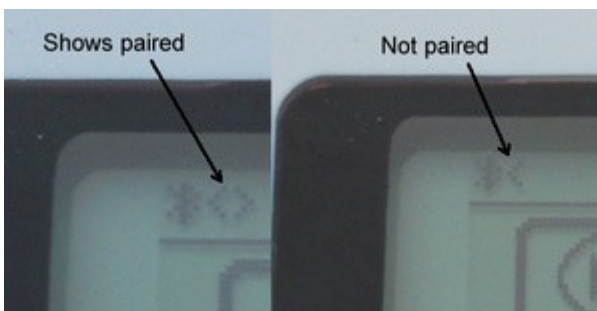


## EV3 Communicating between Robots

### Lets Dance

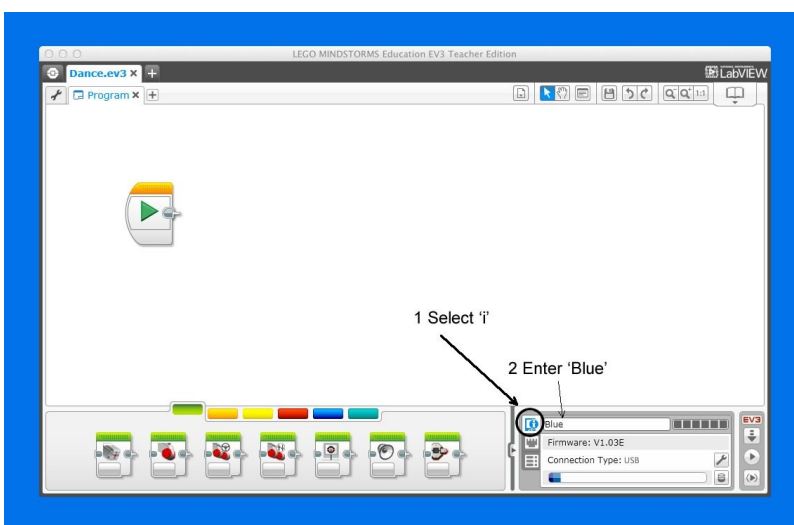
The next stage is to asking another robot to dance. In the following we colour coded the frames of the screen shots (yellow and blue) to be consistent with the two robots named Yellow and Blue.

Before you start, make sure the communicating robots are paired. You will need to do this manually by pushing the buttons on the brick. Find <Bluetooth> in the settings (wrench icon) menu. Then select <Connections>. Then select the name of the robot to be paired with. If the robot name is not visible, select <Search>.

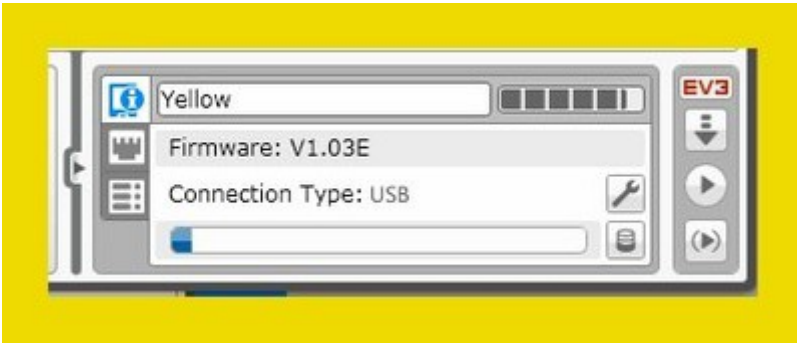


Two <> brackets in the top left corner of the brick's screen confirm that the robots are paired.

