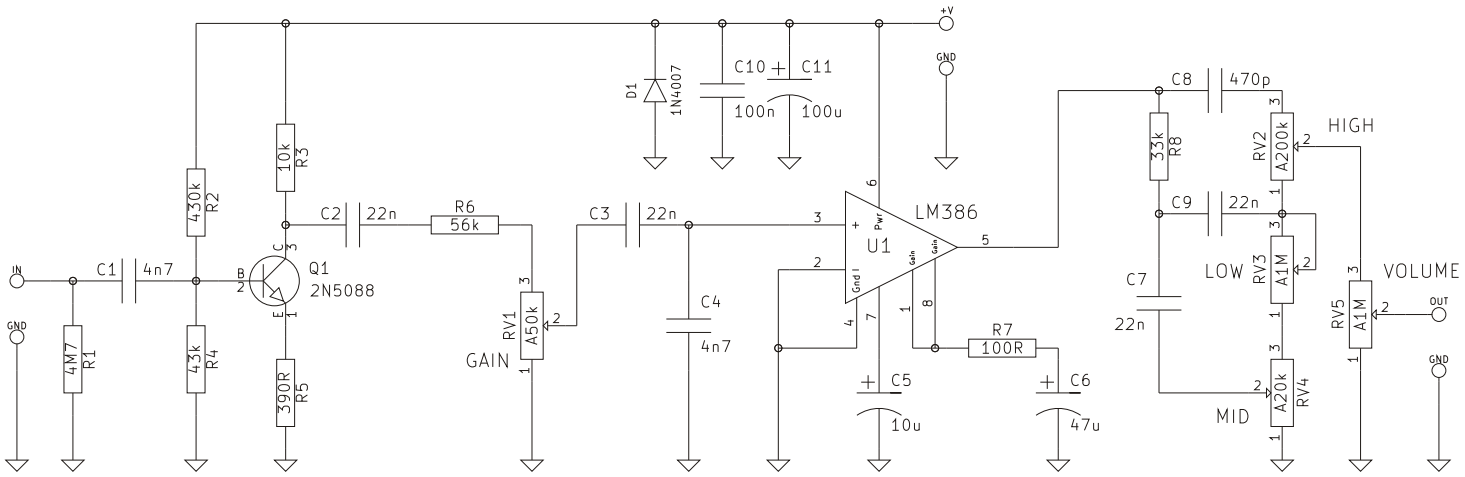
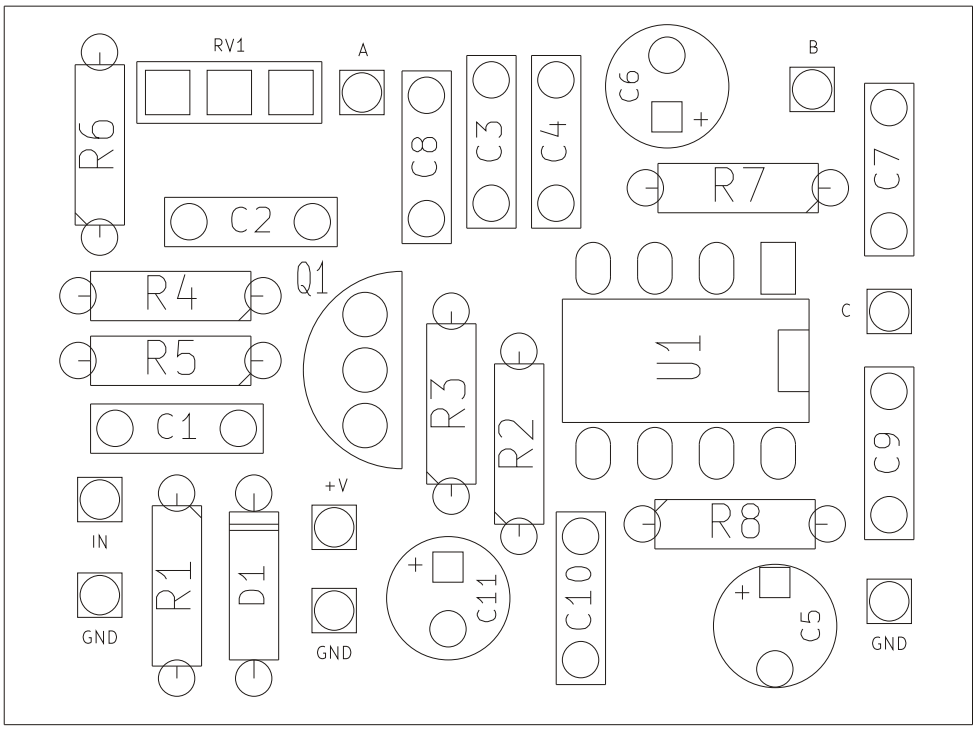
**Distortus Maximus™ schematic:** **12.02.2019**

