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Introduction

Hi there!

If you're looking to subscribe to AdaBox, click here! (https://adafru.it/tNC)

If you're here, it's because you were given the gift of electronics with an AdaBox! Perhaps you are a beginner who is getting started with your AdaBox. Or maybe you just want to relive what it's like being a beginner at electronics again. But most of all, you want to learn how to build and make creative, awesome stuff with electronics, displays, graphics, and coding! (If, rather than learn all that, you'd like to look at pictures of cats instead, please check https://www.adafruit.com/galleries/cats-of-engineering (https://adafru.it/oAd))

And, you're in luck: there's never been a better time. Seriously. We're not just saying that. It's wild how great a time this is for you to learn home automation, electronics, environmental sensing, color displays, coding, graphics, and Internet-connected WiFi projects!!

Gone are the days where you need thousands of dollars of equipment and a physics/math background. Nowadays, if you want to learn to work with electronics and code microcontrollers, you can jump right in for $100 or less and any sort of computer. And we're talking about learning a lot of electronics, graphics, coding, and wireless action - from the basics of setting up a microcontroller, to customizing your graphics on a TFT display, and doing it wirelessly! Soon you'll be tracking your mail deliveries online and using the power of the internet to remind you to fill Fluffy's water bowl!

Who is this for?

Anyone who is interested in learning how to program and build interactive projects, and with access to a modern web browser. That's pretty much the minimum. Remember, this guide is specifically for people who have purchased or received an AdaBox subscription!

You don't need to know a lot of physics or math, and just like an Art Degree isn't required for making art and being creative, you don't need to have a computer science or mechanical engineering degree. It helps if you're comfortable using computers but that's a skill most people pick up through life.
If you know how to program already - great! If not, don't worry, we'll teach you enough to be dangerous.

Who isn't this for?

While you can follow along without an AdaBox, it will not make as much sense unless you have all of the components and more which either came as a gift or purchased yourself - remember, the goal is helping beginners!

This guide is also not for snails. Snails are interesting creatures, but they're probably chilling out in their shells instead of coding (https://adafruit.it/Pdn).

If you're an expert, please visit our thousands of other tutorials and jump right in at learn.adafruit.com (https://adafruit.it/dlu)

Who are you?

Great question. This is me:

I'm Ladyada, and I love to teach people how to build stuff and how they can be creative with technology.

So, are you ready?

Let's do this thing!

Unboxing Adabox 018

There's no place like home... and if you're like us you've spent a lot of time at home over the past year. It almost feels like a whirlwind picked us up and flew us to a strange world, and we've had to adapt to all these new customs when really we want to return to how life used to be. And, maybe, slowly, we're starting to make our way back. Until that day, we can stay at home and tinker with electronics.

This ADABOX is all about home projects, with the FunHouse development board. It's powered with an ESP32-S2 WiFi chip that can run CircuitPython or Arduino, so its easy to make Internet-connected sensors. And sensors are plentiful in this box, with lots of home automation-friendly sensor modules that you can plug right into the FunHouse.
Whether it's tracking the environmental temperature and humidity in your laundry room, or notifying you when someone is detected in the kitchen, to sensing when a window was left open, or logging when your cat leaves through the pet door, this ADABOX is designed to make it way easy to make WiFi-connected home automation projects.

A huge thank you to Digi-Key for going above-and-beyond to help support Adafruit over the last year. Digi-Key's support made this box possible, check out the millions of sensors and devices they have stocked at digikey.com that you can use to automate your home!

In the Box
Adafruit FunHouse
Home automation made easy, with little or no soldering.

Comes with light, pressure, humidity and temperature sensors.

Three JST PH plugs allow for quick connection of STEMMA boards that use digital or analog I/O, and a STEMMA QT port for any I2C devices.

Acrylic Backplate Kit
This clear back-plate attaches to the FunHouse to make wall-mounting easy. Includes some M3 screws to attach with.
Mini PIR Sensor
Plug into the front of the FunHouse to detect motion.

Infrared Breakbeam Sensor
This invisible sensor can quickly detect when something is in between the emitter and receiver, up to 10" apart.

Ultrasonic Distance Sensor
Measure distances of up to about 3 meters.
Magnetic Door Sensor
This sensor lets you know when a door, drawer or window has been opened.

Water Sensor
Keep wet things wet, and dry things dry by detecting when the dry things get wet by accident!

JST PH 3-Pin Socket Cables
Use these to connect the sensors to your FunHouse board with no soldering.
Extension Jumpers
Plug these into your sensors when you need to get loooooong.

Wire Quick Connects
If you have your own sensors or wires, these quick connects are a handy way to attach two wires with no soldering.
Yellow Plate and Brick Set
Craft a desk stand with these golden bricks.

Double-Sided Foam Tape
Adafruit IO+ One Year Free
Unlock a full year of Adafruit IO+, with extra feeds and capabilities!

Redeeming the Adafruit IO+ Subscription Pass

Adafruit IO ([https://adafruit.it/fH9](https://adafruit.it/fH9)) is our IoT cloud service built from the ground up. Our basic free account is great, and lets you have plenty of feeds and dashboards. But maybe you want more than 'plenty'. Adabox 018 includes a one-year subscription pass to Adafruit IO Plus ([https://adafruit.it/Eg3](https://adafruit.it/Eg3)) which upgrades your account's limits to:

- 60 data points per minute
- 60 days of data storage
- Triggers every 5 seconds
- Unlimited feeds

Also, when we add new features to Adafruit IO, we make sure they're always available to IO Plus subscribers first.

The Adafruit IO Plus card included in your Adabox should have a subscription code printed on the back (we've redacted it in this image).

First, if you do not have one already, sign up for a free Adafruit IO Account ([https://adafruit.it/Eg2](https://adafruit.it/Eg2)).
Log into your Adafruit IO account and navigate to https://io.adafruit.com/profile (https://adafruit.it/BmD).

Under "Current Plan", click "Redeem Coupon or Pass".

Enter the secret code from the back of your Adafruit IO Plus card into the text box.

Click "Check Code".

Click "Redeem Pass" to apply the pass to your account.
After redeeming the pass, you will be taken back to the profile page. Underneath "Current Plan", your account should reflect that it's now an Adafruit IO Plus account!

If you are experiencing issues with redeeming your code, please visit [https://io.adafruit.com/support](https://io.adafruit.com/support) and click "Contact Adafruit IO Support".

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**Adafruit FunHouse**

[Adafruit FunHouse](https://adafruit.it/RQf)

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**FunHouse Projects with CircuitPython**

[FunHouse Projects with CircuitPython](https://adafruit.it/RZA)

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**FunHouse Door Alert w Email Notification**

[FunHouse Door Alert w Email Notification](https://adafruit.it/RZB)

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**Using FunHouse with HomeAssistant**

[Using FunHouse with HomeAssistant](https://adafruit.it/RZC)

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**FunHouse Mail Slot Detector**

[FunHouse Mail Slot Detector](https://adafruit.it/SdM)

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**FunHouse 3D Printed Stand**

[FunHouse 3D Printed Stand](https://adafruit.it/SdN)
Motion Activated Outlet with FunHouse

Pet Bowl Water Level Sensing