

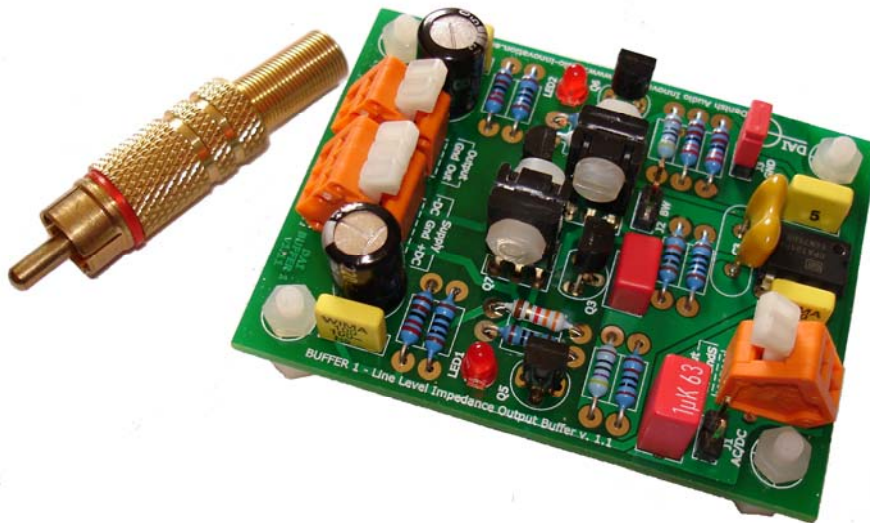


Product Specifications

Last updated 18.05.2008

BUFFER 1

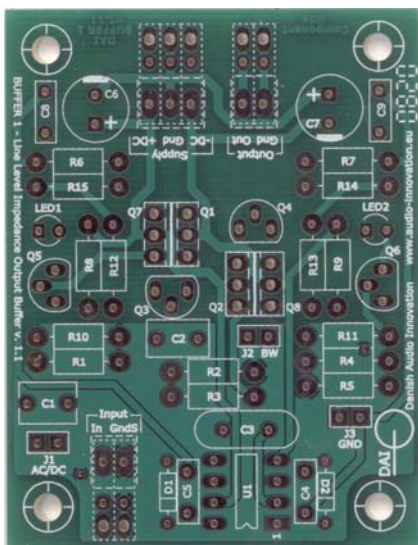
Class A Line Level Audio Line Buffer
v1.1



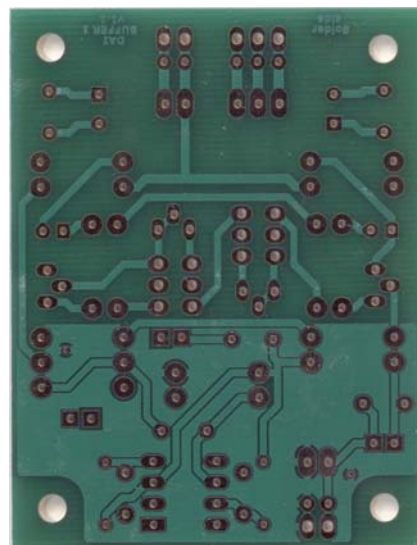
Please note that components on PCB are sold separately!

