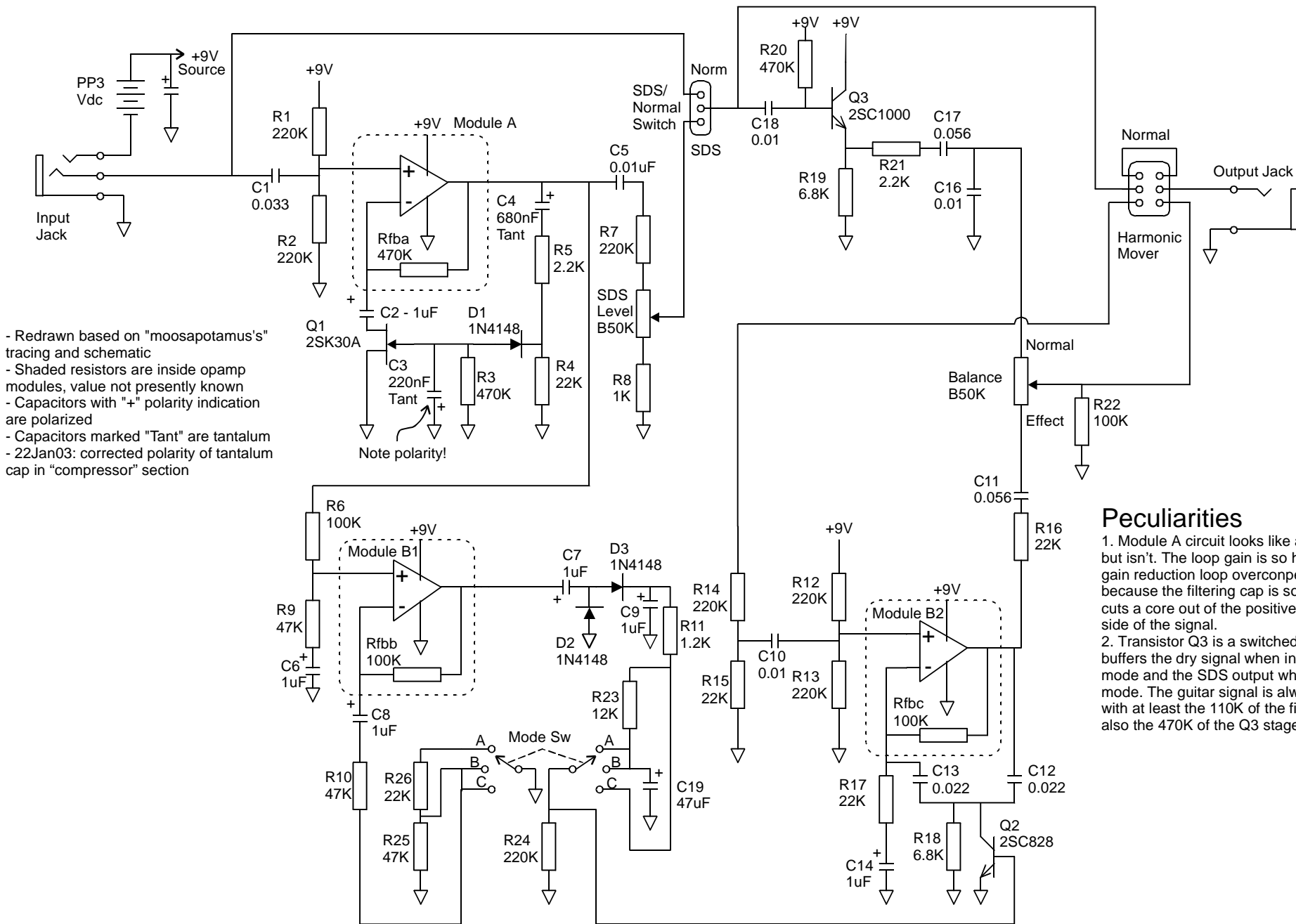


# Roland AG-5 Funny Cat



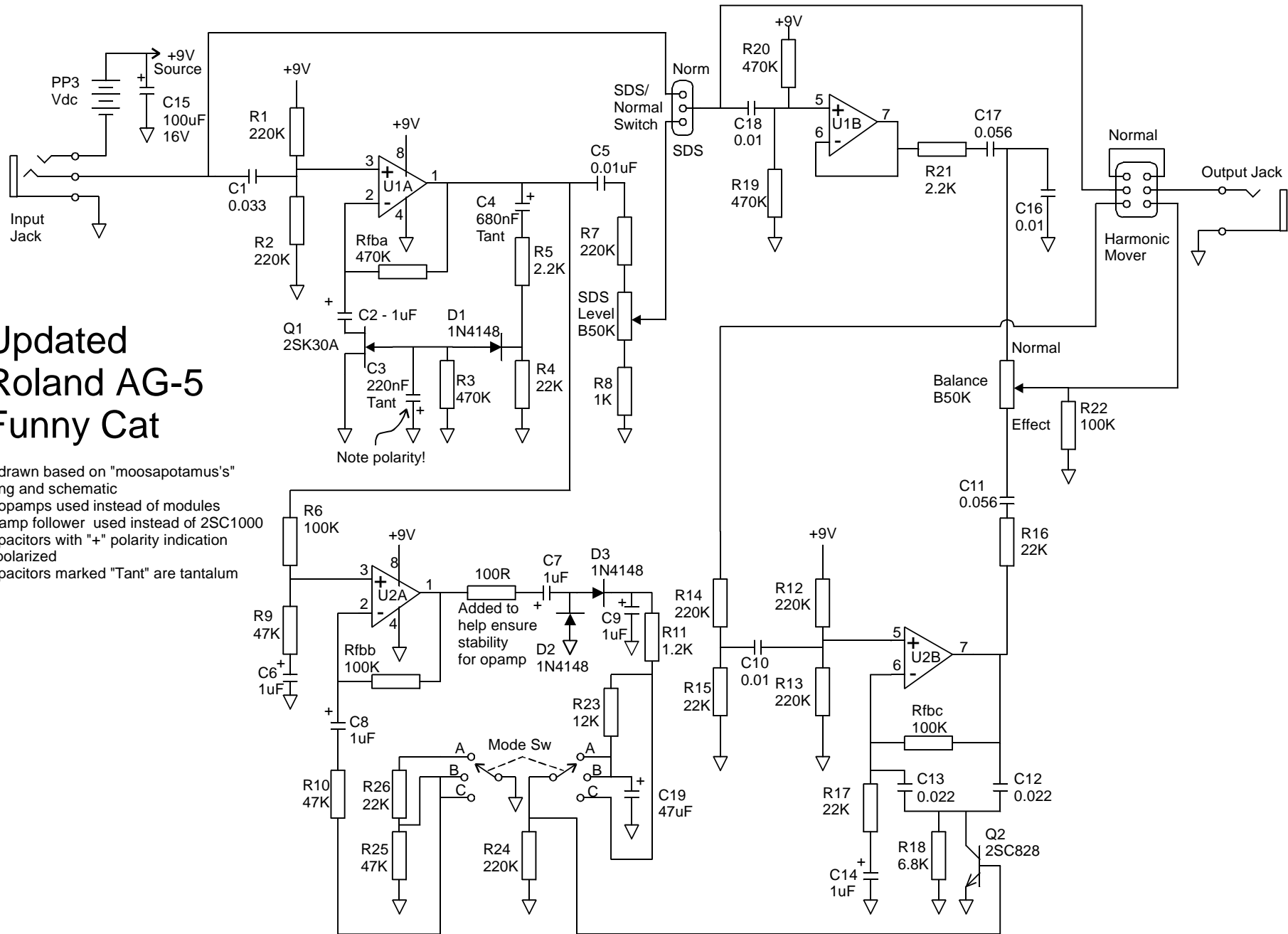
- Redrawn based on "moosapotamus's" tracing and schematic
- Shaded resistors are inside opamp modules, value not presently known
- Capacitors with "+" polarity indication are polarized
- Capacitors marked "Tant" are tantalum
- 22Jan03: corrected polarity of tantalum cap in "compressor" section

