Interfaces Outputs

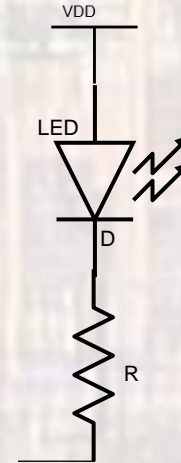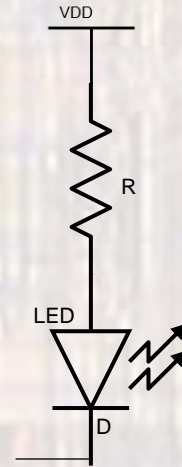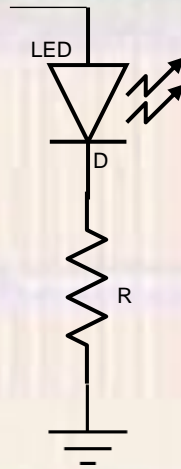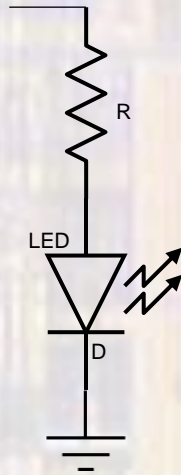Last updated 5/2/22

- Open Collector
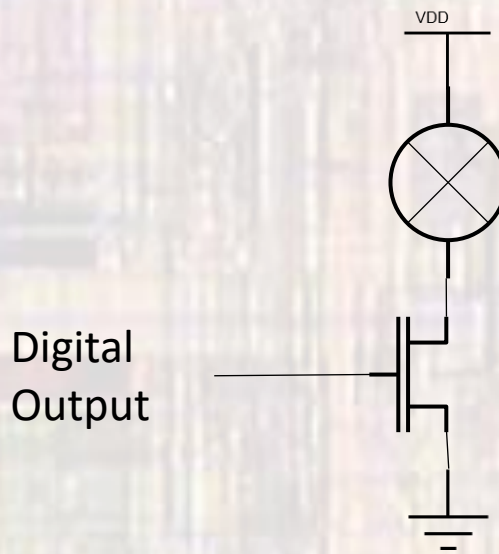 - Wired "nor"
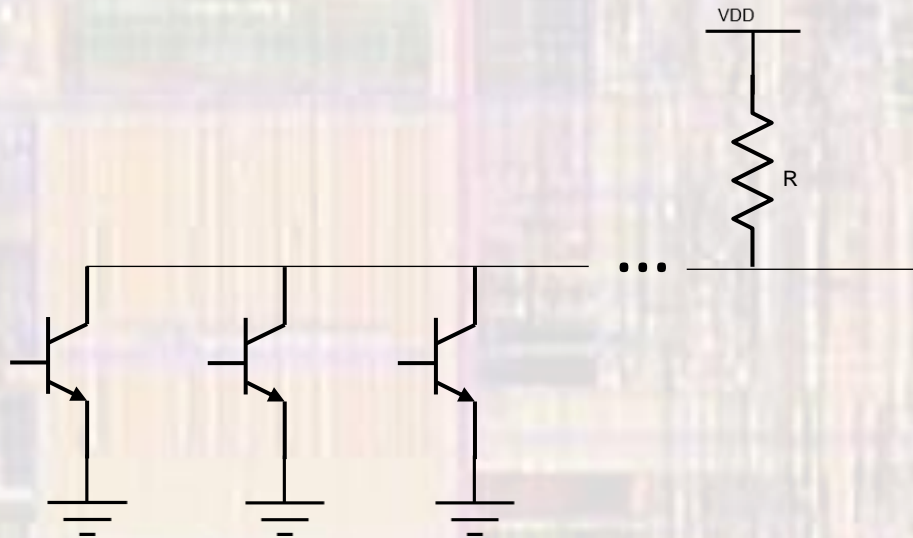
Interfaces - Outputs