Product use

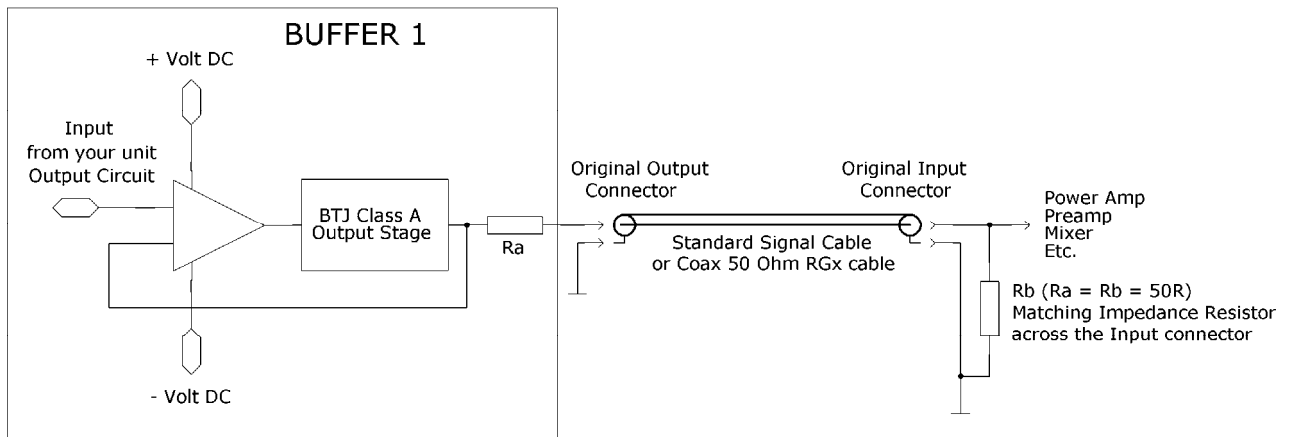
As High End Audio Output Buffer in all existing Audio Line Level Audio Equipment, e.g. Preamps, CD- and DVD-Players, Tuners and all other Audio Line Level Equipment, or you can build your own High End Preamp using the BUFFER 1 circuit with a Power Supply, a quality input selector switch/circuit and a Volume control.



Component side



Solder side



Principle of operation (simplified)

Specifications

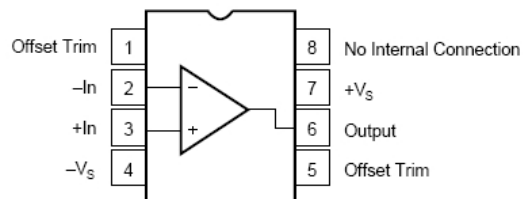
Power Supply:	Stabilized +/-5 to 15 Volt DC, 2x60 mA (not included)
Input Impedance:	>100K Ohm
Frequency response:	0 to app. 500 kHz +/- 0.2 dB with Bandwidth Limit 0 to >1 MHz +/- 1 dB without Bandwidth Limit
Gain:	1 after Matching 50 Ohm Impedance Resistor
Bias Current:	20 mA @ +/-15 Volt DC Supply
Quiescent Current:	40 mA @ +/-15 Volt DC Supply
DC Output Offset:	OPamp Offset (normally less than +/- 0.5 mV)
Output Impedance:	50 Ohms
Comp. recommendations:	Resistors: 1% metalfilm, 0.6W Caps: WIMA film/foil caps, Panasonic NHG Type A electrolytic caps BJT's: 2SA970, 2SA1540, 2SC2240, 2SC3955, MJE340, MJE350 OPamp: OPA134, OPA627
Board size:	50 x 65 mm (App. 1.97" x 2.55")

OPamp Pin configuration

8 pin DIP housed Unity Gain Stable OPamp as shown to the right.

Note!

Pin 1, 5 and 8 has no connection on the board.



General

The BUFFER 1 Line Buffer reduces almost any sonic influence from any interconnect cable regardless length and quality. Using the well known Impedance Matching principle and High Current Signal Transmission Line (STL), the audio signal will be almost immune to incoming noise and will be as clear at the input of the receiver equipment as it was leaving your BUFFER 1 fitted device. Even better is to use the BUFFER 1 with 50 Ohm Coax RGxxx interconnect cables. You won't believe your ears.

Gain is set to two times so the end result after the additional 50 Ohm Impedance resistor on the receiver end will be 1 (= no gain). Each board contains one mono Buffer, so two boards are needed for stereo operation.



Selectable features

The BUFFER 1 is very versatile due to onboard jumpers. By these jumpers it is possible to choose between following settings:

J1: DC or AC coupled input (via 1uF onboard foil/film capacitor)

J2: Bandwidth Limit to 480 kHz or none = app. 1 MHz depended on OPamp used

J3: Onboard interconnection of Signal Ground and Power Ground to suit your actual circuit

Power Supply *(not included)*

One +/-5 to 15 Volts DC, min. 2x60mA, Stabilized Power Supply are needed per board.

Connection to the PCB

The SWITCH 1 is very versatile and following connection methods can be used on the PCB (all holes has 2.54mm/.100" pitch):

- Soldered wire connections (PCB hole dia. 1.20 mm/0.0047")
- Pin Headers (not included)
- Molex KK 6410/7395 Series Connectors (not included)
- WAGO Easy Clamp 233/234 Series Connectors (not included)
- Terminal Blocks etc. (not included)

