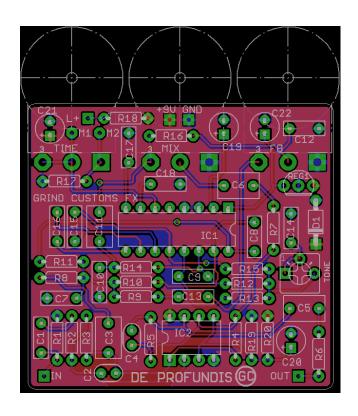
# **GRIND CUSTOMS FX**

www.grindcustomsfx.com



# **De Profundis - Delay**



R1	1M	C1	22nF (box)	D1	1N4001
R2	150K	C2	100pF (disc)	REG	78L05
R3	330K	C3	1μF (box)	IC1	PT2399
R4	22K	C4	100pF (disc)	IC2	TL072
R5	10K	C5	1μF (box)	FEEDBACK	B50K
R6	1K	C6	1μF (box)	MIX	B50K
R7	22K	C7	10nF (box)	TIME	B50K
R8	22K	C8	2.2nF (box)	TONE	10K (trimmer)
R9	10K	C9	2.2nF (box)		
R10	10K	C10	10nF (box)		
R11	10K	C11	1μF (box)		
R12	22K	C12	47nF (box)		
R13	10K	C13	22nF (box)		
R14	1K	C14	100nF (box)		
R15	10K	C15	100nF (box)		
R16	1K	C16	100nF (box)		
R17	2K2	C17	100nF (box)		
R18	4K7	C18	100nF (box)		
R19	10K	C19	47μF (electro)		
R20	10K	C20	47μF (electro)		
		C21	100μF (electro)		
		C22	100μF (electro)		

PAGE 1 OF 1

## **GRIND CUSTOMS FX**

### www.grindcustomsfx.com



#### **Overview**

The DeProfundis Delay is a PT2399-based digital delay with aggressively filtered repeats and the possibility of very long delay times (and minimal delay line noise). There is also a tone control trimmer to adjust the high-pass cutoff frequency on the repeats. The stock values yield a max delay time of approximately 550ms - 600ms. With a minor modifications (see below), max delay time can be extended to almost 900ms.

### **Tweaks & Modifications**

#### "Love You Long Time" - Extend the max delay time

This is a very easy modification. Change the Time pot to A100K and then add a 270K resistor in parallel with Time. You can add the resistor either to the pot pads on the board, or you can use the pads marked "M1" and "M2" (see below for more info on these). Adding the 270K resistor brings the Time pot's total resistance value down to about 75K, which is about the limit of what this circuit can handle without getting noisy and producing synth-like repeats (more resistance = more delay time). If you don't have 270K on hand, try 220K, but be aware that this will give you less max delay time. Or you could put multiple resistors in series to get close to 270K.

#### **Adding Modulation**

The pads marked "M1" and "M2" are there to make adding off-board modulation neater and easier. The intent is to use an LFO that drives the classic LED/LDR combo to offer variable resistance as the output. The LDR's leads should, in some fashion, connect to the M1/M2 pads; via a wire run from the LFO daughter board is probably the best way to handle it. Alternatively, the LDR can be connected directly to pads 1 and 3 of the Time pot. That's where M1/M2 are routed, so either one works.

There is no polarity involved, so it does not matter which lead goes where from the LDR to the delay PCB.

#### **Even Darker Repeats**

If the dark and murky tone of the stock circuit does not satisfy your black heart, try increasing the value of C7 to taste.

# **GRIND CUSTOMS FX**



## www.grindcustomsfx.com

