

## DESCRIPTION

The BELFRY is a 2-in-1 fuzz, insprired by the now discontinued EQD Spires. The Spires was a combination of the Rosac Nu-Fuzz and EQD's Dream Catcher, which is a modified Fuzz Face. Now I've not taken apart an actual Spires, but based on EQD's description we can get pretty close. The Nu-Fuzz circuit has been modified with slightly more common values than original, and the Fuzz Face side is my imagining of the Dream Catcher (and is very likely not accurate, so tweak to your liking). Much like the EQD Grey Channel (see the Black \& Tan) one footswitch turns on the unit, and the other selects between the two fuzz circuits.

## SCHEMATIC



Resistors

| R1 | 1 M |
| :--- | :--- |
| R2 | $47 \Omega$ |
| R3 | 620 k |
| R4 | 750 k |
| R5 | 750 k |
| R6 | 1.2 M |
| R7 | 1 M |
| R8 | $47 \Omega$ |
| R9 | 33 k |
| R10 | $470 \Omega$ |
| R11 | 100 k |
| CLR1 | 4.7 k |
| CLR2 | 4.7 k |

## Capacitors

| C1 | $47 n$ |
| :--- | :--- |
| C2 | $47 n$ |
| C3 | $10 n$ |
| C4 | $1 n$ |
| C5 | $1 \mu$ |
| C6 | 100 p |
| C7 | $22 \mu$ |
| C8 | $68 n$ |
| C9 | $100 \mu$ |
| C10 | $100 n$ |

Semiconductors

| D1 | 1N5817 |
| :--- | :--- |
| LED1 | 5mm LED |
| LED2 | 5 mm bi-color common <br> cathode |
| Q1 | 2 N 5550 |
| Q2 | 2N5550 |
| Q3 | 2N5550 |
| Q4 | 2 N 5550 |

Electromechanical

| Activate | 3PDT footswitch |
| :--- | :--- |
| Bias | 10k |
| Channel | 3PDT footswitch |
| Fuzz | C1k |
| Level | B50k |
| Tone | B500k |
| Volume | A500k |

## Notes

Other low gain transistors can be used like 2N2222A or 2N3904. Sockets are your friends. If you'd rather ditch the footswitch board and wire up each fuzz independently, pad 1 is the input and pad 2 is the output of Fuzz A ( $\mathrm{Nu}-$ Fuzz), pad 3 is the input and pad 4 is the output of Fuzz B (Fuzz Face), with the + and - pads being $+9 v$ and ground respectively.

## SHOPPING LIST

| Value | Type (suggested) | Quantity |
| :--- | :--- | :--- |
| $47 \Omega$ | $1 / 4$ watt metal or carbon film | 2 |
| $470 \Omega$ | $1 / 4$ watt metal or carbon film | 1 |
| 4.7 k | $1 / 4$ watt metal or carbon film | 2 |
| 33 k | $1 / 4$ watt metal or carbon film | 1 |
| 100 k | $1 / 4$ watt metal or carbon film | 1 |
| 620 k | $1 / 4$ watt metal or carbon film | 1 |
| 750 k | $1 / 4$ watt metal or carbon film | 2 |
| 1 M | $1 / 4$ watt metal or carbon film | 2 |
| 1.2 M | $1 / 4$ watt metal or carbon film | 1 |
| 100 p | Ceramic | 1 |
| 1 n | Film | 1 |


| $10 n$ | Film | 1 |
| :--- | :--- | :--- |
| $47 n$ | Film | 2 |
| $68 n$ | Film | 1 |
| $100 n$ | Ceramic | 1 |
| $1 \mu$ | Electrolytic $(25 \mathrm{v}+)$ | 1 |
| $22 \mu$ | Electrolytic $(25 \mathrm{v}+)$ | 1 |
| $100 \mu$ | Electrolytic $(25 \mathrm{v}+)$ | 1 |
| 1 N 5817 | Schottky rectifier diode | 1 |
| 2 N 5550 | BJT | 4 |
| LED | $5 m \mathrm{~m}$ | 1 |
| Bi-color LED | 5 mm common cathode | 1 |
| $3 P D T$ | Footswitch | 2 |
| $10 k$ trim | Trim potentiometer | 1 |
| A500k | $16 m m$ right angle PC mount | 1 |
| B50k | $16 m m$ right angle PC mount | 1 |
| B500k | $16 m m$ right angle PC mount | 1 |
| C1k | $16 m m$ right angle PC mount | 1 |

LAYOUT


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