Setting up An Anterior Segment Practice

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It is a dream of every graduate in ophthalmology to start their own practice. This article is meant to offer guidance on that journey.

**Governmental Clearances & Pre-requisites**

Invariably the young ophthalmologist would be so lost in the negotiations for ophthalmic equipment that the legal and bureaucratic aspects of starting a new clinic escape attention.

When realization does dawn, it would be too late and opens the doors for harassment, bribes and numerous other hassles. It is better then to be ready with the necessary permissions, registrations and documents prior to purchase of equipment.

1. Local body license
2. Current account with bank
3. Partnership / Trust deed (if applicable)
4. Rent agreement (if applicable)
5. Sales Tax registration (if planning to open pharmacy, optical dispensary, request demonstration equipment, etc)
6. Import Export Code number (compulsory if importing equipment)
7. Food license under Food adulteration act (if opening canteen, pharmacy)
8. Labor registration
9. Registration with Professional Protection Scheme (PPS) scheme of IMA or Qualified Private Medical Practitioners Association (absolute necessity)
10. Pollution control board clearance (if having generator, Operating Rooms, Inpatients, Canteen, Laboratory)
11. Registration with IMAGE of Indian Medical Association to avoid PCB interferences
12. Join all respective associations (IMA, QPMPA, Kerala Society of Ophthalmic Surgeons etc)
13. Fire department clearance (if applicable)
14. Permanent Account number (absolute necessity)

**Bank Loan**

Negotiating a bank loan is probably the worst thing a ophthalmic graduate is prepared for as it entails a lot of fiscal planning, hard negotiations, searching questions on credit worthiness, and worst of all preparing to mortgage your property.

With proper advice, a good chartered financial analyst and loads of confidence, this challenge can indeed be won.

1. Prepare a detailed project report
2. Loan can be availed for 75% of total project cost
3. Suitable collateral must be arranged
4. EMI must be realistic. A loan of one crore will entail an EMI of two lakhs per month or Rs.8000 per day.
5. It is advisable that bank loan is availed for around 40-50% of the project value and not more.

**Negotiating for equipments**

The young ophthalmologist must decide whether he wants to start a pure anterior segment practice or combine it with a medical retinal practice. The latter entails a further escalation of capital expenditure of roughly 30 Lakhs.

He or she should ask heads of existing institutions for advice and try to get guidance on pricing and service commitments. But it is recommended that one apply their own mind after sufficient deliberations.

1. Include at least 3 competing organizations
2. Ask for installation base within state

Mulamootil Eye Hospital, Kozhenchery
3. Call the existing customers (to verify actual installation, service, etc)
4. Ask for the list of optional extras
5. Look for hidden costs (eg. Table for the slit lamp)
6. Clarify warranty clauses (ask for extended warranty)
7. Fix Annual Maintenance Contract rates for 5 years
8. Verify service personnel in your area
9. Ensure service within 24-48 hours for critical equipments
10. Avoid dealers with no operation within the state
11. Try to source all equipments from one or two companies (not more)
12. Check the international website of the parent company
13. Ensure written official contracts (will help in legal actions later)
14. Prefer companies that feature in most Conferences
15. Provide for additional 10% customs duties

**Automated refractometers**

1. Look for pupil size, range of estimation in diopters, and speed
2. Ease of use (remember that you will not be the end user)
3. Avoid touch screens (they malfunction in humid conditions)
4. Color monitors (consume more power, use?)
5. Opt for ARK (Autorefracto-keratometers) – will need one for IOL calculation
6. Options include Topography module

**Slit Lamps**

1. At least one 5 step magnification slit lamp
2. Must be possible to upgrade with laser attachments later
3. Select model with provision for beam splitter (for digital camera later)
4. Do not forget applanation tonometer attachment, lenses etc

**Operating Microscope**

1. Preferably with automated focus, zoom & XY
2. Provision for Closed Circuit Camera (to tape your surgeries)
3. Do not forget to buy spare bulbs (if the bulb fails mid-surgery)
4. Select good quality optics

**Other Support Systems**

1. **UPS - Uninterrupted Power Supply**
   - All ophthalmic equipment ought to be connected with uninterrupted and stabilized electricity
   - Separate UPS for OR equipments with at least one hour backup battery

2. **PABX**
   - At least 2 lines, 1 fax
   - Provision for SIM card insertion

3. **Generator**
   - Necessary in our state where 8am – 5pm blackout is normal
   - Must power the UPS, lights, fans and OR airconditioner

