

Rampage V1.3: Assembly Reference

Main PCB

Open "Main Board Bag A"

Resistors:

| Qty | Value | Code | Name on PCB |
|-----|-------|--------------------------------------|--|
| 29 | 100k | Brown, black, black, orange, brown | R6, R8, R9, R10, R11, R14, R15, R23, R24, R28, R32, R33, R34, R35, R37, R38, R41, R42, R48, R49, R54, R56, R57, R59, R61, R69, R80, R81, R85 |
| 17 | 10k | Brown, black, black, red, brown | R17, R21, R22, R25, R31, R46, R55, R60, R63, R66, R67, R71, R75, R82, R83, R84, R87 |
| 6 | 560k | Green, blue, black, orange, brown | R1, R4, R12, R27, R72, R74 |
| 6 | 1M | Brown, black, black, yellow, brown | R19, R36, R39, R40, R65, R76 |
| 4 | 2k2 | Red, red, black, brown, brown | R43, R44, R45, R47 |
| 4 | 3M | Orange, black, black, yellow, brown | R13, R16, R20, R29 |
| 4 | 1k | Brown, black, black, brown, brown | R79, R88, R89, R90 |
| 4 | 4K7 | Yellow, violet, black, brown, brown | R70, R73, R77, R78 |
| 4 | 110k | Brown, brown, black, orange, brown | R2, R3, R50, R51 |
| 3 | 30k | Orange, black, black, red, brown | R18, R26, R30 |
| 2 | 22k | Red, red, black, red, brown | R68, R86 |
| 2 | 180k | Brown, gray, black, orange, brown | R53, R64 |
| 2 | 470k | Yellow, violet, black, orange, brown | R58, R62 |
| 1 | 20k | Red, black, black, red, brown | R52 |
| 1 | 10M | Brown, black, blue, gold | R5 |

Solder the diodes respecting the polarity. Black or White line on the diode must be in the same place as white line on diode symbol on PCB silkscreen.

| Qty | Value | Name on PCB |
|-----|--------|--|
| 23 | 1N4148 | D1, D2, D3, D4, D5, D6, D7, D8, D9, D10, D11, D12, D13, D14, D15, D16, D17, D18, D19, D20, D21, D24, D25 |
| 2 | 1N5817 | (black color) D22, D23 |

Solder the two ferrite beads passing through a recycled resistor leg and proceed as if it were a resistor. Ferrite beads don't have polarity.

| QTY | Name on PCB |
|-----|--------------------|
| 2 | FERRITE+, FERRITE- |

Open "Main Board Bag B"

Place the sockets taking care of the orientation and solder them on IC1, IC2, IC3, IC4, IC5, IC6, IC7 and IC8. The orientation must match the PCB's drawing.

Place the eight ICs on the sockets taking care of polarity. To do that the mark on front must match the mark on the socket and the PCB's silkscreen.

| Qty | Value | Name on PCB |
|-----|----------|--|
| 8 | TL074/84 | IC1, IC2, IC3, IC4, IC5, IC6, IC7, IC8 |

Open "Main Board Bag B"

Solder the Capacitors:

| QTY | Value | Code | Name on PCB |
|-----|----------------|----------------|---|
| 20 | 100n | 104 | C3, C4, C5, C7, C8, C12, C13, C14, C17, C18, C19, C21, C23, C24, C25, C26, C27, C28, C31, C32 |
| 2 | 100p | 101 | C20, C22 |
| 2 | 560p | 561 | C10, C11 |
| 2 | 1n Polystyrene | (Silver color) | C15, C16 |

Solder electrolytic Capacitors:

Values written at the side of the capacitor. Mind polarity. Check positive terminal on board and make it match with long leg.

| QTY | Value | Code | Name on PCB |
|-----|-------|---------|-------------|
| 2 | 10uf | 10uFsad | C29, C30 |

Solder transistors. Be sure they are on proper position (same as the silkscreen on the PCB)

| QTY | Value | Name on PCB |
|-----|--------|----------------|
| 4 | 2n3904 | T1, T2, T3, T4 |

Place and solder the two Male Pin Headers at the top side of the silkscreen, ensuring it is 90° from PCB.

Solder the power connector ensuring the position is correct: it must be on the silkscreen side with the pins facing out.