- Open Drain
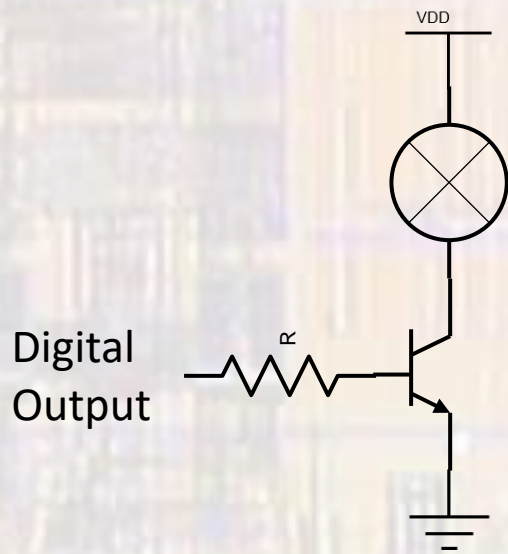 - Wired "nor"
  - TWI / I2C

Interfaces - Outputs

- Basic LED Driver
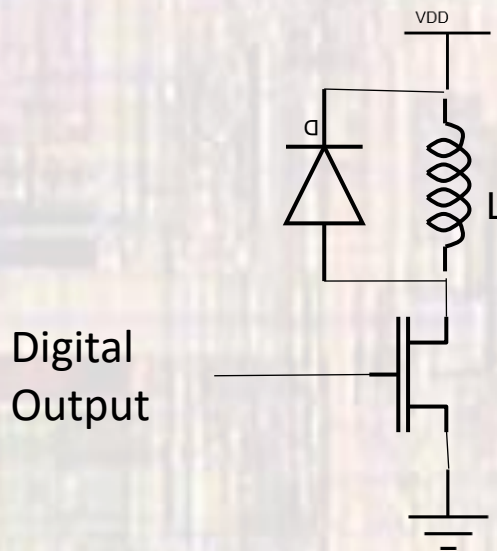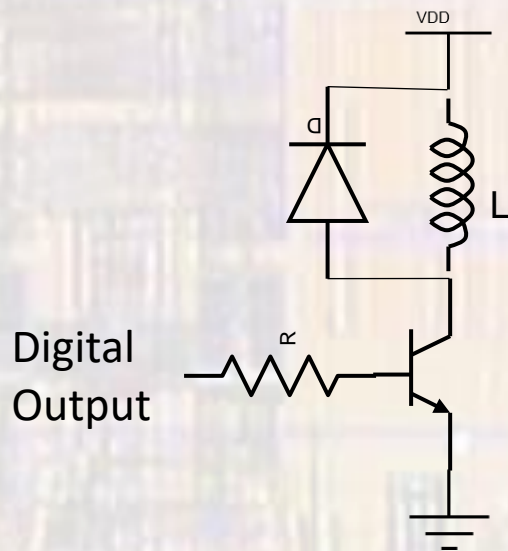 - Current limiting resistor

Interfaces - Outputs

- High Current Loads
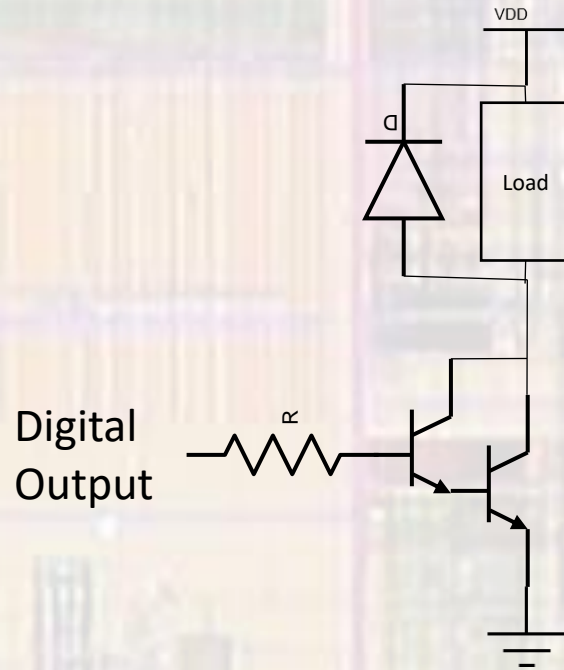 - Lamp
    - Current limiting not required