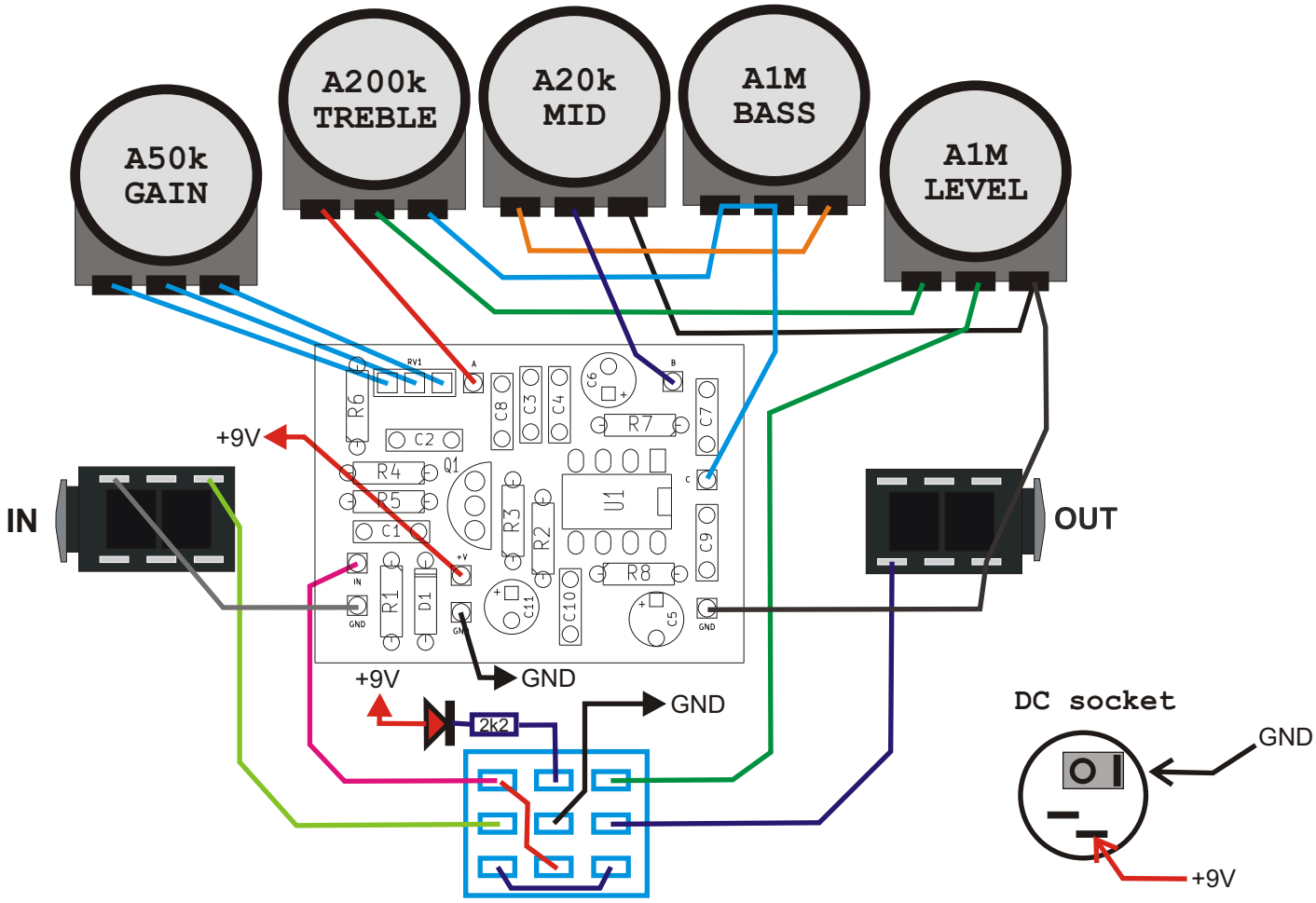



**PCB parts placement diagram:**




| | | | | | |
|---|---|---|---|---|---|
| R1 | 4M7 | C1 | 4n7 | D1 | 1N400X |
| R2 | 430k | C2 | 22n | Q1 | 2N5088 |
| R3 | 10k | C3 | 22n | U1 | LM386 |
| R4 | 43k | C4 | 4n7 | | |
| R5 | 390R | C5 | 10u | | |
| R6 | 56k | C6 | 47u | | |
| R7 | 100R | C7 | 22n | | |
| R8 | 33k | C8 | 470p | | |
| RV1 | A50k | C9 | 22n | | |
| RV2 | A200k | C10 | 100n | | |
| RV3 | A1M | C11 | 100u | | |
| RV4 | A20k | | | | |
| RV5 | A1M | | | | |

Wiring (bottom view):




Use metal enclosure connected to ground.
Power supply: 9V DC

Bill of materials:

Resistors:

| | | |
|---|---|---|
| 100R | 1pcs. | "R7" |
| 390R | 1pcs. | "R5" |
| 2k2 | 1pcs. | "LED" |
| 10k | 1pcs. | "R3" |
| 33k | 1pcs. | "R8" |
| 43k | 1pcs. | "R4" |
| 56k | 1pcs. | "R6" |
| 430k | 1pcs. | "R2" |
| 4M7 | 1pcs. | "R1" |

Capacitors:

| | | |
|---|---|---|
| 470p | 1pcs. | "C8" |
| 4n7 | 2pcs. | "C1 C4" |
| 22n | 4pcs. | "C2 C3 C7 C9" |
| 100n | 1pcs. | "C10" |

Electrolytic capacitors:

| | | |
|---|---|---|
| 10u | 1pcs. | "C5" |
| 47u | 1pcs. | "C6" |
| 100u | 1pcs. | "C11" |

Semiconductors:

| | | |
|---|---|---|
| 1N400X | 1pcs. | "D1" |
| 2N5088 | 1pcs. | "Q1" |
| LM386 | 1pcs. | "U1" |
