

# Tips & Troubleshooting

## Uh-oh ...

If the red scanner light is not blinking, it usually indicates a problem with the batteries. Remove and re-install the batteries. If that doesn't help, replace the batteries with new ones.

A tri-tone sound and a red scan indicator LED means that an error occurred. KIBO may have mis-scanned, or there may be an error in your program. Try scanning again or re-arranging your blocks. Have fun experimenting!

If KIBO is turning left or right (or going backward) when it should be going forward, check the motors to make sure that the green dots are showing through KIBO's transparent bottom.

## Take care of your motor modules!

KIBO's motor modules are designed to turn KIBO's wheels; they are not designed to carry a lot of weight. So, please don't force KIBO to go faster than it wants, and don't push down on KIBO's body when its wheels and motors are installed. These behaviors can damage the motor modules. Our warranty doesn't cover damage caused by improper motor use.



## Programming tips

Make sure you plug in the modules that your program needs! If you use the WAIT FOR CLAP block, you will need the "ear" (sound) sensor. If you use the RED/WHITE/BLEUE LIGHT ON blocks, you will need the light bulb.

## Scanning tips

To scan, hold KIBO 2-4" away from the bar code. Shine the red scanner light onto the bar code. It's ok if the light is a little "bigger" than the bar code.



This type of reflection can interfere with scanning.

If KIBO won't scan, try changing KIBO's position slightly. Move it slightly closer or farther away from the block and try changing the angle a little bit.

If you're still having trouble scanning, notice if there is light reflecting from your stickers. Try moving away from direct overhead lighting and windows. Or, try scanning the sides of the blocks, instead of the top.



If scanning from the top isn't working ...

Try scanning from the side!



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KIBO 15 robot kit contents



KIBO body



programming blocks (15)



motor modules (2)



light output: light bulb



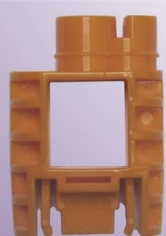
sound sensor: ear



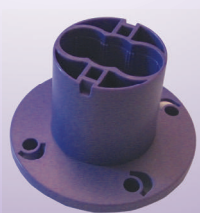
parameter cards (4)



wheels (2)



stage support



stage pedestal



rectangular stage

Colors of some components may vary. Additional parts available at [shop.kinderlabrobotics.com](http://shop.kinderlabrobotics.com) Complete parts list at [kinderlabrobotics.com/compare](http://kinderlabrobotics.com/compare)

# Getting started with KIBO



1. If this is your first time using your KIBO, insert 4 AA batteries into the battery case. The red scanner light will start blinking.



Screwdriver and batteries not included

2. Choose the motors, wheels, and sensors that you want to use. Insert the motors so that the green dot shows through KIBO's transparent bottom.



3. Sequence some blocks into a program. Every program needs a BEGIN block and an END block.



4. Push KIBO's triangular button to turn KIBO on. The red scanner light will blink.

KIBO will turn itself off if left alone for a few minutes.



5. Use KIBO to scan the bar codes on the programming blocks, left to right, one at a time\*. If your scan was successful, KIBO will beep and the scan indicator LED will glow green after each block. (A red scan indicator LED indicates a scanning error.)



\*See scanning tips on the back of this guide.

6. Push KIBO's triangular button to tell KIBO to go!

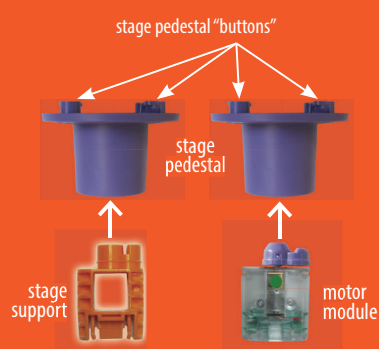
To re-run the program: push KIBO's button again.



To change your program: Re-arrange the blocks, re-scan, and push KIBO's button. Watch KIBO go!

7. Decorate KIBO with the rectangular art stage.

Insert stage support or motor module into stage pedestal



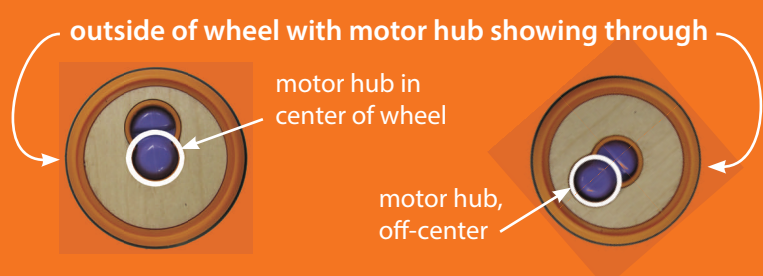
Insert the wood stage onto the stage pedestal buttons



## Fun things to try

Try inserting the motors "upside-down," with the green dot *\*not\** showing and see what happens.

Insert the motors into the wheels so that the motors' axles are *off-center*, relative to the center of the wheels, and see what happens!



Check out more fun challenges and activity guides at <http://resources.kinderlabrobotics.com>.

## Good things to know

KIBO's lights can tell you lots of useful things:

- KIBO's red scanner light and triangular button will blink when KIBO is ready to *scan* a program – OR – when KIBO is ready to *run* a program. The button will stop blinking while KIBO is scanning a program; the red scanner light will stop blinking while KIBO is running a program.

- When KIBO's triangular button blinks, it means that KIBO has a program stored in its memory. The triangular button will go dark while KIBO is scanning a new program, and also after inserting new batteries.

- You can put KIBO to sleep by pressing and holding the triangular button for several seconds.