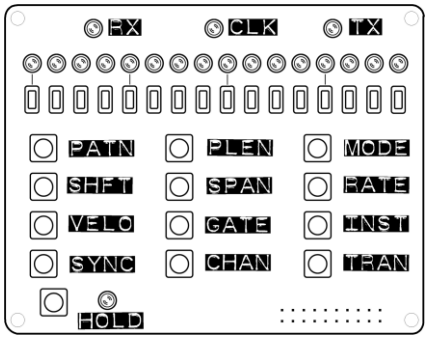
ARPIE
midi arpeggiator



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**

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 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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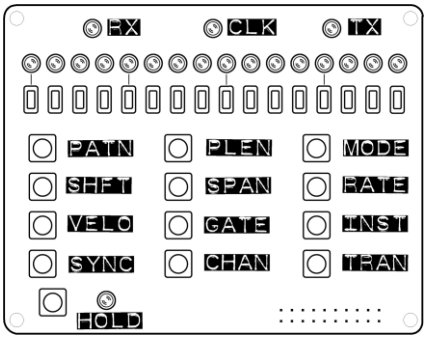

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