### Step 1: Name the Robots

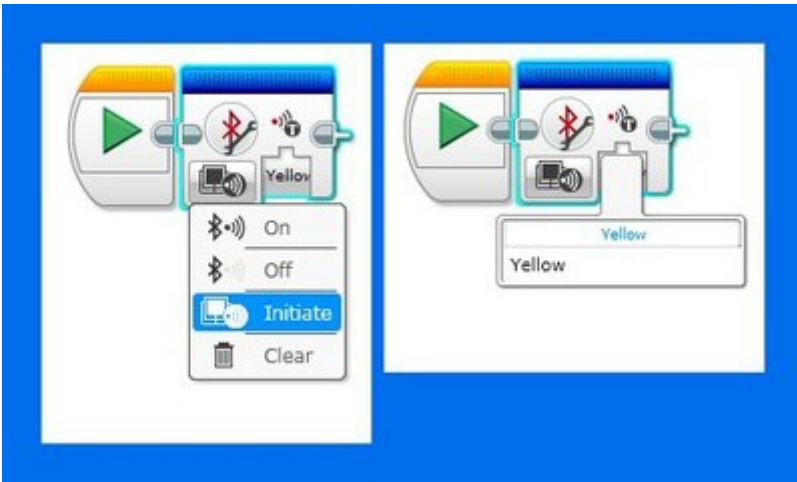


First, Blue needs to know its name. Plug the USB into the robot and computer. Make sure the 'i' icon is selected in the lower right hand box. Enter 'Blue' in the text box. Then do the same for yellow. It is OK to use the same computer for both robots, however, each robot needs its own program and unique name. Capitalization matters. In large classrooms, have the children choose unique names. Otherwise there will be interference from other programs calling the same name.



Then do the same for yellow by following the same process. It is OK to use the same computer for both robots, however, each robot needs its own program and unique name. Capitalization matters. In large classrooms, have the children choose unique names. Otherwise there will be interference from other programs calling the same name.

