Beginner Programming Lesson: Basic Sequencer

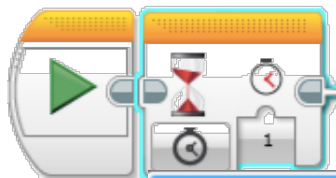BY

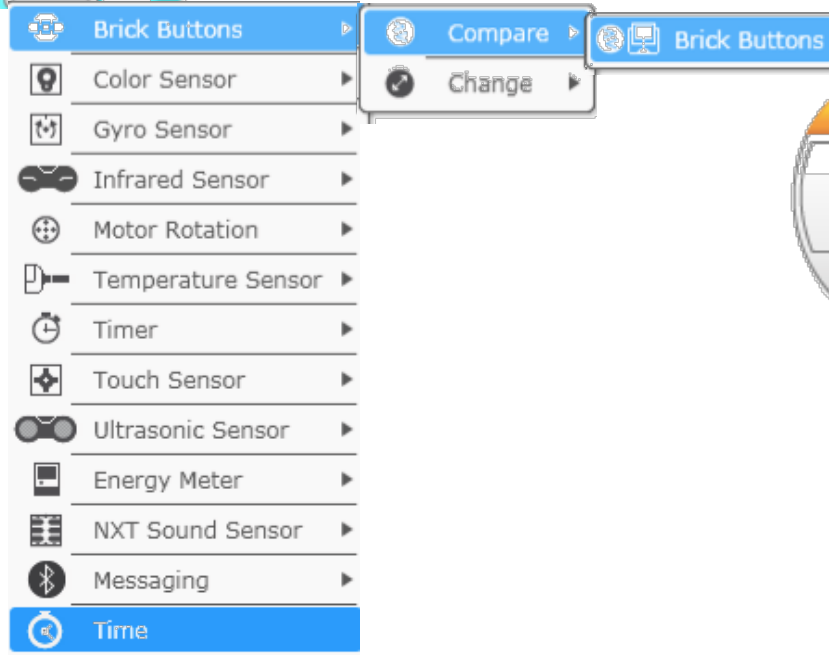EV3LESSONS.COM AND DROIDS ROBOTICS

Using EV3 Brick Buttons as a Sensor

➢ All the EV3 brick buttons (except the OFF button) are like the touch sensor

➢ You can use the buttons to make a game, run different actions based on each button, or make a sequencer (explained on slide 4).

➢ You do not need to waste a sensor port on a touch sensor if you plan to use the touch sensor like a button.

➢ The first step to making a Basic Sequencer is to learn how to use the "Wait for Button Press" feature. See next slide (slide 3)

How to Use a "Wait for Button Press" Block

Wait Block – Click on the bottom left corner and select Brick Buttons – Compare – Brick Buttons
This slide is animated.
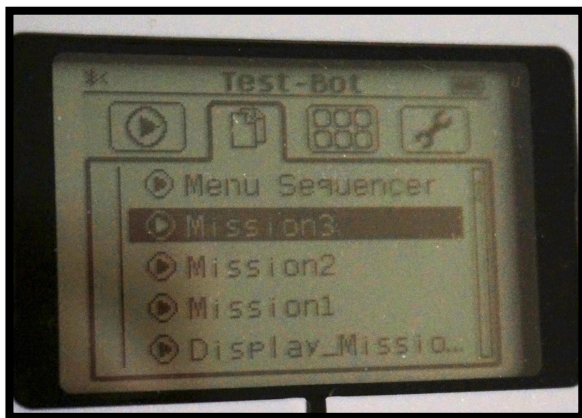
Droids recommend #2 (bumped) – most reliable

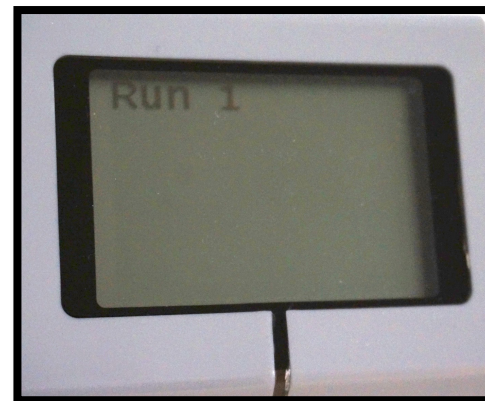You can choose any button except the off button

What is a Sequencer and and Why Use one?