Interfaces - Outputs

- ## High Current Loads
  - ### Inductive Load
    - Motors, Solenoids, Relays
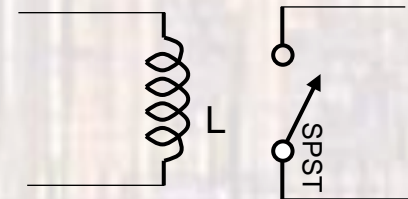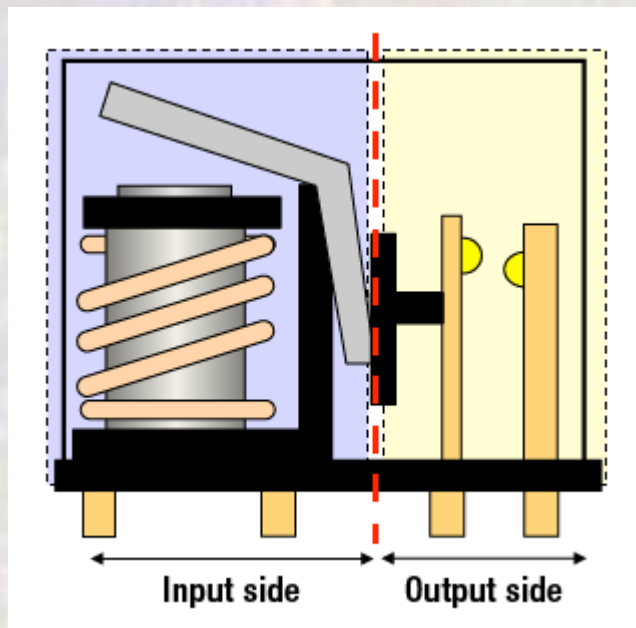   - Flyback protection required

Interfaces - Outputs

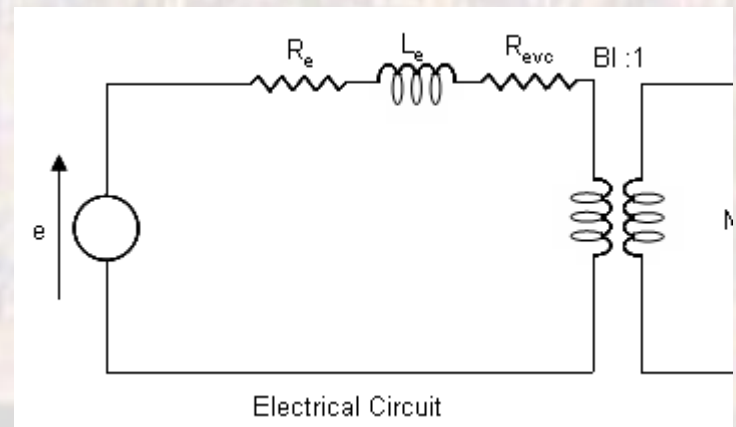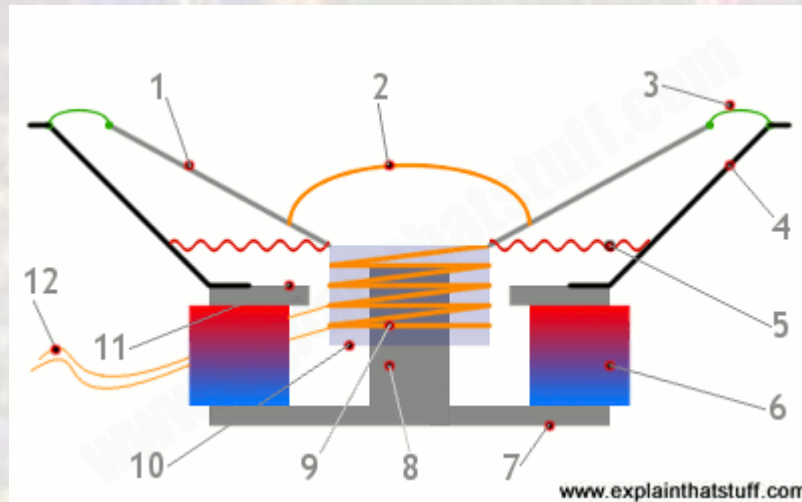- High Current Loads
  - High Gain

