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– TRANSFORMERS –

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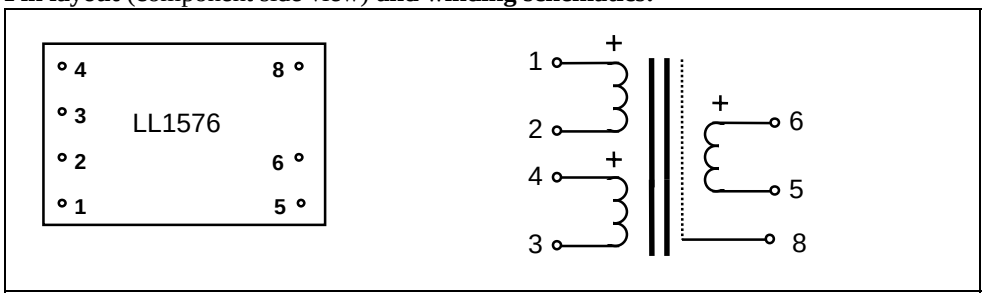
Microphone Input Transformers, Line-box Transformers LL1576 and LL1577

The LL1576 and the LL1577 are high performance microphone input transformers/line-box transformers with high permeability mu-metal cores and high bandwidth coils. The LL1576 and the LL1577 use the same pin-out as our well known microphone transformer LL1538.
In both types, primary and secondary windings are separated by electrostatic shields. The very low leakage inductance and thus excellent frequency response is achieved by a two-coil, three-section per coil winding structure.
The transformers are encapsulated in mu-metal cases for magnetic shielding.

Pin layout (component side view) **and winding schematics:**



Dimensions Max. Length x Width x Height above PCB (mm)	Spacing between pins	Spacing between rows of pins	Recommended PCB hole diameter	Weight
38 x 24 x 17	5.08 mm (0.2")	27.94 mm (1.1")	1.5 mm	46 g

	LL1576	**LL1577**
Turns ratio	1 + 1 : 7	1 + 1 : 14
Static resistance of each primary	50 Ω	12 Ω
Static resistance of secondary	1.5 kΩ	1.5 kΩ
Primary level at 0.2 % THD, 50 Hz signal Primaries connected in parallel (fig b), source impedance 50Ω	+2 dBU (sec. level +19 dBU)	-4 dBU (sec. level +19 dBU)
Primary level at 1 % THD, 50 Hz signal Primaries connected in parallel (fig b), source impedance 50Ω	+ 12 dBU (sec. level +29 dBU	+6 dBU (sec level +29 dBU)
Frequency response +/- 0.5 dB to balanced input Signal level 0 dBU, source 200 Ω, fig b, no termination	15Hz – 50kHz	30Hz – 12kHz
Frequency response +/- 0.5 dB to balanced input Signal level -10 dBU, source 50 Ω, fig b, load:	5Hz – 40kHz 30 kΩ + 200pF	10Hz – 50kHz 80 kΩ + 100pF
Isolation between windings / between windings and shield	4 kV / 2 kV	4 kV / 2 kV

Connection alternatives

Component side

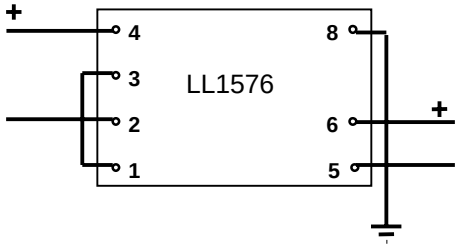


Fig. a. Primaries in series.
Turns ratio 1 : 3.5 with LL1576
Turns ratio 1 : 7 with LL1577

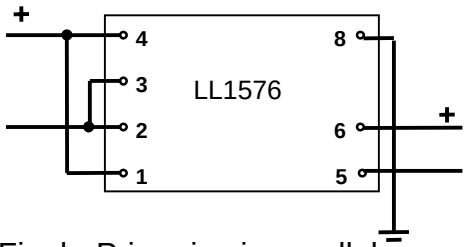


Fig. b. Primaries in parallel.
Turns ratio 1 : 7 with LL1576
Turns ratio 1 : 14 with LL1577

The transformers are often used reversed (7:1 or 14:1) for example in line boxes.

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