD screen as you enter it for confirmation. Press the down cursor button to store the action, and the program will move to the next block. Keep repeating the process until you have entered all the actions for your program.

Press the Go button to transfer the program to the robot, and watch as it performs. If you want to change an action, use the up/down cursor buttons to display the action, and then key in the new action, or press the X button to cancel the action.

Once you're satisfied with the program, press the memory button (M1, M2, or M3) to store it. A few words of caution: storing the new program overwrites any existing program stored in that particular memory. We didn't realize this at first, and we lost a few programs until we got smart enough to read through the manual and figure out what was happening.

The basic programming ability is impressive for a robot at this price, but it gets better. For example, to program the robot to walk a few steps, you move the left joystick in the direction you want the robot to go and hold it until the indicator matches the number of steps you want it to take. This type of walking motion requires only one memory block. You can also set up and store unique arm actions in a similar fashion. Each arm action takes two memory blocks.

You can even include the Special Actions within your program. For example, you could entertain your friends by having the i-SOBOT walk across a miniature stage, say hello, introduce himself, play an air guitar session, bow to the audience, say goodnight and walk off stage left. How cool is that?

We highly recommend that you write your program key sequences on a sheet of grid paper first, especially if they are long. With just a little practice, it's easy to key in programs quickly on the i-SOBOT control keys, but it's also easy to go too fast, or make a mistake, which can be a little frustrating.

HOW I-SOBOT AND ITS CONTROLLER WORK TOGETHER

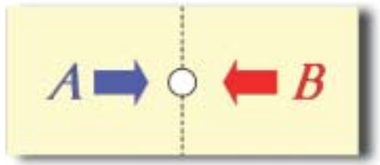
It's useful to understand how the i-SOBOT and its controller share the work. Basically, the robot is responsible for motion control, balance, voice recognition and playing back program sequences sent to it by the remote. At the same time, the remote manages all the user input, key codes and display along with program editing and storage.

Programs that you create using the remote are stored internally and can be assigned to one of the three program buttons, M1, M2, or M3. When you're ready to have the robot execute a program, you select the appropriate program key and then press the Go button while pointing the remote at the i-SOBOT's sensor. A traveling arrow will appear on the remote display. Be sure to hold the remote steady until the arrow stops moving, indicating that it was successfully downloaded. Since the entire program is being downloaded each time, the delay is a little noticeable, though it certainly was not objectionable during our tests.

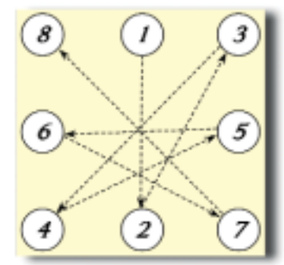
GAMES I-SOBOT PLAYS

We found that i-SOBOT is one of those rare products that is not only a lot of fun to play with but also keeps offering you new ways to enjoy the experience, either alone or with friends who also have i-SOBOTs. Half the fun is thinking up new games and activities that involve the robot, and the local dollar store is full of low-cost items to use as props. Here are some of our current favorite i-SOBOT games:

KICK THE CAN Set up a small rectangular playing field on the floor or your desktop, and draw a centerline. Its size isn't critical, but roughly 15 inches long by 9 inches wide seems to work well. A spool of thread or a thimble makes a good "can." Place the can on the centerline in the middle. Each robot tries to control the can and push it across their goal while blocking the other player's robot.



ROBOT BILLIARDS Lay out a square playing field (12 inches on each side) and arrange eight paper cups (empty, of course) upside-down around the edges of the field, just like the pockets on a pool table. Put i-SOBOT in the center of the field. We play this game with two fun variations: for novices the goal is to knock all the paper cups off the field, playing against the clock. Once they have that mastered, we number the bottoms of the cups from 1 to 8, position them in a diagonal sequence, and they have to knock them off the field in order. It's a lot harder than you might think. Of course,



when two people want to play against each other, it's easy to set up a second playing field.

PAPER-CUP SPARRING PARTNERS Paper cups make excellent sparring partners for i-SOBOT. Invert one and tape another to its bottom in an 'X" shape. They are cheap, just the right size, and zero-impact, so you don't run the risk of damaging your robot. If they fall over too easily, tape a few coins inside one of the cups to enhance stability. You can stick a photo of your boss, adversary, or the schoolyard bully on the outside, and let i-SOBOT give him a work-over.

USE A LITTLE CREATIVITY

i-SOBOT's body is plastic—very similar to a cell phone's—and its shape is very close to that of a cube. With a few measurements and a little layout, either on grid paper or in a drawing program, you can easily create simple templates to print on the vinyl skin material that is used to decorate cell phones. The pattern can be printed on the vinyl skin using an inkjet printer, trimmed and then put on i-SOBOT's body. The robot does have heat vents on the back of its torso, and it never seems to get very hot. To be safe, avoid covering the vents with the vinyl.

Which cool i-SOBOT skins do we have planned? How about a Camo-bot, or an Optimus Prime i-SOBOT, or why not some i-SOBOT skins with a terrifying Star Wars Darth Maul grimace?

ATTENTION TO DETAIL

The remote includes buttons so that you can mute the robot's voice and sound effects and turn off its "searchlight." TOMY also included a "sleep" mode for the robot. If you don't send i-SOBOT any commands for a while, it will start to do some routines to indicate that it wants attention or is getting bored. After six minutes without a command, it shuts down its two LED lights and goes to sleep. There is a slight power drain even when it's in sleep mode, so be sure to turn the power switch to the off position when you aren't using the robot.

"EASTER EGGS"!

Programmers and designers like to hide special little features (typically referred to as "Easter eggs") in their products, and they challenge users to discover them. i-SOBOT is no exception to this. There are at least three, maybe more, Easter egg actions buried in the robot, including one that would make Ace Ventura turn absolutely green with envy.

ADJUSTING THE I-SOBOT

With their decades of experience in designing toys and complex mechanisms that have to withstand everyday use, the TOMY team included clutches in each of the 17 servos. Nevertheless, with extended play, sooner or later, the robot may have to be adjusted and realigned so that its actions play as expected.

TOMY went to a lot of effort to provide detailed documentation along with the diagrams in the manual. They also put alignment marks in i-SOBOT's molded-plastic body parts, and they include the small Allen wrench needed to make the adjustments. Be sure to follow the alignment procedure given in the manual carefully, step by step. Note: page 6 in the manual refers to the wrench as an "exclusive hexagonal wrench," but I confirmed with the company that it's a standard 1.5mm (L-15) Allen wrench (or hex wrench), just in case you misplace the one that comes in the box.

SHARE THE FUN ONLINE

Take photos and videos of your i-SOBOT creations in action, and post them online to share with the world. Be sure to include "isobot" as the keyword or tag on services such as Flickr and YouTube to make them easy to find. We'd love to see what you come up with. Who knows? It might generate some online challenges or i-SOBOT competitions. To get the party started, we'll have sample programs and downloadable videos on Robot's website.

Links
Robots-Dreams, www.robots-dreams.com
TOMY Corp., www.tomy.com (949) 955-1030

For more information, please see our source guide on page 97.