Individual #1. Operational Amplifier Types

Find the information and give the example of the operational amplifiers of different op amp types (see the Example for *Precision Op Amp Type*):

1. General Purpose
2. Precision

       Input offset voltage V_{os}<500 µV (A_{ol} > 100 dB)

       Input offset voltage drift <1 µV/°C

       Applications: Battery-powered (3/5 V) products

                     Test equipment

                     Communication

                     Industrial controls

                     Automotive sensors

       Example: **AD820** (Rail to Rail Low Power FET-Input Op Amp)

              General Description

- The single supply of +5.0 V to 36 V, or dual supplies of ±2.5 V to ±18 V
- Output voltage swing extends to within 10mV of each rail
- Offset voltage of 400 µV
- Offset voltage drift of 1 µV/°C
- Input bias currents below 25 pA and low input voltage noise
- 1.8 MHz unity gain bandwidth
- 3 V/µs slew rate
- Low supply current of 800 µA

3. High Speed
4. Low Power
5. Micropower (Nanopower)
6. High Output Power
7. Low Noise
8. Buffers
9. Comparators

Individual #2. Presentation

Topics:
1. Operational amplifier in electronics system design
2. Square wave generator based on op amp
3. Triangular wave generator
4. Crystal-controlled generator
5. Sinusoidal oscillator
6. LC oscillator
7. Instrumentation amplifier
8. Precision current sources

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