

CLINICAL APPLICATIONS TRAINING SERIES

PREGNANCY AND FETAL PRESENTATION

Signos RT provides Midwives and Obstetricians with a simple tool for determining Fetal presentation, detecting Fetal Heart Beat and assisting in providing quality care to expectant mothers.

FETAL PRESENTATION

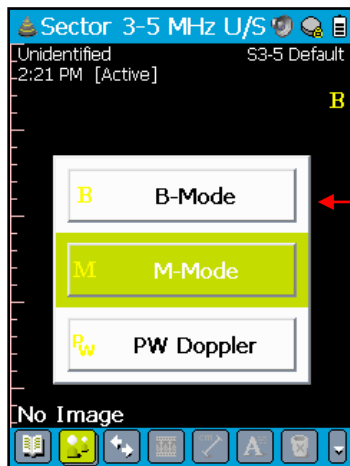
1. **Turn Device on** - button on top right

2. **If you wish to enter patient details select**



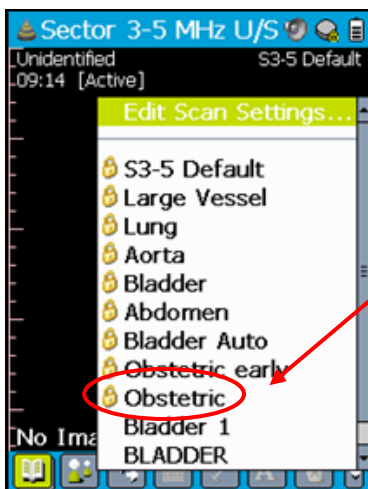
(User Manual Section 5)

3. **Select B-Mode** - tap on the B, M or S Mode symbol in the top right hand corner or hold down the 'snowflake' scanning button until it 'Honks' then select B-Mode using the scroll wheel (User Manual Section 3).



Select B-Mode

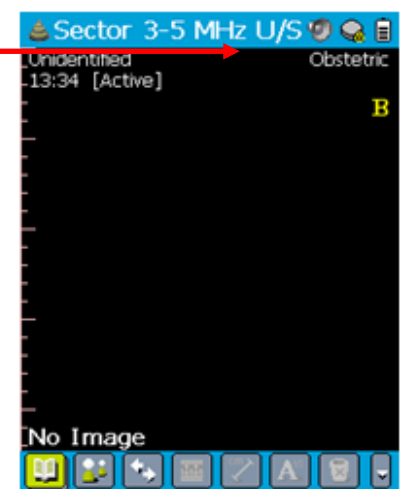
4. **Select the Obstetric Preset** (User Manual Section 6)



- Tap stylus on the preset icon (top right)
- Obtain drop down list
- Select **Obstetric**

OR

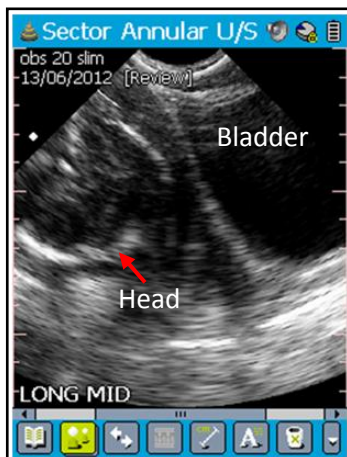
- Scroll to Main Menu (book icon) – 'click'
- Select **Scan preset**
- Select **Select Preset**
- Select **Obstetric**



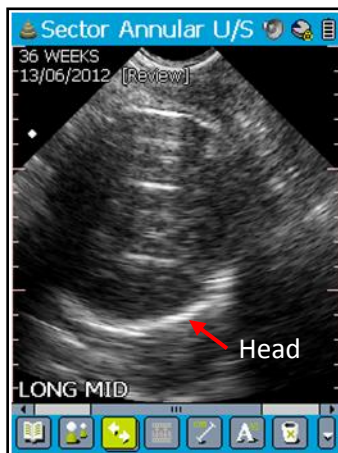
5. Perform a Longitudinal Scan

- Place ultrasound gel just above the pubic bone.
- Position the Transducer on the patient just above the pubic bone in the midline of the patient.
- The Orientation Indicator will be aligned with the patient's head.
- Start and stop scanning by pressing the '**Snowflake**'  button.
- If the fetus is cephalic you will see the fetal skull (white and round) and the maternal bladder (black) if it is full.

