



CURTIS ELECTROMUSIC SPECIALTIES
110 Highland Ave.
Los Gatos, CA USA
(408) 395-3350 TLX 499-2868

C E M 5 5 0 8

OCTAL SAMPLE & HOLD

Preliminary, January 1986

Description

The CEM 5508 is an 8 channel multiplexed Sample and Hold intended for generating multiple system control voltages or moderate speed multiplexed digital audio. Containing an auto zeroing op amp, analog multiplexer, 3 bit decoder, and 8 individual Sample and Holds capable of settling to 12 bits in under 1.5 uS, the 5530 can sample a voltage from a DAC into any one of its 8 outputs with less than 2 mV error from -5 to +5 volts.

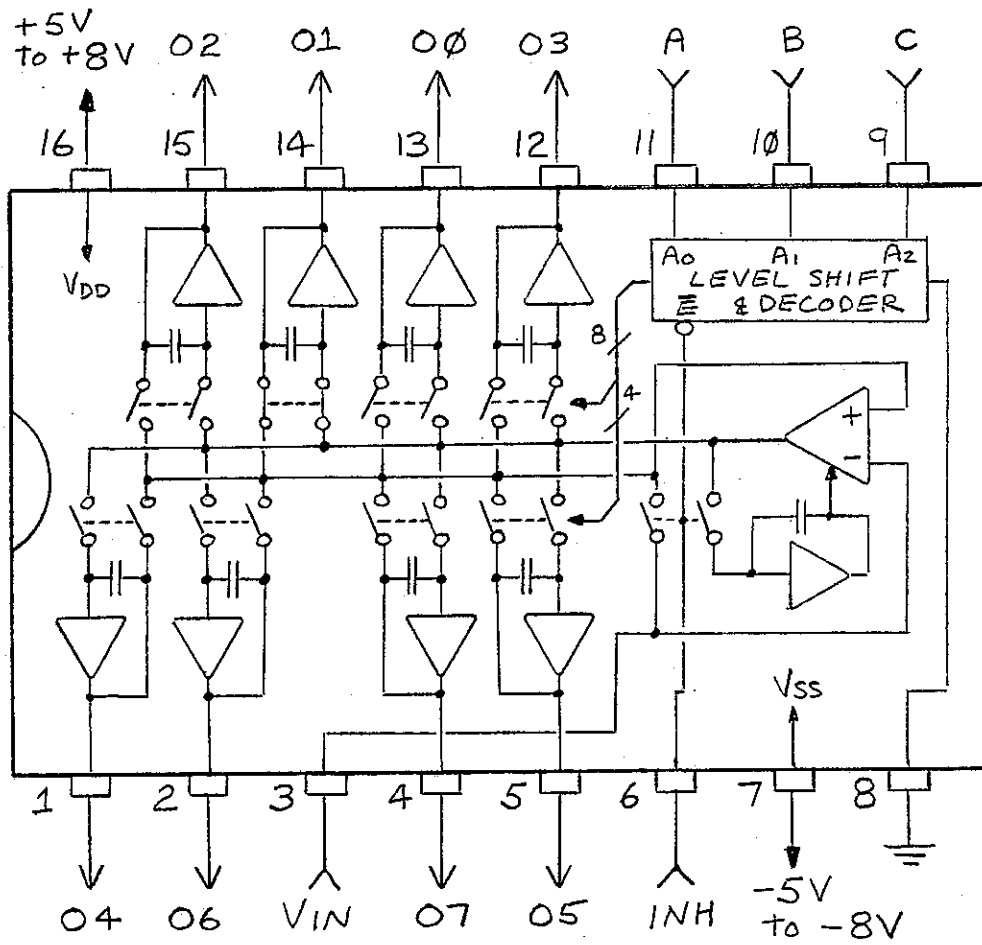
Operation of the 5508 is straightforward: Bringing INH high puts all channels in the hold mode and causes the input op amp to auto zero. The DAC data and channel address are then changed, and while the DAC and decoder are settling, input offset is being nulled out. Finally, INH is brought low again to sample the input voltage into the addressed channel. As the auto zeroing process requires a minimum of 1.5 uS, every channel can be updated with full accuracy in less than 3 uS.

Each channel output can swing to within 2.5 volts of either supply, allowing -5 to +5 volt outputs with +/-7.5 volt supplies, or -2.5 to +2.5 volt outputs with +/-5 volt supplies. Ease of use is further enhanced with outputs which can handle moderate capacitive loading with little degradation in performance, and CMOS logic inputs which are TTL compatible regardless of supplies.

With all hold capacitors on-chip and requiring no external components, the CEM 5508 makes interface between microprocessor and voltage controlled devices exceptionally simple and economical.

Features

- o 8 Sample & Holds in a single 16 pin DIP
- o 12 bit accuracy
- o 16 bit linearity
- o Acquisition to 12 bits in $< 1.5 \mu\text{s}$
- o On-chip auto zeroing of input offset
- o Low droop: 1 mV/mS max.
- o Hold capacitors on-chip
- o Supply independent TTL compatible CMOS inputs
- o Large outputs: 10V with 15V supply
- o Can handle capacitive loading without degrading performance
- o Retrofits into existing 4051 sockets



CEM 5508 OCTAL SAMPLE & HOLD