Interfaces - Outputs

- High Current Loads
  - Relay

Interfaces - Outputs

- Speaker
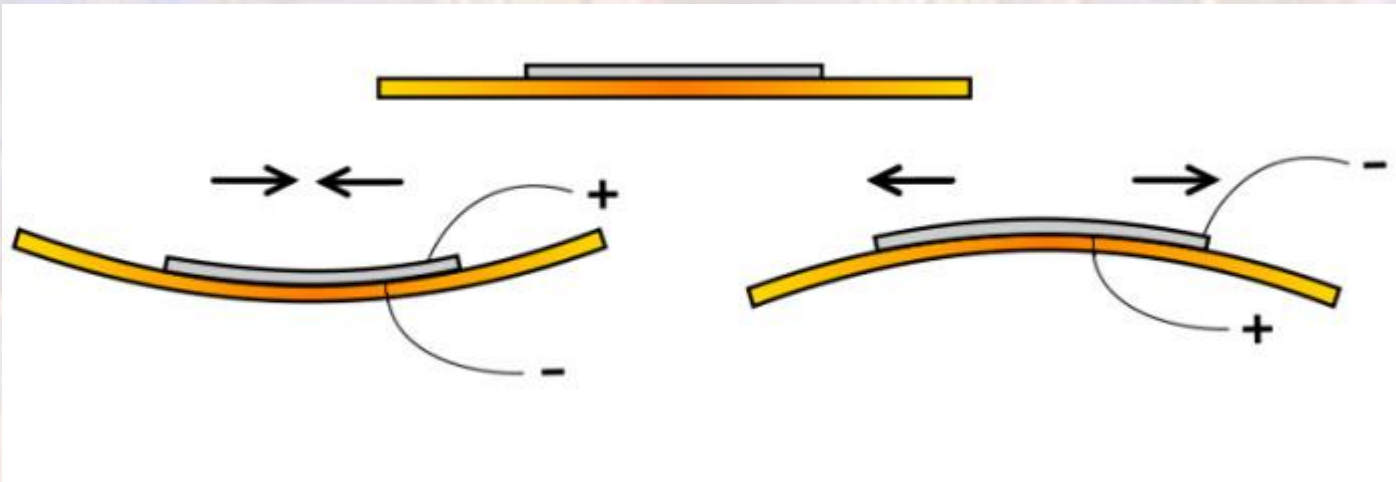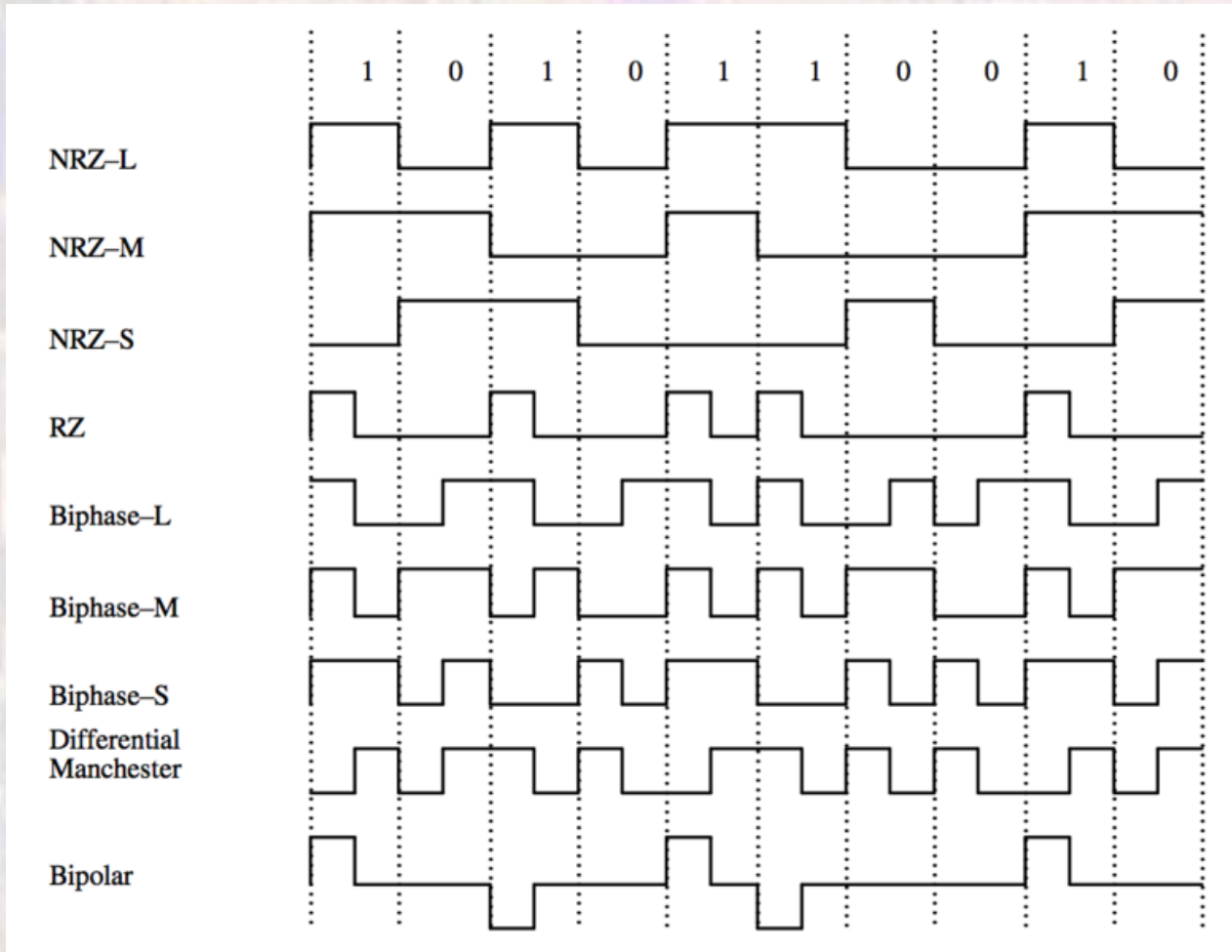

