Optical Chopper

SR540 — Optical chopper system

The SR540 chopper will handle all your optical chopping requirements — from simple measurements to dual-beam and intermodulation experiments. The SR540 has a 4-digit frequency display, front-panel frequency control, analog voltage frequency control, and two reference outputs with selectable operating modes. Two anodized aluminum blades are provided: a 5/6 slot blade for frequencies up to 400 Hz, and a 25/30 slot blade for frequencies up to 3.7 kHz. Reference outputs are provided for frequencies corresponding to each row of slots, as well as the sum and difference frequencies.

### SR540 Specifications

- **Chop frequency**: 4 Hz to 3.7 kHz chopping frequencies
- **Low phase jitter**:
- **Single and dual beam experiments**:
- **Sum & difference reference outputs**:

### Ordering Information

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>SR540</td>
<td>Optical chopper</td>
<td>$1395</td>
</tr>
<tr>
<td>O5402530</td>
<td>25/30 dual-slot replacement blade</td>
<td>$50</td>
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<tr>
<td>O54056</td>
<td>5/6 dual-slot replacement blade</td>
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<td>O5405</td>
<td>5-slot replacement blade</td>
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<td>O54030</td>
<td>30-slot replacement blade</td>
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<tr>
<td>O540RCH</td>
<td>Replacement chopper head</td>
<td>$450</td>
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</tbody>
</table>

Chop frequency: 4 Hz to 400 Hz (5/6 slot blade); 400 Hz to 3.7 kHz (25/30 slot blade)

Frequency stability: 250 ppm/°C (typ.)

Frequency drift: <2%, 100 Hz < f < 3700 Hz

Phase jitter (rms): 0.2° (50 Hz to 400 Hz); 0.5° (400 Hz to 3.7 kHz)

Frequency display: 4-digit, 1 Hz resolution and accuracy

Frequency control: 10-turn pot with 3 ranges: 4 Hz to 40 Hz; 40 Hz to 400 Hz; 400 Hz to 3.7 kHz

Input control voltage: 0 to 10 VDC for 0 to 100% of full scale. Control voltage overrides frequency dial.

Reference modes: \( f_{\text{inner}}, f_{\text{outer}}, 5 \times f_{\text{outer}}, f_{\text{inner}} + f_{\text{outer}}, f_{\text{outer}} - f_{\text{inner}} \)

Dimensions:
- Controller: 7.7” x 1.8” x 5.1” (WHD)
- Head: 2.8” x 2.1” x 1.0” (WHD)

Blade diameter: 4.04” ± 0.002”

Cable length: 6 ft.

Power: 12 W, 100/120/220/240 VAC, 50/60 Hz

Warranty: One year parts and labor on materials and workmanship, 90 days on motor.