| LED | 1pcs. | |

Other:

| | |
|---|---|
| Footswitch 3PDT | 1pcs. |
| Knobs | 5pcs. |
| JACK socket | 2pcs. |
| DC socket 5.5/2.1 | 1pcs. |

Potentiometers:

| | | |
|---|---|---|
| A1M | 2pcs. | "BASS LEVEL" |
| A20k | 1pcs. | "MID" |
| A200k | 1pcs. | "TREBLE" |
| A50k | 1pcs. | "GAIN" |

# Resistor color code:

390 x 10Ω = 3,9kΩ

| Color | Band 1 | Band 2 | Band 3 | Multiplier | Tolerance |
|---|---|---|---|---|---|
| Black | 0 | 0 | 0 | 1 Ω | |
| Brown | 1 | 1 | 1 | 10 Ω | 1% |
| Red | 2 | 2 | 2 | 100 Ω | 2% |
| Orange | 3 | 3 | 3 | 1k Ω | |
| Yellow | 4 | 4 | 4 | 10 kΩ | |
| Green | 5 | 5 | 5 | 100 kΩ | 0,5% |
| Blue | 6 | 6 | 6 | 1 MΩ | 0,25% |
| Purple | 7 | 7 | 7 | 10 MΩ | 0,1% |
| Gray | 8 | 8 | 8 | 100 MΩ | 0,05% |
| White | 9 | 9 | 9 | 1 GΩ | |
| Gold | | | | 0,1 Ω | 5% |
| Silver | | | | 0,01 Ω | 10% |

# Capacitors markings:

471 = 47 x $10^1$ pF = 470pF
472 = 47 x $10^2$ pF = 4700pF = 4,7nF
473 = 47 x $10^3$ pF = 47000pF = 47nF
474 = 47 x $10^4$ pF = 470000pF = 470nF

| | | | |
|---|---|---|---|
| 100pF | 100p | 100 | 101 |
| 220pF | 220p | 220 | 221 |
| 4,7nF | 4n7 | 0.0047 | 472 |
| 10nF | 10n | 0.01 | 103 |
| 100nF | 100n | 0.1 | 104 |
| 220nF | 220n | 0.22 | 224 |
| 470nF | 470n | 0.47 | 474 |
| 1000nF | 1uF | 1u | 105 |