Control PCB

Open "Control Board Bag A"

Resistors:

| QTY | Value | Code | Name on PCB |
|-----|-------|--------------------------------------|--|
| 13 | 1k | Brown, black, black, brown, brown | R100, R101, R102, R103, R105, R106, R118, R119, R123, R125, R134, R135, R140 |
| 10 | 100k | Brown, black, black, orange, brown | R110, R111, R112, R115, R120, R121, R128, R131, R148, R149 |
| 6 | 2k2 | Red, red, black, brown, brown | R104, R107, R108, R109, R136, R137 |
| 6 | 10k | Brown, black, black, red, brown | R116, R117, R122, R124, R145, R147 |
| 4 | 23k7 | Red, orange, violet, red, brown | R138, R142, R143, R146 |
| 4 | 110k | Brown, brown, black, orange, brown | R113, R114, R126, R127 |
| 3 | 4k7 | Yellow, violet, black, brown, brown | R129, R130, R139 |
| 2 | 22k | Red, red, black, red, brown | R132, R133 |
| 2 | 4M7 | Yellow, violet, black, yellow, brown | R141, R144 |

Solder diodes respecting the polarity. Black line on the diode must be in the same place as white line on the diode PCB silkscreen.

| QTY | Value | Name on PCB |
|-----|--------|------------------------|
| 4 | 1N4148 | D100, D101, D102, D103 |

Capacitors:

| QTY | Value | Code | Name on PCB |
|-----|----------------|------|------------------------|
| 2 | 470n Polyester | 474 | C104, C105 |
| 2 | 100n | 104 | C102, C103 |
| 4 | 10n | 103 | C106, C107, C108, C109 |
| 2 | 47n Polyester | 472 | C100, C101 |

Solder transistors. Be sure they are on proper position (same as the silkscreen on the PCB)

| QTY | Value | Name on PCB |
|-----|--------|------------------------|
| 4 | 2n3904 | T100, T101, T102, T103 |
| 2 | 2n3906 | T104, T105 |

Solder the two 10k trimmers on SYMETRY_A and SYMETRY_B with the screw facing out of the PCB.

Open "Control Board Bag B"

Place the two female pin headers (to_con_A, To_con_B) and solder them ensuring it is 90° from PCB. Then cut with a plyers the excess of the pins on the other side so as to facilitate the placement of the faders (next step)

Solder the faders in the side indicator by the drawing ensuring they are 90° from PCB. (FALL_POT, FALL_POT_B, RISE_POT, RISE_POT_B)

Place the two spacers on the holes using his the male side and facing to the resistor's side of the PCB. Then fix with the two 3mm nuts.

Open MiniJacks bag

Place minijacks ensuring they are by the silkscreen side **but don't solder** them until the front panel is on place and with all nuts screwed to it.

This way it's easier to solder them on the right position. Keep in mind that the front pannel holes are quite narrow and is almost impossible to place it with all the components already soldered. **Caution:** the switch nuts and the jack nuts looks the same but they are not and wil not fit in each other's thread so dont mix them!

Cut the little ledge on all three pots with cutting pliers as pictured:



Place potentiometers ... **but don't solder** them.

| <i>QTY</i> | <i>Type</i> | <i>Name on PCB</i> |
|------------|---------------|--------------------|
| 2 | Dual (6pin) | SHAPE_A, SHAPE_B |
| 1 | Single (3pin) | Crossfader |

Place the four switches and the two push buttons **but don't solder** them until they are screw to the front panel. This way it's easier to solder them on the right position.

You will recognize them because when switching, two of them have just two different positions and never stops on the middle.

| <i>QTY</i> | <i>Type</i> | <i>Name on PCB</i> |
|------------|-----------------------|--------------------|
| 2 | Single two position | CYCLE_A, CYCLE_B |
| 2 | Single three position | RANGE_A, RANGE_B |
| 2 | Push Button | M_TRIG_A, M_TRIG_B |

Put LEDs on place taking care of the polarity. **but don't solder** them until the front panel is on place. This the only way to solder them on the right position.

Long Leg is the + and short is the minus. In the PCB the square hole is the minus and there is a + symbol to indicate you the right position.

| <i>QTY</i> | <i>Name on PCB</i> |
|------------|---|
| 9 | F_A_LED, F_B_LED, LED_A, LED_A>B, LED_B, LED_MAX, LED_MIN, R_A_LED, R_B_LED |

Place the front panel moving a little the parts one by one if necessary until you fit them to the top. At this point a sharp tweezers can be helpful.

screw in the next order: minijacks, switches, pots and then push button until all of them are flat and touching completely the the panel. Then solder all of them.

Place the LEDs in the panel holes making sure they are on the right level and proceed to solder them.

Plug the PCB1 on the PCB2 using the pin headers and esuring the two 3mm holes match the spacers.Screw both boards using two screws.

Put The knobs on the potentiometers and the caps on the switches/faders

Plug the Power ribbon cable: The blue wire (negative) correspond to the pin number one of the connectors. The pin number one is indicated with a small triangle and usually with a line in your power bus.