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How to get the robot correctly positioned

Obtaining the key information

How to start
A surgeon wants to try FreeHand - where, what and how?
• Ideally have enough time to do a dry-lab with surgeon
• Follow the path shown to get close to how it will work for the surgeon
• NB with a little practice this part becomes much faster!

• Position of patient?
  - eg supine, lateral

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<table>
<thead>
<tr>
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Identify
• camera port
• arc of view required by surgeon
• mid-line
How to get the robot correctly positioned

Obtaining the key information

- An imaginary protractor will define maximum view in pan (left to right) mode (ie 180°)
- Place scope on neutral mid-line

- The ‘Motion Unit’ is diametrically opposite the mid-line of the scope. The Motion Unit predicts the line of the arm which predicts the position of the Control Box on the table
How to get the robot correctly positioned

Illustrative final set-up

- Identify operating port positions, position of monitor and surgeon + scrub nurse +/- assistants
- Ideally set up in dry lab and check with surgeon no obvious port/instrument clashes

NB Example shown is one example for a laparoscopic cholecystectomy. Please use the new guide to assist in possible positions for other procedures
SUPINE POSITIONS
Final set-up with possible port positions

Notes:
- Check port positions with surgeon!
- Some surgeons stand between the patient’s legs.
Notes:-
- Check port positions with surgeon!
- Some surgeons stand at the left hand side of the patient.
- Box can be on patient’s right.
Final set-up with possible port positions

Notes:
- Check port positions with surgeon!
- Neutral mid-line usually slightly off-centre.
- Some surgeons stand at the right hand side of the patient.
- Box can be on patient’s right.
Final set-up with possible port positions

Notes:

- Check port positions with surgeon!
- Neutral mid-line usually slightly off-centre.
- Some surgeons stand at the right hand side of the patient.
- Box can be on patient’s right.
Final set-up with possible port positions

Notes:-
- Check port positions with surgeon!
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**Final set-up with possible port positions**

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<td>surgeon</td>
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<tr>
<td>monitor</td>
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</tr>
</tbody>
</table>

**Notes:**
- Check port positions with surgeon!
- Shows segmental approach of instruments.
  Many surgeons will triangulate their instruments.
Final set-up with possible port positions

**Keycode:**
- Red: Camera port
- Blue: Operating port
- Black: Scope + camera
- Gray: Control box
- Orange: Monitor
- Pink: Arm and motion unit
- Light blue: Surgeon

**Notes:**
- Check port positions with surgeon!
LEFT HEMICOLECTOMY

Final set-up with possible port positions

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Notes:-
- Check port positions with surgeon!
Final set-up with possible port positions

Notes: -
  - Check port positions with surgeon!
  - easier to use FreeHand with 3-port procedure, rather than 4-port.
Final set-up with possible port positions

Notes:
- Shows set up for right inguinal hernia.
- Check port positions with surgeon!
- Configuration may be used for L, R or bilateral inguinal hernias.
- Box may be either side for a bilateral hernia.
- Box usually on patient’s right for a R hernia and on the patient’s left for a L hernia.
- Camera might be in lateral port.
Final set-up with possible port positions

Notes:
- Check port positions with surgeon!
- Transperitoneal approach shown. For Retro/Extra peritoneal approach ports are generally lower.
- Box can be on patient’s left.
LATERAL POSITIONS
Final set-up with possible port positions

Notes:
- Check port positions with surgeon!
- Left kidney is mirror image of right, but with only 3 ports.
- RMA comes over the patient and is angled down, parallel with the abdomen.
NEPHRECTOMY-R-EX-PERITONEAL

Final set-up with possible port positions

Notes:-
- Check port positions with surgeon!
- Right kidney is mirror image of left, but with 4 ports.

keycode

<table>
<thead>
<tr>
<th>Camera port (red)</th>
<th>Operating port (blue)</th>
</tr>
</thead>
<tbody>
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<tr>
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</tr>
<tr>
<td>Monitor (teal)</td>
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</table>
VATS

Final set-up with possible port positions

Notes:-
- Check port positions with surgeon!
- Left VATS is mirror image of right.
- Surgeon may be on either side of the table.
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