➤A sequencer is a program that puts your missions in the order you choose. It is sometimes called a Master Program or a Menu System.

➤Advantages: You will not need to search for the program in a jumble of programs on the brick. This will save you time on your runs.

➤Disadvantages: You will not be able to re-run each program easily with a basic sequencer (check our more advanced Menu System lesson)
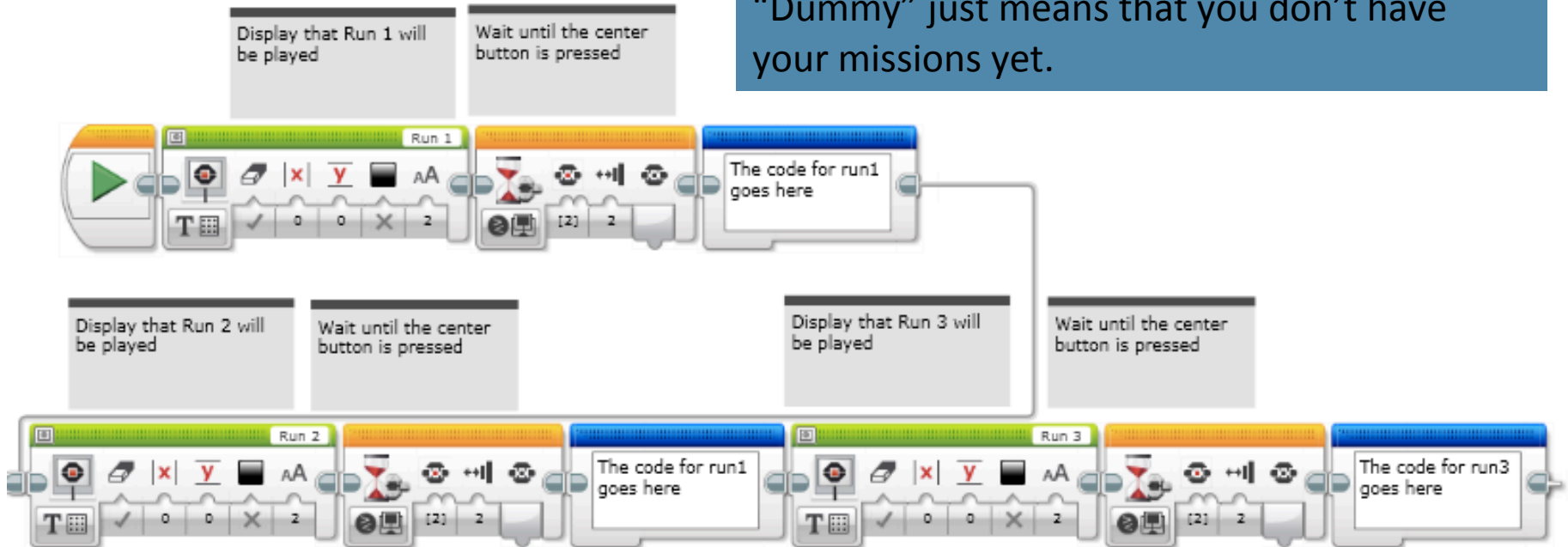
Programs on brick

Sequencer

Step 1: Create A "Dummy" Sequencer

The goal of this program is to create a basic master program that plays 3 runs in a row with waits in between each run, so you have time to set up.

Create a Sequencer that waits until you press the button to play the (next) mission. This will also display which mission will be played next. "Dummy" just means that you don't have your missions yet.

