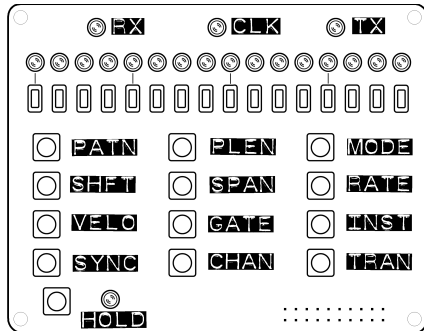


# ARPIE

## midi arpeggiator



**Thankyou for your purchase of an ARPIE kit!** The information on this sheet is the bare minimum needed to build the kit. However, you will find additional information and tips at [six4pix.com/arpie](http://six4pix.com/arpie)

### ARPIE Component Designators

**R1, R2, R3, R4, R18** - 220 Ohm (red-red-brown code) resistor

**R5, R6, R7, R8, (R21)** -1.5 kOhm (brown-green-red code) resistor. **Do not add R21** unless you experience problems with "off" step LEDs flickering or lighting dimly (this is unlikely with the standard LEDs provided with the kit)

**R9, R10, R13** - 10 kOhm (brown-black-orange code ) resistor

**R11, R12, R14, R15, R16, R17, R19, R20** - 1 kOhm (brown-black-red code) resistor

**D1, D2** - 1N4148 Small Signal Diode (small orange/black glass package). Align cathode stripe with corresponding marking on PCB.

**D3, D4, D5, D6** - 1N4001 Rectifier Diode (black plastic package, silver lettering). Align cathode stripe with corresponding marking on PCB.

**C1, C2, C3, C4, (C9)** - 100nF Ceramic Capacitor (104 code). C9 is optional and allows auto-reset during firmware upload.

**C5, C6** - 33pF Ceramic Capacitor (33 code)

**C7, C8** - 4.7uF Electrolytic Capacitor (polarised, check negative terminal marked on package and PCB)

**X1** - 16MHz Crystal

**TR1** - 2N3904 General Purpose NPN Transistor (polarity matters, check outline on PCB)

**Solder the IC sockets before fitting IC's. Check orientation of pin 1 notch/dimple with markings on PCB)**

**IC1** -ATMega328P Microcontroller with firmware

**IC2** - PIC12F1822 Microcontroller with firmware

**IC3, IC4** - 6N138/6N139 High Speed Opto-Coupler

**Check voltage regulator (IC5) orientation against markings on the PCB**

**IC5** - 7805-TO220 +5V Voltage Regulator

**LEDs** – ARPIE uses a row of 16 blue LEDs on the control surface PCB. The control surface has 4 other indicator LEDs (suggested red) and the main board has 3 diagnostic LEDs (suggested green). Feel free to use the supplied green and red LEDs as you wish. Remember the anode (positive) terminal of an LED has the longer lead.

**6-Pin Headers** - solder the male header in the "Serial Prog" position and the 6-pin female header in the position next to TR1.

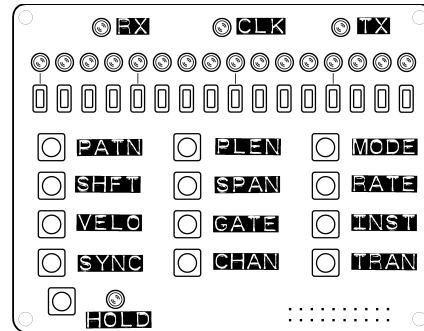
**Switches, Battery holder + M2.5 nuts/bolts, Sockets, Pin Headers, Standoff Pillars + M3 bolts** – it should be reasonably obvious where all those bits go but if in any doubt please refer to the build instructions at the URL given above.

I hope you enjoy your ARPIE. If you have any questions or comments, please contact me at [goarpie@gmail.com](mailto:goarpie@gmail.com) or via the site where you ordered your kit. ARPIE is an open source, open hardware project. All input is welcome, from wish-list ideas to actual code. If you do something amazing with your ARPIE I'd love to see it!

Cheers, Jason

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Cheers, Jason

