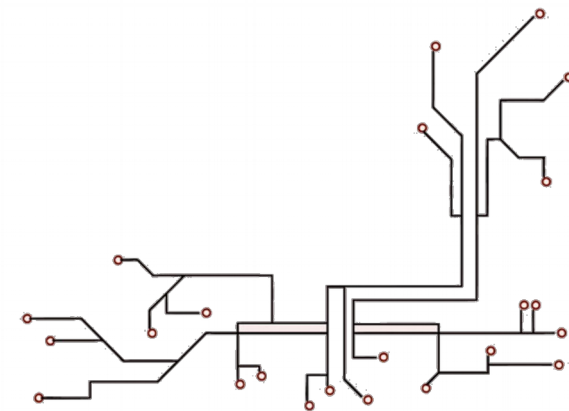
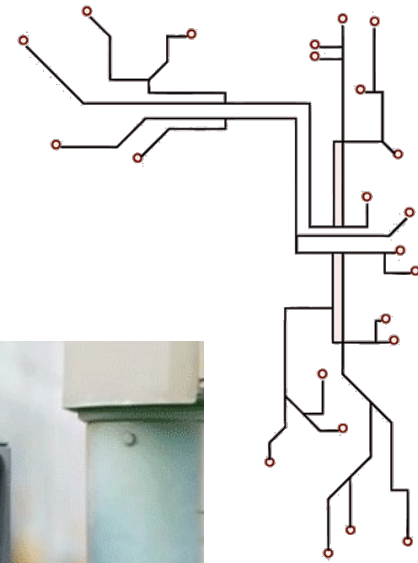


Synchronized Traffic Lights

- Running Out of Pins
- Radio Control
- Synchronizing Lights

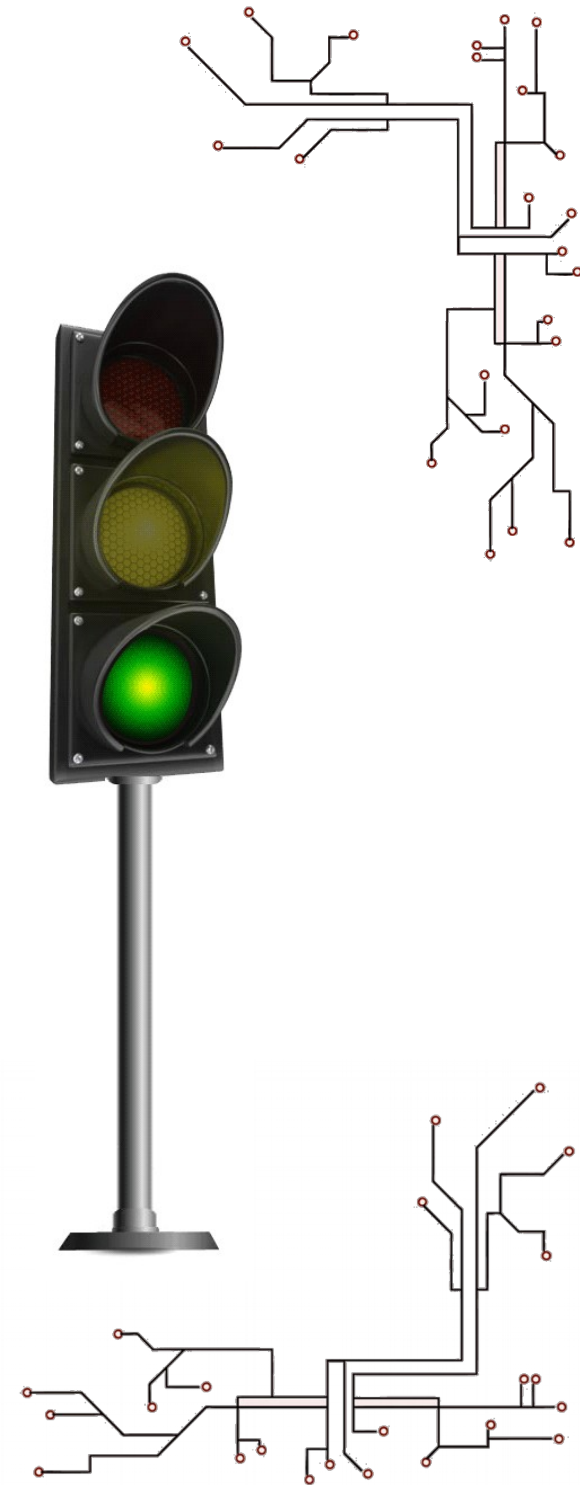


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Single Traffic Light

- **Red** – STOP (10 sec)
- **Green** – GO (10 sec)
- **Yellow** – SLOW DOWN (3 sec)
- Back to Red...