4. **AC - Air Conditioner**
   - Is now an essential part of the consultation, waiting, laser and ORs

5. **Computers**
   - Preferably the highest configuration for memory intensive digital fundus camera, counseling software, etc
   - LAN - Local Area Network
   - Web enabled (for online appointments)

6. **Hospital Management Software**
   - Patient registration
   - Billing
   - Tax reports
   - Salary records
   - Purchase / sales of medicines, frames, lenses, etc
   - Archiving

**Operating Rooms**

1. Seamless floor and walls
2. Must have UPS
3. Heppa filter AC
4. Laminar flow is desirable
5. CSSD

**Support staff**

1. Security personnel
   - They are the point of first and last contact. They must be good natured.
   - Eye hospitals do not need security. Instead these men direct the patients to the respective sections
2. Customer Relations officers
   - Must be friendly, pleasant and preferably good at computers
   - Knowledge of English would be an advantage
3. Nurses
   - Appoint at least one specialist ophthalmic nurse in the OR and the OPD
   - Remainder can be trained by them or by you
   - It is advisable to train them in refraction
4. Optometrists
5. Housekeeping
6. Pharmacist is not an absolute necessity
7. Opticians (sales personnel and optical fitter)

Support network
1. Experienced anterior segment surgeon
2. Vitreo-retinal Surgeon
3. Anesthetist
4. Physicians (they could refer)

The ethics of advertising
How does one know that a hen has laid an egg? It crows!! Well, that's advertisement.
We have a responsibility to let the public know of our location, specialized services and arrival of newer equipment. But advertisement of special offers and discount packages are to be discouraged.

Conclusion
This article would have served its purpose if it encourages the reader to consider the possibility of approaching their dream with confidence and professionalism.
The reader is encouraged to contact the author should he or she need any assistance.
## Comparison of AR/ARKs