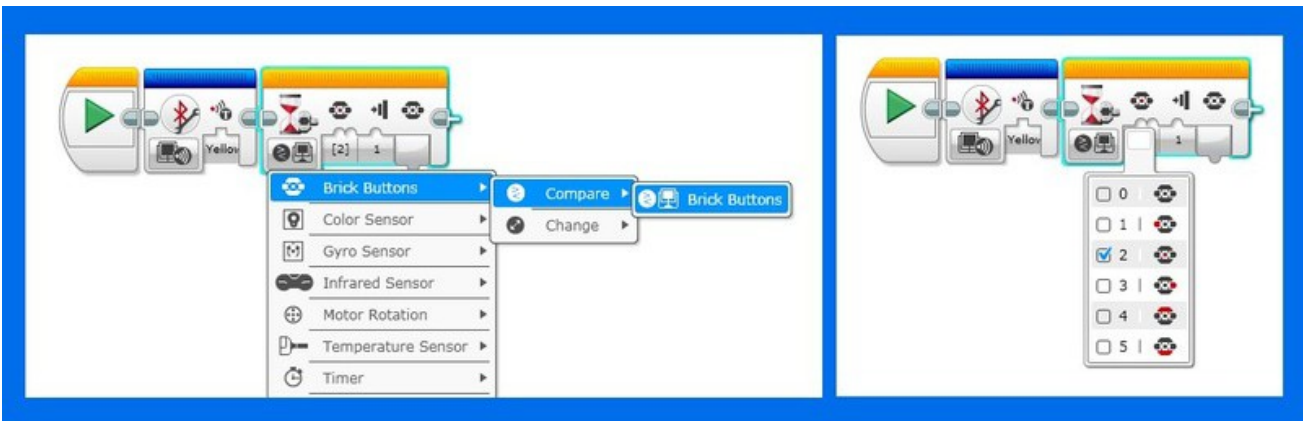
### Step 2: Initiate Communication

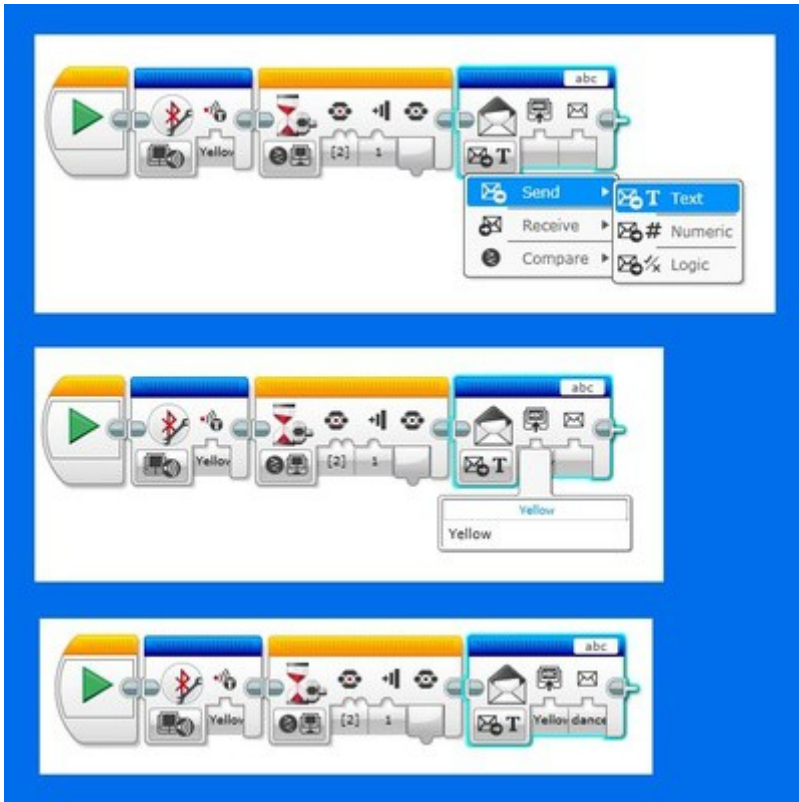


Next, the robots need to know how to communicate with each other, which requires Bluetooth initiation. In the programming code below, start with a Bluetooth block from the Advanced menu (blue tab). Select <Initiate> and type in the robot name that your robot will send messages to. (Make sure the brick's Bluetooth is turned on.) In this case, Blue is sending to Yellow.

### Send Message

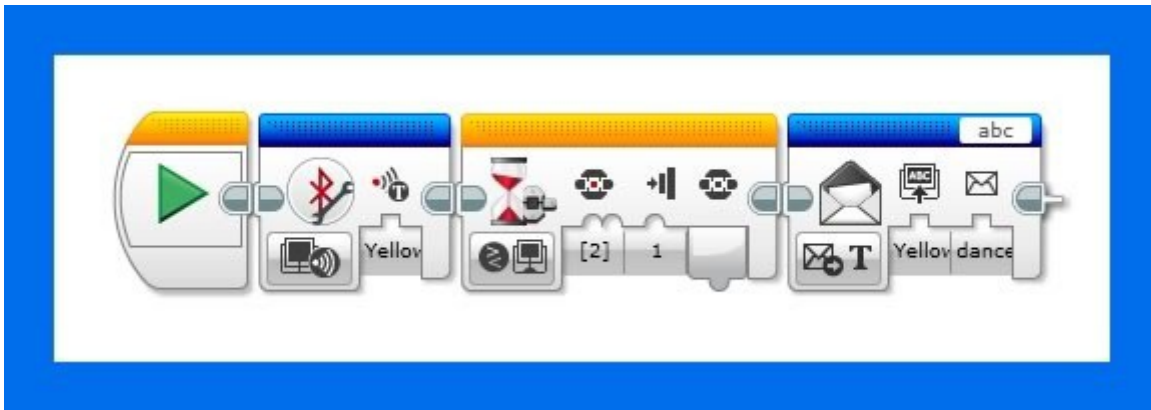
Next, add a Wait block from the Flow Control menu (orange tab). This block makes the robot wait for a command. There are many options for the Wait block. Select (Brick Buttons><Compare><Brick Buttons> for the Wait options. Then select the middle button <2>. The default is set to 1 button push. This setting makes the robot wait until the middle button is pushed to send a message to yellow.





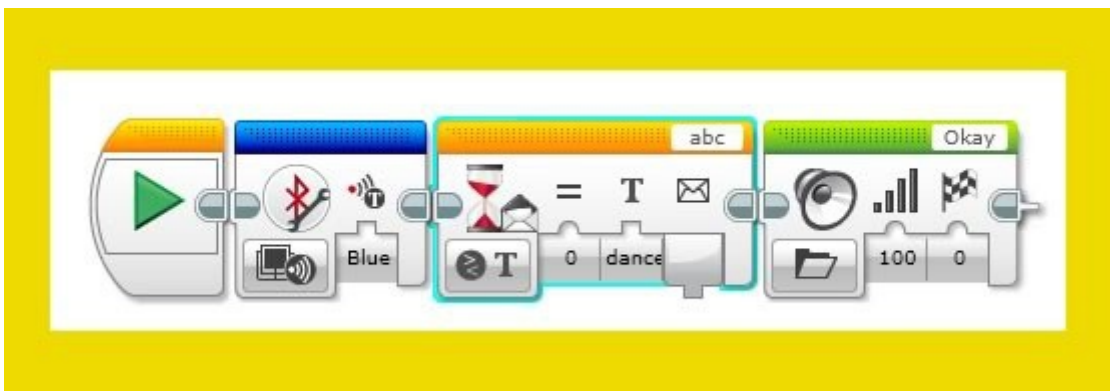
Add a Message block from the Advanced menu (blue tab). Select <Send><Text> . Then enter the receiving robot's name. In this case "Yellow". Then enter the message 'dance?'

The following is Blue's message asking Yellow to dance.



### Receive and Respond to Message

The following is Yellow's waiting to be asked to dance by blue and responding "Okay."



### Step 3: Add some moves and get groovin

Now, add a few dance steps to the program and the robots can dance at the same time.

