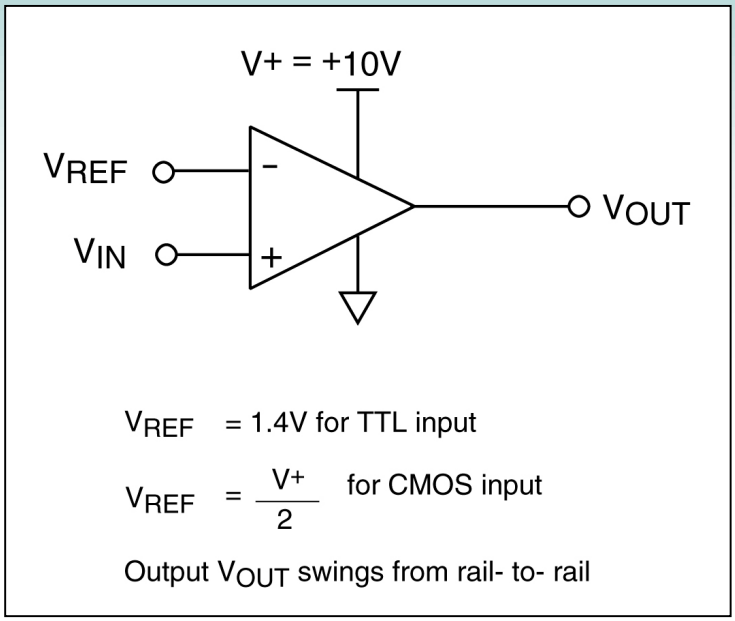
Category: Level Translators **CIRCUIT IDEAS FOR DESIGNERS** Schematic no. LT_23001.0

Voltage Level Translator



Description

Basic voltage level translator utilizes a voltage comparator to translate an input voltage range into an output voltage range. First step is to determine the input voltage range, which involves an input low voltage level V_{IN}(low) and an input high voltage level, V_{IN}(high). Next step is to figure out the proper reference voltage level, at V_{REF}. In many cases V_{REF} can be simply midpoint between V_{IN} (low) and V_{IN}(high). In other cases, one may want to skew the V_{REF} voltage level towards either V_{IN}(low) or V_{IN}(high). In this example, the output voltage range is simple ground and V+, which also represent output voltage that range from rail to rail. For logic circuit type of voltage level translator, V_{REF} could be set to 1.4V for TTL logic voltages, and V+/2 for CMOS logic voltages.

Recommended Components

½ ALD2302, ¼ ALD4302
Precision applications: ½ ALD2321

Other Related Circuit Ideas

Schematic no. LT_23002.0 Voltage Level Translator