www.explainthatstuff.com

Electrical Circuit

Interfaces - Outputs

- Speaker
  - Piezo-electric

$$I = \frac{\mathrm{d}Q}{\mathrm{d}t}$$

V_{OUT}
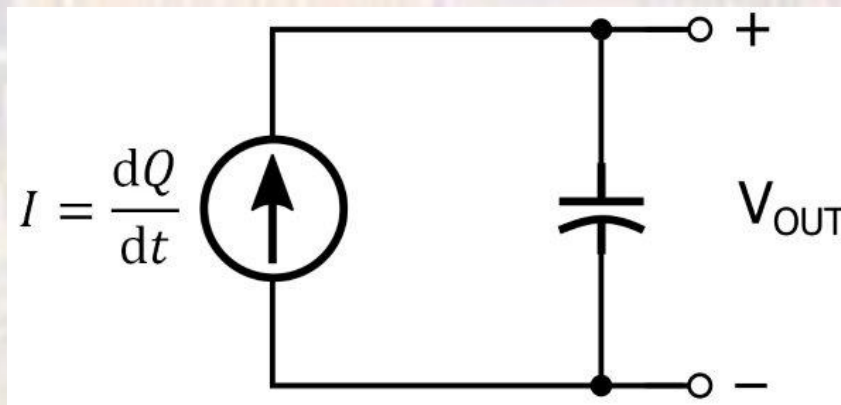
Interfaces - Outputs

- Signal Encoding

Interfaces - Outputs

- Barcode

Example of a Code 39, Mod 10 barcode

31234000452154

| 3 | 1234 | 00045215 | 4 |

| **3** | **1234** | **00045215** | **4** |
| Type Indicator | Location Code | Item or Patron Number | Check Digit |

A B C D E F G H I J K L

M N O P Q R S T U V W X

Y Z 0 1 2 3 4 5 6 7 8 9

[SPACE] - $ % . / + *

Interfaces - Outputs

- QR Code