<table>
<thead>
<tr>
<th>Manufacturer, Distributor</th>
<th>Model, type</th>
<th>Pup size mm</th>
<th>LCD / Color</th>
<th>Spbl range</th>
<th>Cyl range</th>
<th>Virtual vision</th>
<th>Auto track / Auto shoot</th>
<th>Special features</th>
<th>Service availability in Kerala</th>
<th>Ease of use, features, etc</th>
<th>Comments</th>
<th>Price (list price)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Topcon, Japan</td>
<td>KR 8800 (ARK)</td>
<td>2</td>
<td>Y / Y</td>
<td>-25 to -22</td>
<td>+/- 10</td>
<td>N</td>
<td>N</td>
<td>Fixation target brightness can be adjusted, Binocular readings displayed, Service center of distribute in Kerala</td>
<td>Good</td>
<td>Value for money</td>
<td>$ 2.90 + taxes</td>
<td></td>
</tr>
<tr>
<td>Sunil Hi tech, Kochi</td>
<td>RM 8800 (ARK)</td>
<td>2</td>
<td>Y / Y</td>
<td>-25 to -22</td>
<td>+/- 10</td>
<td>N</td>
<td>N</td>
<td>Fixation target brightness can be adjusted, Binocular readings displayed, Service center of distribute in Kerala</td>
<td>Good</td>
<td>Value for money</td>
<td>$ 2.25 + taxes</td>
<td></td>
</tr>
<tr>
<td>Nidek, Japan</td>
<td>AR 330A (AR)</td>
<td>2</td>
<td>Y / Y 5.7 inch Tiltable screen</td>
<td>-30 to +25</td>
<td>+/- 12</td>
<td>N</td>
<td>Y</td>
<td>Wider measurement range, Super luminescent diode (no better reading in media opacities), double mirrors, guidance marks for chin rest and main body movement, power chin rest, eye care card for wire less transfer, Auto paper cutter for printer</td>
<td>Excellent</td>
<td>Best technology</td>
<td>$ 2.45 + taxes</td>
<td></td>
</tr>
<tr>
<td>KLB, Chennai Bionex, Bangalore</td>
<td>AR 330A (AR)</td>
<td>2</td>
<td>Y / Y 5.7 inch Tiltable screen</td>
<td>-30 to +25</td>
<td>+/- 12</td>
<td>Y</td>
<td>Y 5xyz auto track</td>
<td>Wider measurement range, Super luminescent diode (no better reading in media opacities), double mirrors, guidance marks for chin rest and main body movement, power chin rest, eye care card for wire less transfer, Auto paper cutter for printer</td>
<td>Excellent</td>
<td>Best technology</td>
<td>$ 3.5 + taxes</td>
<td></td>
</tr>
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<td>Nidek, Japan</td>
<td>AR 330A (AR)</td>
<td>2</td>
<td>Y / Y 5.7 inch Tiltable screen</td>
<td>-30 to +25</td>
<td>+/- 12</td>
<td>Y</td>
<td>Y 5xyz auto track</td>
<td>Wider measurement range, Super luminescent diode (no better reading in media opacities), double mirrors, guidance marks for chin rest and main body movement, power chin rest, eye care card for wire less transfer, Auto paper cutter for printer</td>
<td>Excellent</td>
<td>Best technology</td>
<td>$ 3.65 + taxes</td>
<td></td>
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<td>KLB, Chennai Bionex, Bangalore</td>
<td>AR 330A (AR)</td>
<td>2</td>
<td>Y / Y 5.7 inch Tiltable screen</td>
<td>-30 to +25</td>
<td>+/- 12</td>
<td>Y</td>
<td>Y 5xyz auto track</td>
<td>Wider measurement range, Super luminescent diode (no better reading in media opacities), double mirrors, guidance marks for chin rest and main body movement, power chin rest, eye care card for wire less transfer, Auto paper cutter for printer</td>
<td>Excellent</td>
<td>Best technology</td>
<td>$ 4.25 + taxes</td>
<td></td>
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<tr>
<td>Tomey, Japan</td>
<td>TR 4000 (ARK)</td>
<td>2.5</td>
<td>N / N CRT display</td>
<td>-20 to +20</td>
<td>+/- 8</td>
<td>N</td>
<td>N</td>
<td>Dual CCD camera, Service personnel posted in Kerala</td>
<td>Average</td>
<td>Measurement at range poor</td>
<td></td>
<td></td>
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<tr>
<td>Tomey, Japan</td>
<td>RC 5000 (ARK)</td>
<td>2.2</td>
<td>Touch screen for pupal alignment</td>
<td>-25 to +22</td>
<td>+/- 10</td>
<td>N</td>
<td>N</td>
<td>Dual CCD camera, IOL / Corneal size, corneal and pupil diameter measuring, power chin rest, Service personnel posted in Kerala</td>
<td>Good</td>
<td>Good</td>
<td></td>
<td></td>
</tr>
<tr>
<td>My Healthkape Mumbai</td>
<td>TSRK 1000 (ARK)</td>
<td>2.5</td>
<td>Y / Y</td>
<td>-25 to +22</td>
<td>+/- 10</td>
<td>N</td>
<td>N</td>
<td>Compact Service personnel posted for Kerala</td>
<td>Good</td>
<td>Best value</td>
<td>$ 2.35 + taxes</td>
<td></td>
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<tr>
<td>Axis, Korea Bionex, Mumbai</td>
<td>TSRK 1000 (ARK)</td>
<td>2.5</td>
<td>Y / Y</td>
<td>-25 to +22</td>
<td>+/- 10</td>
<td>N</td>
<td>N</td>
<td>Compact Service personnel posted for Kerala</td>
<td>Good</td>
<td>Best value</td>
<td>$ 2.35 + taxes</td>
<td></td>
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<tr>
<td>Shin Nippon, Japan</td>
<td>Accu ref 8001 (ARK)</td>
<td>2.3</td>
<td>Y / Y 5.6 inch Tiltable monitor</td>
<td>-25 to +25</td>
<td>+/- 10</td>
<td>N</td>
<td>N</td>
<td>Auto paper cutter for printer Service personnel posted in Kerala</td>
<td>Good</td>
<td>Good</td>
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<tr>
<td>Ascon Chennai</td>
<td>Accu ref 9092 (ARK)</td>
<td>2.3</td>
<td>Y / Y 5.6 inch Tiltable monitor</td>
<td>-25 to +25</td>
<td>+/- 10</td>
<td>N</td>
<td>N</td>
<td>Auto paper cutter for printer Service personnel posted in Kerala</td>
<td>Good</td>
<td>Good</td>
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</tr>
</tbody>
</table>
## Comparison of Slit Lamps