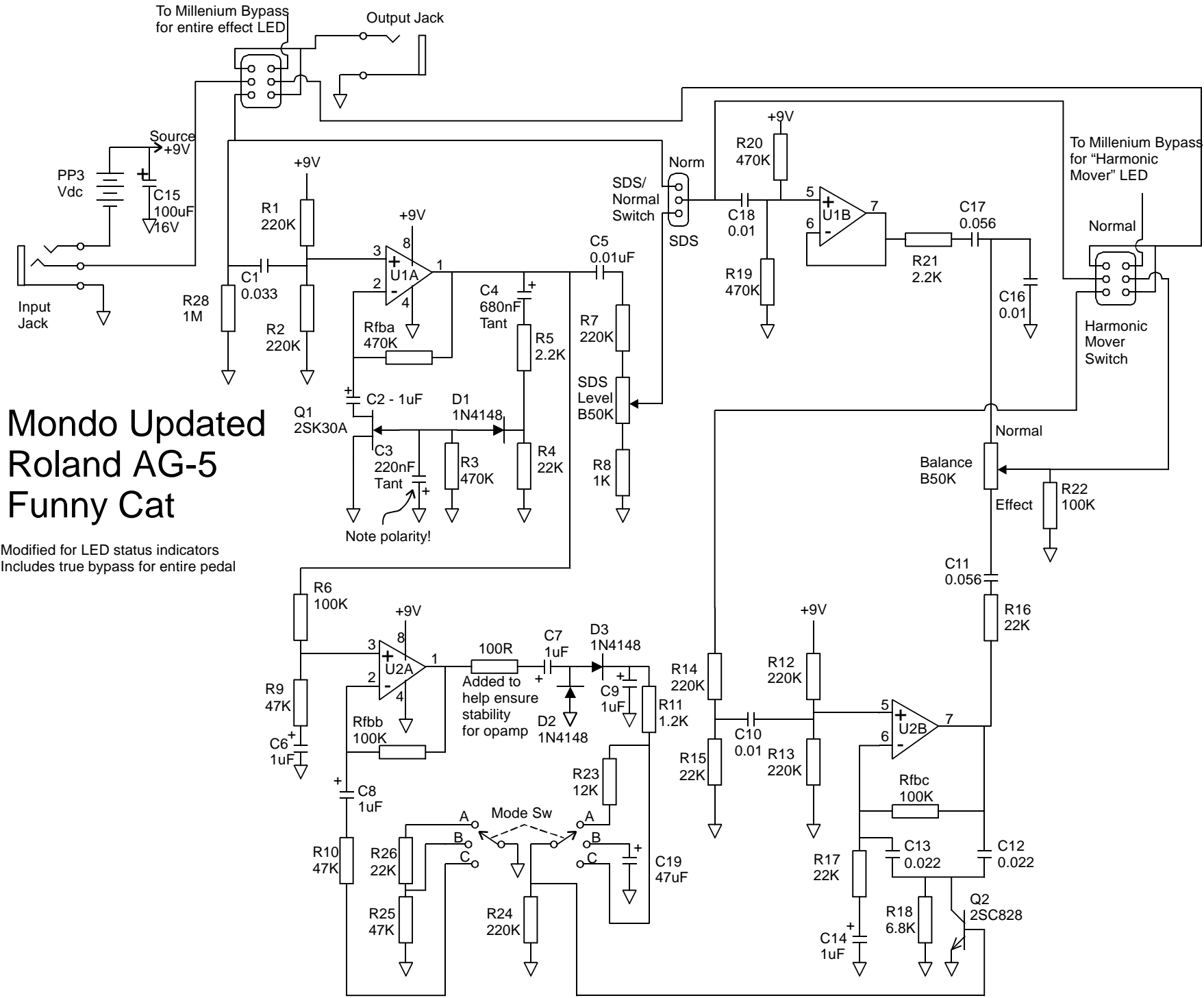
## Peculiarities

1. Module A circuit looks like a compressor but isn't. The loop gain is so high that the gain reduction loop overcompensates, and because the filtering cap is so small, it cuts a core out of the positive going side of the signal.
2. Transistor Q3 is a switched buffer. It buffers the dry signal when in non-SDS mode and the SDS output when in SDS mode. The guitar signal is always loaded with at least the 110K of the first stage, and also the 470K of the Q3 stage.

# Updated Roland AG-5 Funny Cat

- Redrawn based on "moosapotamus's" tracing and schematic
- IC opamps used instead of modules
- Opamp follower used instead of 2SC1000
- Capacitors with "+" polarity indication are polarized
- Capacitors marked "Tant" are tantalum





# Mondo Updated Roland AG-5 Funny Cat

- Modified for LED status indicators
- Includes true bypass for entire pedal

# Silly Feline PCB layout and wiring

The full sized PCB layout is shown at bottom left, and the parts stuffing diagram and wiring diagram is at left. Pots are shown viewed from the back.

Note that the original Funny Cat was not a true bypass box. The input impedance of this effect will be in the 50K region, enough to have treble loss when the SDS/Normal switch is in the "Normal" position. A true bypass around the whole thing might be a good addition.

In making the PCB, all holes except off-board wiring pads and the switch pads are drilled out to 0.028" to 0.032". The off-board wiring pads need to be about 0.040", and the switch pad holes need to be 0.060" to 0.062" to accommodate the pins of the specified switch.

Notice the square pads. Those are polarity designators. The square pads in the IC layout patterns signify pin 1. In the electrolytic caps, the square pad is the (+) pin. Only Q2A or Q2B are used, not both. Q2A is the original type number with pinout ECB for the Japanese "2SC" types, and Q2B is pinned out EBC for "2N" types. Use whichever type you can get, but put it in the correct footprint.

On the board layout, C6 and R9 are reversed in order from the schematic. This has no effect on the unit's operation.

R1	220K	R21	2.2K	C10	0.01	The other usual stuff: SPDT switch (SDS/N) DPDT stomp (s) Input and output jacks Box Battery clip knobs wire solder time attention money...
R2	220K	R22	100K	C11	0.056	
R3	470K	R23	12K	C12	0.022	
R4	22K	R24	220K	C13	0.022	
R5	2.2K	R25	47K	C14	1uF	
R6	100K	R26	22K	C15	100uF16V	
R7	220K	R27	100	C16	0.01	
R8	1K	Rfba	470K	C17	0.056	
R9	47K	Rfbb	100K	C18	0.01	
R10	47K	Rfbc	100K	C19	47uF 16V	
R11	1.2K	R28	1M			
R12	220K	C1	0.033	SDS Level	- 50K log	
R13	220K	C2	1uF	Balance	- 50K log	
R14	220K	C3	0.22tant	All diodes	1N4148	
R15	22K	C4	0.68 tant	U1, 2 =	dual opamp	
R16	22K	C5	0.01	Q1	2SK30A	
R17	22K	C6	1uF	Q2A	2SC828	
R18	6.8K	C7	1uF	Q2B	2N3904	
R19	470K	C8	1uF	Sw1 =	4P3T rotary Mouser # 105-14574	
R20	470K	C9	1uF	(Lorlin nylon rotary switch #105-14574)		

