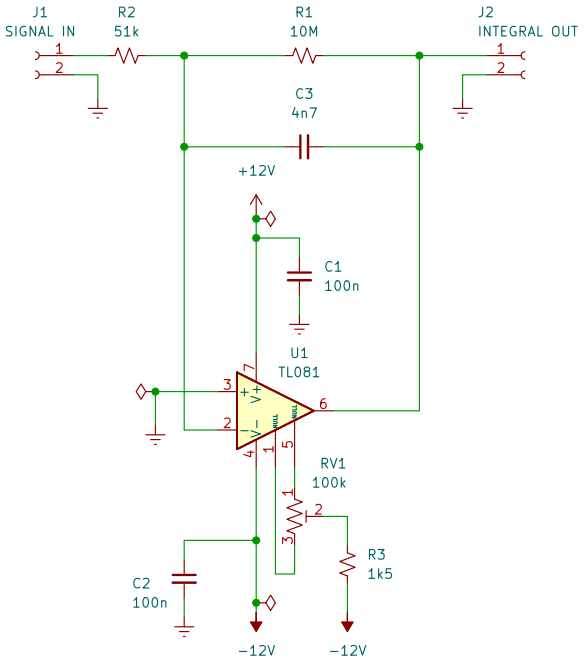

To demonstrate:

Begin without fitting R1 or RV1. Connect voltmeter and scope to J2, and short J1. Power on circuit, and observe that output voltage drifts rapidly because of op amp offset. Calculate offset voltage from the velocity of the drift by multiplying by RC time constant.

Fit 10M resistor and remeasure. Observe that output is stable, and note its voltage. Calculate op amp offset by dividing the output voltage by the DC gain (200). Compare with the result above.

Fit RV1 and R3. Note that offset is different from the amp without RV1 and R3, but can be trimmed by adjusting R3.

Remove the short circuit from J1 and replace with a function generator. Try various waveforms (square, ramp, sine, etc) and observe that the circuit computes their integrals.

All resistors 1/4W 1% metal film
C1, C2 – X7R ceramic
C3 – Polyester or polypropylene film capacitor

open source hardware

Exploring Audio Synthesis
Episode 7 – The Integrator
Kludges from Kevin's Cave

Sheet: /
File: integrator.kicad_sch

Title: Simple Integrator

Size: USLetter	Date: 2024-07-01	**Rev: A**
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