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| **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](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 | **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). 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