Droid Developer Kit
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Meet the Micro Scout

The Micro Scout is a smart LEGO brick with a microcomputer inside. Using the Micro Scout, you can build and program Droids that do what you want.

- The Micro Scout has a built-in motor that lets your Droids move.
- It has a built-in Light Sensor that lets your Droids react to light.
- It also has a Display Window and buttons that let you control what your Droid does.

The Micro Scout has seven different programs that control your Droid's behavior.
How it Works

The Micro Scout works like the Droids you know from the *Star Wars* universe...well almost.

1. The Micro Scout uses its sensor to scan for changes in light.

2. When the sensor sees a change in light, it sends a signal to the Micro Scout's brain (a computer chip).

3. The brain decides what to do, such as turn on the motor or play a sound.
INSTALLING BATTERIES

The Micro Scout requires two AA/LR6 batteries (not included in the set). Alkaline batteries are recommended.

1. Open the Micro Scout by pulling the battery cover in the direction of the two arrows.

2. Put in the two batteries.

3. Slide the battery lid back on.

Important:
When the Micro Scout’s batteries are low, a battery icon appears in the Display Window.

Instructions for use of battery box:
Never mix different types of batteries or old and new batteries in one battery box. Always remove the batteries from the battery box for long-term storage or if they have reached the end of their life. Liquid leaking from dead batteries will damage the battery box.

FCC Statement:
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference that may cause undesired operation.

USING THE BUTTONS

ON OFF
The On-Off button turns the Micro Scout on and off.

When ON, the Micro Scout is ready for your commands.

SELECT
The Select button lets you scroll through the 7 built-in programs, as well as the P program.*

RUN
The Run button starts and stops the Micro Scout.

When a program is running, you will see the number flashing on the display.

* Check out www.legomindstorms.com/dsk for more information on the P program.
LIGHT SENSOR

A Light Sensor is built into the front of the Micro Scout. It lets the Micro Scout see changes in light.

The Light Sensor is placed at a 45 degree angle.

When using a light to control your Droid, be sure to aim your light directly at the Light Sensor.

Checkpoint: Light Sensor

1. Make sure the Micro Scout is turned on.

2. Press Select until the display shows Program 6.
   This is the Alarm program.

   The Micro Scout plays a sound while it measures the light level.

4. Cover the Light Sensor with your hand or flash a light at it to trigger the alarm.
   The alarm sounds and the motor should spin.
**PROGRAMS**

The Micro Scout has seven built-in programs that control its behavior. Use the Select and Run button to try them out.

- Note that other Droids may drive differently from L-360, according to the way their gears and mechanisms are constructed.

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**ONE DIRECTION**

L-360 drives backwards.

**TWO DIRECTIONS**

L-360 first drives backwards.  
L-360 then drives forwards.
3 SEEK LIGHT

- L-3G0 drives backwards.
- When L-3G0 sees a light, it drives forwards.

4 LIGHT CONTROL

- L-3G0 stands still.
- When L-3G0 sees a light, it moves.
- When L-3G0 detects two flashes from a light source, the droid changes direction.

5 KEEP ALIVE

- L-3G0 stands still.
- When a light is flashed L-3G0 drives forwards and picks up speed.
ALARM

L-360 waits for a change in light.

When L-360 sees a light change, an alarm sounds and the Druid goes back and forth.

CODE

L-360 plays a sequence of short and long beeps.

Play the same sequence with your flashlight.

If the code is correct L-360 drives forward for a split-second.

If the code is wrong L-360 drives backwards for a split-second.

CONTROL

The P program is designed to work with future versions of LEGO MINDSTORMS products. See www.legomindstorms.com/ids for more information.
BUILDING INSTRUCTIONS

Part 1 - L-3GO Trainer Droid™
Part 2 - R2-D2™ Astromech Droid™
Part 3 - Jedi Knight Droid™
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INSPIRATIONAL DROIDS

Here are some custom Droids you can build in the Jedi Knight Level.
SPECIAL FEATURES

Attach the following Special Features to add new actions and behaviors to your Droids.

Camera feature
Telescopic Camera

Head feature
Swing Head

Head feature
Beetlehead
Engine feature
Ion Jet Drive

Tool feature
Swinging Crane

Defense feature
Target Tracking Laser
Flying feature
Aerofoils

Detect feature
Precision Radar

Detect feature
Wide Band Radar
TECHNICAL STUFF

Droid™ Developer Kit CD-ROM
Tips & Tricks
DROID DEVELOPER KIT CD-ROM

The challenges on the CD-ROM can help you achieve the rank of Jedi Master in building Droids. There are three levels to complete. The screen shots on these pages show you some of the adventures waiting to be encountered.

R2-D2™ building step from the Apprentice Level.

Apprentice Level where you can build C-3PO and R2-D2™.

Jedi Knight Level.

Jedi Master Level.
The Tech Files, containing details on all Special features, frames and sub assemblies for your Droids.

Micro Scout Tutorial.

When at the Exit screen, you can press ctrl+A to achieve Apprentice Level, ctrl+K to achieve Jedi Knight Level, and ctrl+M to achieve Jedi Master Level.
TIPS & TRICKS

How to build stronger, bigger and better Droids.