

OutputBuffers – mounting instructions

Thanks for buying this Outputbuffers pcb or kit! Now the fun of mounting starts. Make sure you read the complete instructions before you start mounting. Complete assembly can be done by an experienced hobbyist in about two hours. This circuit was designed to be used in a preamplifier project. More information can be found on the project page:

<http://www.djuke.nl/en/projects/10-pre-amplifiers/34-preamplifier2>

List of components

The kit consists of the following components. If you bought the pcb, these components are suggested (but you can of course adapt it to your needs).

SMD components

Qty	Value	Device	Parts
8	100n	C-1206	C1, C3, C4, C6, C7, C9, C10, C25
8	NE5532D	Opamp	IC1, IC2, IC3, IC4, IC5, IC6, IC7, IC8
10	100	R-1206	R5, R8, R13, R14, R27, R30, R31, R35, R75, R76
10	100k	R-1206	R24, R25, R29, R33, R41, R42, R43, R44, R45, R46
16	10k	R-1206	R1, R2, R6, R7, R17, R18, R19, R21, R37, R38, R39, R40, R49, R50, R52, R53
20	1k	R-1206	R3, R4, R9, R10, R11, R12, R15, R16, R20, R22, R23, R26, R28, R32, R34, R36, R47, R48, R51, R54

Through-hole components

Qty	Value	Device	Parts
4	5-pin	con-KK	CH12, CH34, CH56, MONITOR
4	6-pin	con-KK	XLR1, XLR2, XLR3, XLR4
4	47u/35	C-elec-2.5-5	C2, C5, C8, C27
1	CINCH_2X	con-cinch	CH12-OUT
2	CINCH_4X	con-cinch	CH3456-OUT, MON-OUT

Tools

Required:

- ✓ Soldering iron with small tip
- ✓ Flux, solder (0.5mm), solder wick
- ✓ Multi-meter (voltage and resistance)
- ✓ Side-cutting pliers, tweezers

Recommended:

- ✓ Adjustable power supply
- ✓ Oscilloscope
- ✓ CS3318VolumeControl pcb for testing

Mounting

Note that this kit contains (small) SMD components, which have been premounted for convenience. Only the remaining through-hole components need to be soldered. The easiest way of mounting those is by starting with the components with the lowest height and build up the PCB in steps, where components of the same height are fitted and soldered in each step: first the electrolytic capacitor then the connectors.

Always double check all components before you solder them (especially the polarity dependent electrolytic capacitors), as it is difficult to remove them after soldering, much more time consuming and may break components or PCB.

Functionality

This circuit provides buffered 2x 2-channel monitor outputs and 6-channel buffered outputs. It provides XLR signals which can be connected to XLR outputs. It is designed to be used in combination with the CS3318VolumeControl pcb but it can also be used as standalone circuit, please refer to the schematic if you want to do so.

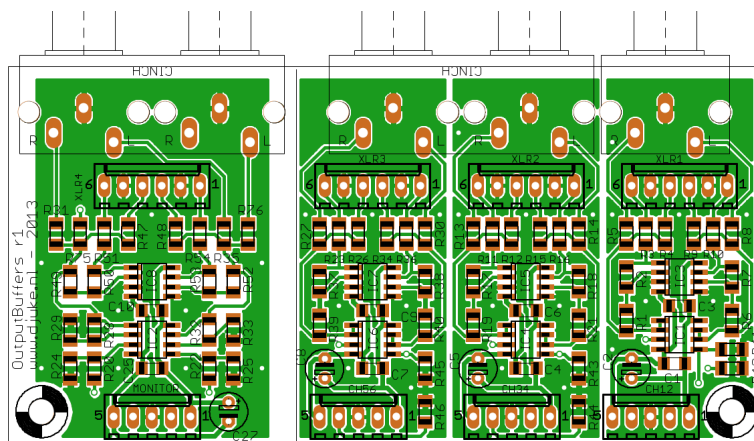
The schematic for channel 1+2, channel 3+4 and channel 5+6 is the same. If needed, the monitor section can be cut from the other channels to facilitate mounting.

Testing

Double-check all soldering connections to make sure no shorts are present.

- Connect the MONITOR/CH12/CH34/CH56 to the corresponding connector on the CS3318VolumeControl pcb.
- Check the supply voltage (comes from the CS3318VolumeControl pcb) between pin1 and pin5
- Connect a sound source and check if the output is correct.

Top silkscreen



Schematic