<table>
<thead>
<tr>
<th>Manufacturer, Distributor</th>
<th>Model</th>
<th>Magnification</th>
<th>Filters</th>
<th>Lamp</th>
<th>Options</th>
<th>Special features</th>
<th>Service availability in Kerala</th>
<th>Comments</th>
<th>Price in lacs (list price)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Haag-Streit Switzerland</td>
<td>BM 900</td>
<td>10x &amp; 16x</td>
<td>Red, free, Blue, Heat absorption</td>
<td>Tungsten lamp, (Halogen optional)</td>
<td>Photo digital connector, Yellow filter,</td>
<td>NIL</td>
<td>Service personnel posted for Kerala</td>
<td>Quality build Work horse</td>
<td>4.00</td>
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<tr>
<td>Biodex Bangalore</td>
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<tr>
<td>Haag-Streit Switzerland</td>
<td>BP 900</td>
<td>10x, 16x &amp; 25x</td>
<td>Red, free, Blue, Heat absorption</td>
<td>Tungsten lamp, (Halogen optional)</td>
<td>Photo digital connector, Yellow filter, Beam splitter</td>
<td>NIL</td>
<td>Service personnel posted for Kerala</td>
<td>Quality build</td>
<td>4.55</td>
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<tr>
<td>Biodex Bangalore</td>
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<tr>
<td>Haag-Streit Switzerland</td>
<td>BQ 900</td>
<td>5-step magnification changer 6.3x, 10x, 16x, 25x, 40x</td>
<td>Red, free, Blue, Heat absorption</td>
<td>Tungsten lamp, (Halogen optional)</td>
<td>Photo digital connector, Yellow filter, integrated flash</td>
<td>Zoom objective, inclined eye piece adapter, stereo variator,</td>
<td>Service personnel posted for Kerala</td>
<td>Quality build and superior optics. Much like the Mercedes of slit lamps</td>
<td>5.50</td>
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<tr>
<td>Biodex Bangalore</td>
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<tr>
<td>Carl Zeiss Meditec AG, Germany Present in India</td>
<td>SL 115</td>
<td>8X, 12X, 20X</td>
<td>blue, green UV protection filter, heat-absorbing filter</td>
<td>10 W Halogen lamp</td>
<td>Video adapter</td>
<td>-</td>
<td>-</td>
<td>Excellent optics</td>
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<tr>
<td>Carl Zeiss Meditec AG, Germany Present in India</td>
<td>SL 120</td>
<td>6x 10x 16x 25x 40x</td>
<td>blue, green UV protection filter, heat-absorbing filter</td>
<td>20W Halogen lamp</td>
<td>Video adapter</td>
<td>Quick action lock, Link with Visupac,</td>
<td>-</td>
<td>Excellent optics</td>
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<tr>
<td>Carl Zeiss Meditec AG, Germany Present in India</td>
<td>SL 130</td>
<td>6x 10x 16x 25x 40x</td>
<td>blue, green UV protection filter, heat-absorbing filter</td>
<td>20W Halogen lamp</td>
<td>Video adapter</td>
<td>Quick action lock, Link with Visupac, Laser link</td>
<td>-</td>
<td>Excellent optics</td>
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<tr>
<td>Topcon, Japan Suraj Hi tech, Kochi</td>
<td>SL 1E</td>
<td></td>
<td>Red, free, Blue, Heat absorption</td>
<td>20W Halogen lamp</td>
<td>-</td>
<td>No photography possible</td>
<td>Service center of distributor in Kerala</td>
<td>Best Value for money</td>
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<tr>
<td>Topcon, Japan Suraj Hi tech, Kochi</td>
<td>SL 3E</td>
<td>10x &amp; 16x</td>
<td>Red, free, Blue, Heat absorption</td>
<td>20W Halogen lamp</td>
<td>-</td>
<td>Laser mount possible, No photography possible</td>
<td>Service center of distributor in Kerala</td>
<td>Good</td>
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<tr>
<td>Topcon, Japan Suraj Hi tech, Kochi</td>
<td>SL D7 / D8 Z</td>
<td>6x 10x 16x 25x 40x</td>
<td>Red, free, Blue, Heat absorption</td>
<td>30W Halogen lamp</td>
<td>Photography possible with excellent results</td>
<td>Link with Imagenet</td>
<td>Service center of distributor in Kerala</td>
<td>Excellent value in a photography mode</td>
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<tr>
<td>Appasamy Associates India</td>
<td>AIA 11</td>
<td>10X, &amp; 16X</td>
<td>Red, free, Blue, Heat absorption</td>
<td>50W Halogen Lamp</td>
<td>-</td>
<td>Ruby lens, spare bulb, focusing rod, breathing sheet are all standard accessories</td>
<td>Service within 24 hours is assured</td>
<td>Phenomenal value. Exceptional service, average</td>
<td></td>
</tr>
</tbody>
</table>