

Hypno

Delay Kit by Pedal Markt

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Rev1.0

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1 Introduction

TODO

Enclosures for Hypno and other pedals in the Beastly Series were designed by [Agata Fiz.](#)



Figure 1: Hypno: outside and inside

2 BOM – Bill of Materials

BOM is a document that lists the parts you'd need to build a project. Each row corresponds to a component with a certain value, for example, a 'ceramic capacitor with value 1nF.' There could be one or more actual physical parts per row, their designators are listed in the *Reference* column.



In the BOM *text in italic font* gives tips about how to mount or solder parts.

Table 1: BOM

Ref	Value	Qty	Description
Outboard			
–	Enclosure	1	<i>Mount the DC jack, Footswitch and Lampshade into the enclosure before soldering</i>
–	Lampshade	1	Small transparent plastic part for the LED, <i>mount in enclosure before putting the boards in</i>
–	Rubber Ring	1	<i>Use it to keep Lampshade in place</i>
–	DC Jack	1	Black plastic part with a nut, <i>mount in enclosure before soldering</i>
–	DC Cable	1	Red and black cables in a JST connector, <i>cut to $\approx 10\text{cm}$ and solder to DC Jack once it's mounted in enclosure. Black wire to shorter lug, red to the longer one.</i>
–	Audio Jack	2	<i>Only mount these in the enclosure together with the main board once they are wired up</i>
Main board, floor side			
GND	Wire	2	$\approx 5\text{cm}$, black, <i>strip and tin the ends</i>
IN	Wire	1	$\approx 5\text{cm}$, any color, <i>strip and tin the ends</i>
OUT	Wire	1	$\approx 5\text{cm}$, any other color, <i>strip and tin the ends</i>
R8	5.6k	1	Resistor
R9	56k	1	Resistor
R10	100	1	Resistor
R11	68k	1	Resistor
R12	100k	1	Resistor
R19	470k	1	Resistor
R20	1k	1	Resistor
R21	6.8k	1	Resistor
R2, R7	15k	2	Resistor
R13, R14	1M	2	Resistor
R15, R16, R17, R18	140k	4	Resistor

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Table 1: BOM (Continued)

	R1, R3, R4, R5, R6, R25, R26, R27	10k	8	Resistor
	D3	1N4148	1	Diode, <i>Orientation matters</i>
	D4	1N4001	1	Diode, <i>Orientation matters</i>
	U2	PT2399	1	Delay chip. <i>Please use socket. Orientation matters</i>
	U3	TL072	1	Dual opamp. <i>Please use socket. Orientation matters</i>
	C18	1u	1	Ceramic capacitor
	C20	2.2p	1	Ceramic capacitor
	C7, C13	560p	2	Ceramic capacitor
	C15, C24	100n	2	Ceramic capacitor
	J1	Power Socket	1	JST 2-pin m, in the bottom-left part of the board, <i>orientation matters</i>
	Q1, Q2	2N3904	2	NPN transistor, <i>orientation matters</i>
	U1	L78L05	1	Voltage regulator, <i>orientation matters</i>
	C14	10n	1	Film capacitor
	C5, C11	3.9n	2	Film capacitor
	C8, C9, C10, C12, C19	100n	5	Film capacitor
	C1, C17	1u	2	Film capacitor
	C6	100n	1	Electrolytic capacitor, <i>orientation matters</i>
	C3	330n	1	Electrolytic capacitor, <i>orientation matters</i>
	C26	100u	1	Electrolytic capacitor, <i>orientation matters</i>
	C16, C25	10u	2	Electrolytic capacitor, <i>orientation matters</i>
	C2, C4, C23	4.7u	3	Electrolytic capacitor, <i>orientation matters</i>
Main board, player side				
	–	Ribbon cable	1	Pads for that cable are in the bottom-center of the main board, <i>solder one end to main board, another to switch board, make sure pin names on the two boards match, IN on one board is connected to IN on the other board etc</i>

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Table 1: BOM (Continued)

	RV1 (Sink)	C10k	1	Potentiometer
	RV2 (Recall)	A100k	1	Potentiometer
	RV3 (Lucidity)	B100k	1	Potentiometer
Switch board, player side				
	Rled	1k	1	<i>larger value will make the LED dimmer, values up to 6.8k are reasonable</i>
	—	LED	1	<i>Insert in PCB first. Solder last, once the main board is in the enclosure. Orientation matters</i>
	—	Footswitch	1	<i>Mount in enclosure before putting the boards in</i>

2.1 Note on values

Different kits and schematics designate values differently. For example, these usually mean the same value:

$$2.2\text{ k}\Omega = 2.2k = 2k2 = 2.2 \times 10^3\text{ Ohm} = 2200\text{ Ohm}$$

$$4.7\text{ }\mu\text{F} = 4.7u = 4u7 = 4.7 \times 10^{-6}\text{ Farad} = 0.0000047\text{ Farad}$$

Table 2: Component values

Value	Multiplier	Unit
Resistance		
100 Ω , 100R, 100	1	Ohm
1 k Ω , 1k	10^3	Ohm
1 M Ω , 1M	10^6	Ohm
Capacitance		
1 pF, 1p	10^{-12}	Farad
1 nF, 1n	10^{-9}	Farad
1 μ F, 1u	10^{-6}	Farad

3 Revision History

Revision	Date	Author(s)	Description
1.0	May 11, 2025	AS	Created