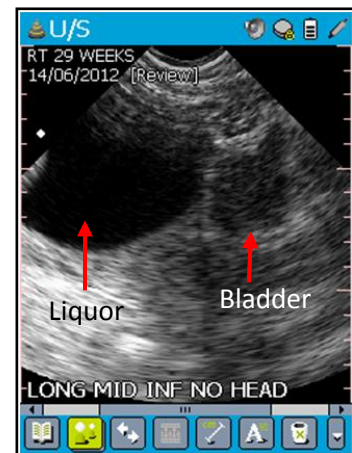
Longitudinal images demonstrating different appearances



- 20 weeks gestation
- Cephalic
- Maternal bladder full



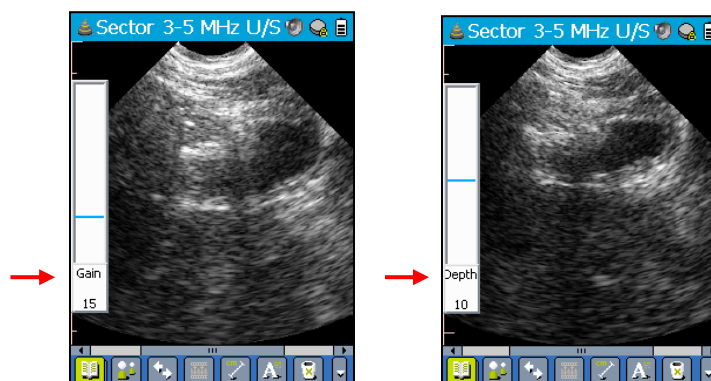
- 36 weeks gestation
- Cephalic
- **Maternal bladder empty**



- 29 weeks gestation
- Breech oblique
- **No fetal head seen**

6. If the fetal head is not located in the maternal pelvis, confirm the presence of the head at the fundus of the uterus. Remain in the longitudinal scanning plane and slide the probe to the fundus of the uterus. Slide the probe to the maternal right and maternal left to locate the fetal head and confirm breech presentation.

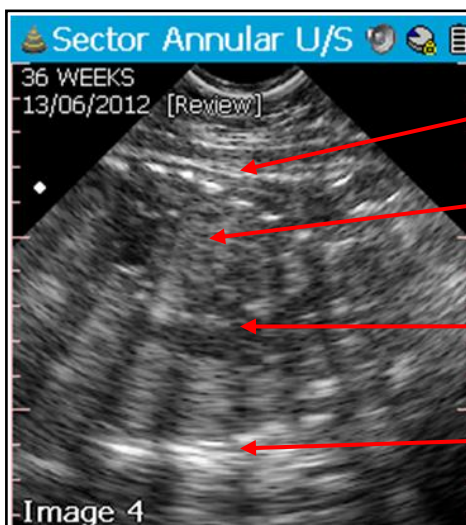
7. **Change the Gain and Depth if needed.** While scanning click the 'scroll' wheel in once to access the Gain (brightness) control. Click the 'scroll' wheel again to access the Depth control. Roll the scroll wheel to change the gain and depth settings (User Manual: Section3: scrollwheel adjustments).



FETAL HEART

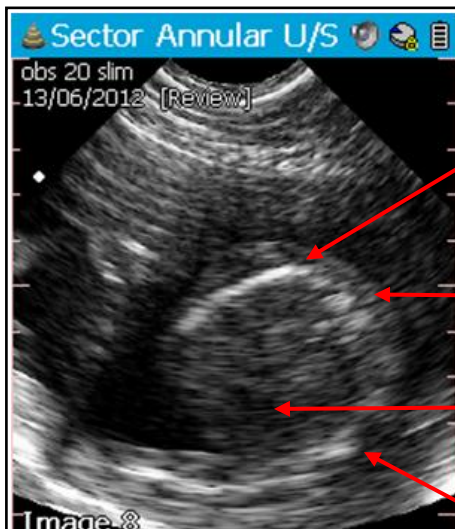
The fetal heart can be visualized in either the longitudinal or transverse plane of the fetus using B-Mode

- Once you have determined where the fetal head is situated in the longitudinal plane, slide the probe in the direction of the fetal chest and then scan towards the right and left of midline to identify the beating heart.
- Or, once you have located the fetal head in the longitudinal plane, rotate the transducer 90 degrees to the transverse plane and scan along the fetus in the direction of the chest until the heart movement is seen.



