Metronome:

* Functionality
  + Time signature select
  + Beat division/subdivision select
  + Tempo bpm input
  + Tap out tempo
  + Volume control?

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| RTI | ATD | SPI | TIM | PWM | SCI |
| Pushbutton sampling:   * Start/stop | Potentiometer input:   * “Dial in” bpm | LCD Output:   * BMP readout * Count value | Pushbutton sampling:   * Tap out tempo | Generate “beat” sound |  |
|  |  |  | Trigger “beats” |  |  |

Morse Code Device:

* Functionality
  + Input message via phone app?
  + Input message via Morse tapper
  + Receive responses from a 9S12 output to an LCD
  + Play tones for short and long pulses as received
  + Allow 2 9S12’s to communicate via audible Morse code?

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| RTI | ATD | SPI | TIM | PWM | SCI |
| Pushbutton sampling:   * Start/stop |  | LCD Output:   * Sent message * Received message | Pushbutton sampling:   * Morse code taps | Generate audible pulses | Input typed message |
|  |  | 9S12 pair communication |  |  |  |