# Microbit Morse Code transmitter/receiver

The program once flashed to a Microbit is designed to change the allow the Microbit to function as a transmitter and receiver of morse code.

## Required items

* 2 Microbit devices
* Micro USB cable

## How it works

1. Download the provided python code and copy to a Microbit Python Editor. Here is a link to the editor used for development “<https://python.microbit.org/v/3>”
2. Connect Microbit via USB cable and flash the code to the microbit
3. To Transmit code
   * - Press and hold the "A" button for a short duration to send a dot ('.').
   * - Press and hold the "A" button for a longer duration to send a dash ('-').
4. The Micro:Bit will receive incoming Morse code signals from other devices via radio communication and display the related letters. In between characters have to wait 1 sec

## MorseCode Mapping

Provided below is the mapping for the morse code.

|  |  |  |  |
| --- | --- | --- | --- |
| **Char** | **Code** | **Char** | **Code** |
| A | **.-** | U | **..-** |
| B | **-…** | V | **…-** |
| C | **-.-.** | W | **.--** |
| D | **-..** | X | **-..-** |
| E | **.** | Y | **-.--** |
| F | **..-.** | Z | **--..** |
| G | **--.** |  |  |
| H | **….** |  |  |
| I | **..** |  |  |
| J | **.---** |  |  |
| K | **-.-** | 1 | **.----** |
| L | **.-..** | 2 | **..---** |
| M | **--** | 3 | **…--** |
| N | **-.** | 4 | **….-** |
| O | **---** | 5 | **…..** |
| P | **.--.** | 6 | **-….** |
| Q | **--.-** | 7 | **--…** |
| R | **.-.** | 8 | **---..** |
| S | **…** | 9 | **----.** |
| T | **-** | 0 | **-----** |