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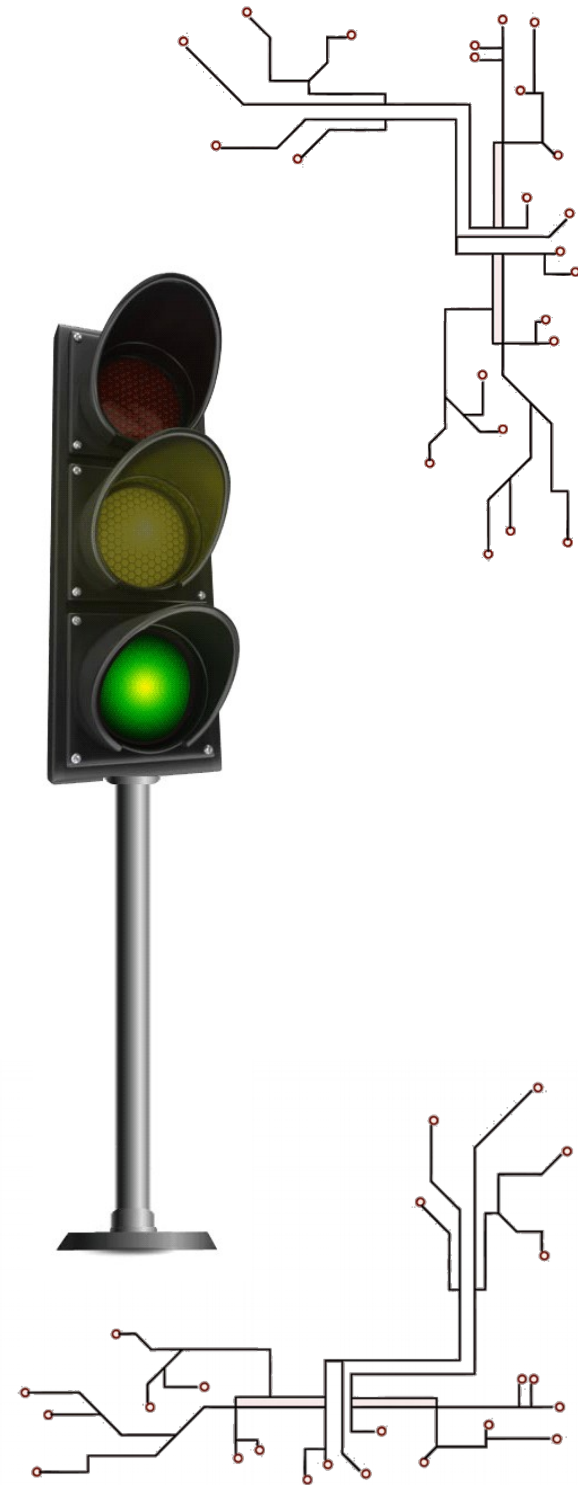
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Crossing Traffic Light

- **Red** – STOP (10 sec)
 - Crossing: Show Walking Man
- **Green** – GO (10 sec)
 - Crossing: Show Standing Man
- **Yellow** – SLOW DOWN (3 sec)
 - Crossing: Still **Red** Standing Man
- Back to Red...

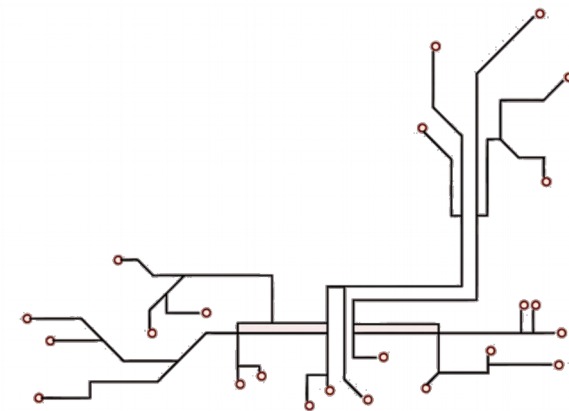
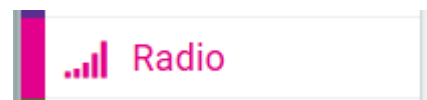
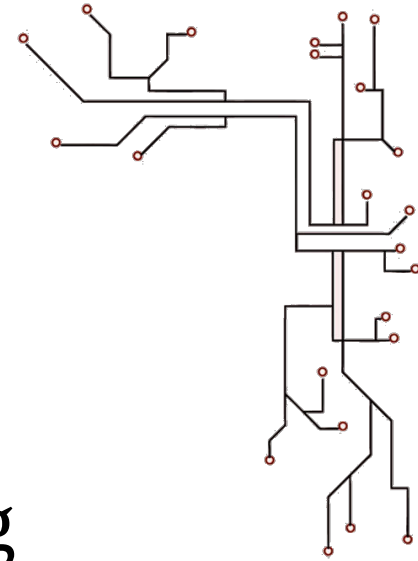
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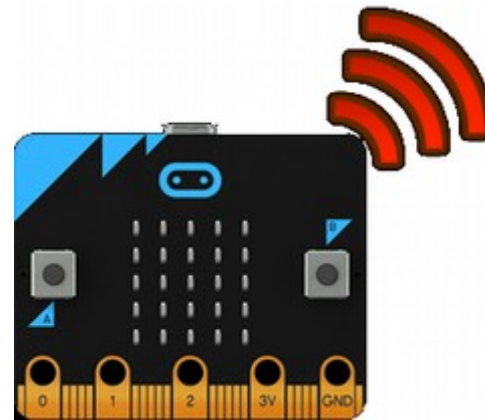
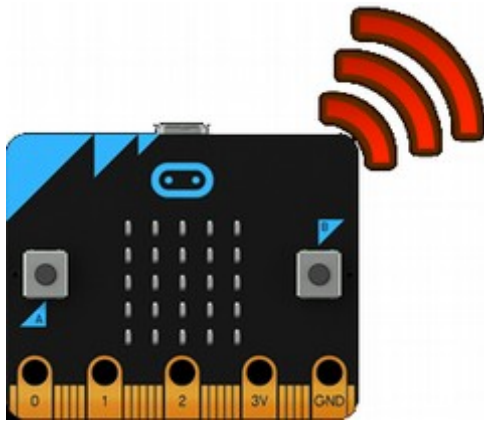
Running Out of *Pins*