Display that Run 1 will be played

Wait until the center button is pressed

Run 1

The code for run1 goes here

Display that Run 2 will be played

Wait until the center button is pressed

Display that Run 3 will be played

Wait until the center button is pressed

Run 2

The code for run1 goes here

Run 3

The code for run3 goes here

Step 2: Add missions

The goal of this program is to create a basic master program that plays 3 runs in a row with waits in between each run, so you have time to set up.
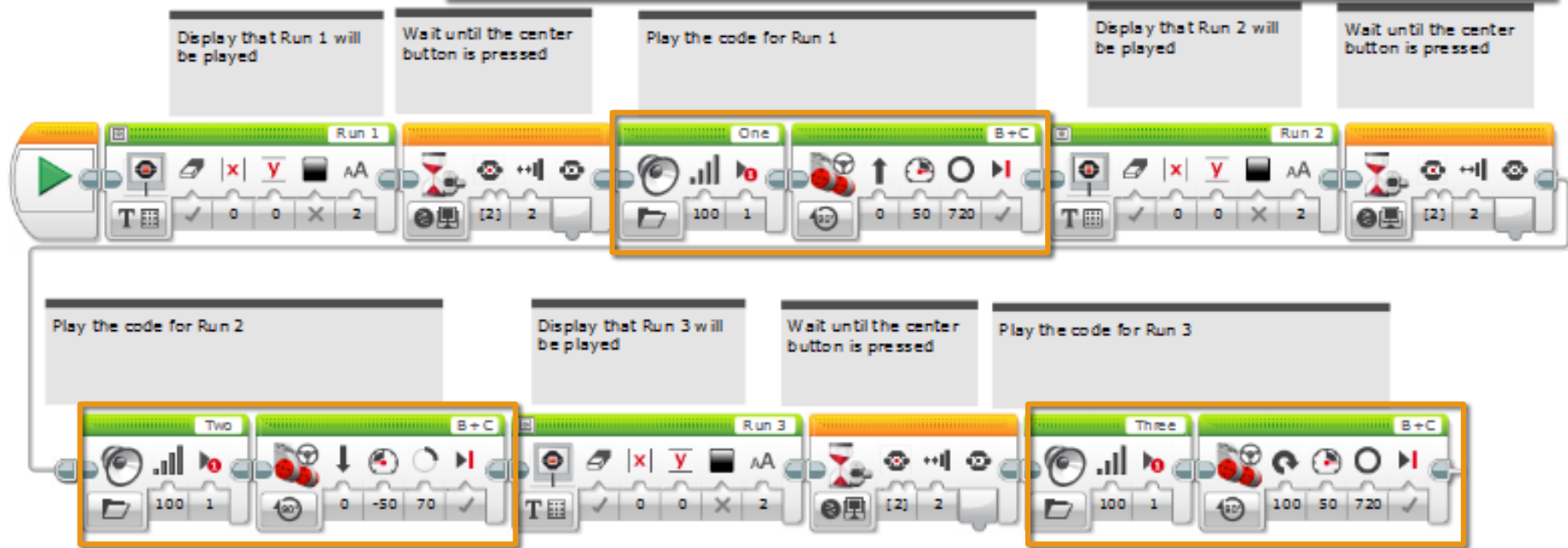
Copy and paste each of your missions after each button press. Note: these missions just move and turn (don't really do much!). Replace with your own code.

Display that Run 1 will be played

Wait until the center button is pressed

Play the code for Run 1

Display that Run 2 will be played

Wait until the center button is pressed

Play the code for Run 2

Display that Run 3 will be played

Wait until the center button is pressed

Play the code for Run 3

➢This sequencer code is set up for only 3 runs…. You can add more to the program

Credits

➢This lesson was written by Sanjay Seshan and Arvind Seshan from Droids Robotics.

➢Feel free to use and adapt, but give credit to the original authors.

➢A more advanced Sequencer lesson can be found on ev3lessons.com

➢More lessons are available at www.ev3lessons.com