Thankyou for supporting ARPIE!

The information on this page is the bare minimum needed to build the project, however you will find expanded information for building your ARPIE at the following URL
https://github.com/hotchk155/arpie/wiki

ARPIE Component Designators

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

R5, R6, R7, R8 -1.5 kOhm (brown-green-red code) resistor

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

C1, C2, C3, C4, (C9) - 100nF Ceramic Capacitor (105 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.

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. The supplied 6 pin header is optional and would be soldered in location **ICSP1** where it allows upload of new ARPIE firmware via a suitable cable (e.g. FTDI USB2TTL 5V) and Arduino environment.

I hope you enjoy your ARPIE. If you have any problems please contact me at the following email goarpie@gmail.com or via the site where you ordered your ARPIE

ARPIE is an open source, open hardware project. All input is welcome, from wish-list ideas to actual code. Also if you do something amazing with your ARPIE I'd love to see it

Cheers

Jason Hotchk155

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