- We will need to use multiple micro:bits to control a more complicated traffic crossing
- We can synchronize their behaviors through Radio functions



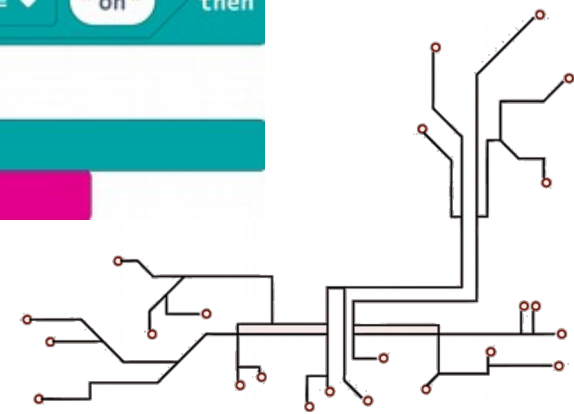
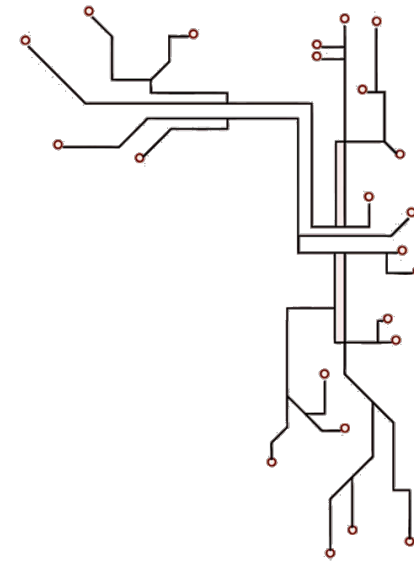
Radio

- Test Simple Walkie Talkie

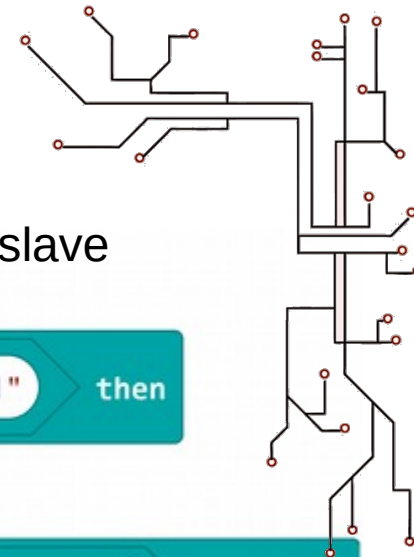


```
on button A pressed
  radio send string "on"
```

```
on radio received receivedString
  if receivedString = "on" then
    show icon [grid icon]
```



Synchronizing Lights



```
forever
  digital write pin P1 to 1
  radio send string "red"
  pause (ms) 10000
  digital write pin P1 to 0
  digital write pin P2 to 1
  radio send string "yellow"
  pause (ms) 10000
```

master

```
on radio received receivedString
  if receivedString = "red" then
    ?
  else if receivedString = "yellow" then
    ?
  else
    ?
  ?
```

slave

PARTIAL ANSWER – Fill In Missing Bits:

- Green Light...
- *Always need to shut 2 lights, turn 1 on*
- Correct pedestrian icon for each case

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