Disk 3 — Optical Sensor / Tachometer Processor

Function:

- Converts the optical encoder output into a DC or frequency signal representing platter speed.

Main ICs:

- LM308 — Precision op-amp (signal conditioning)
- XR2207 — Voltage-controlled oscillator / frequency converter
- LM3900 — Quad Norton amplifier

Notes:

- Mounted close to the motor's internal photodiode assembly.
- Generates the "tach" waveform compared against the reference oscillator (Disk 4).
- Provides both frequency and voltage feedback for servo error correction.
- Includes shaping and filtering circuits to clean the optical pulses.