- Ribs (white dots)
- Stomach (Black if present)
- Heart (black, movement seen in Real-time)
- Ribs (white dots)

Longitudinal image of 36 week fetal chest demonstrating the ribs on both sides and the stomach inferior to the heart



- Rib (white line)
- Spine (3 white dots)
- Heart (black)
- Rib (white line)

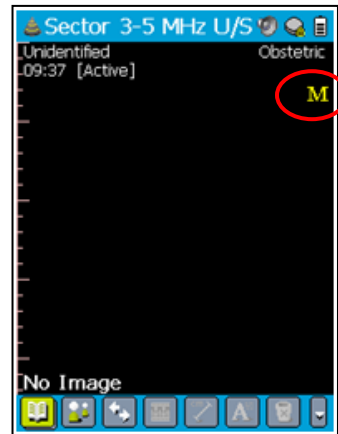
Transverse image of a 20 week fetal chest demonstrating the ribs on both sides of the chest, the spine in cross section and the heart.

Once you have located the heart

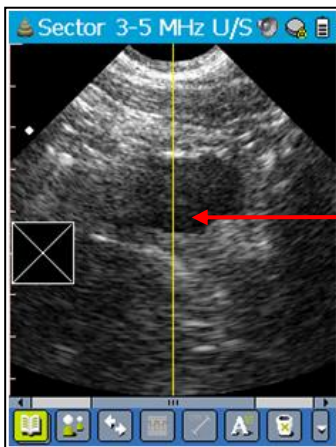
1. **Change the Scanning Mode to M-Mode.** Tap on the B, M or S-Mode symbol in the top right hand corner or hold down the snowflake scanning button until it 'Honks' then select M-Mode by pressing the scroll wheel (User Manual Section 3).



Select M-Mode



2. **Continue scanning.** The scan will begin in B-Mode. Direct the vertical yellow line through the fetal heart.



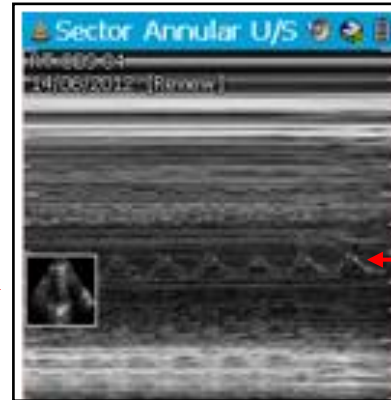
Yellow line

3. **Press the Back Button.** This is located on the side of the Display Unit under the scroll wheel or tap the toggle square to obtain an M-Mode trace of the fetal heart.



Back button

Toggle square

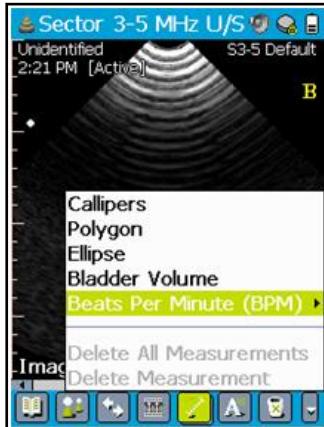


M-Mode fetal heart trace

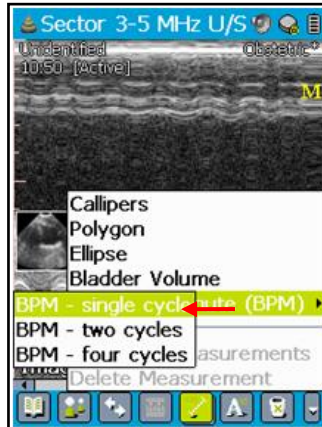
4. **Freeze the image by pressing the “Snowflake” button**

5. **To measure the fetal heart rate**

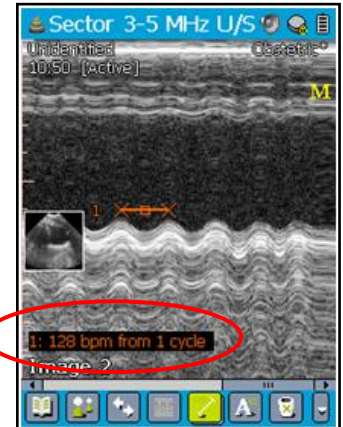
- Select  (User Manual section 5)



Select **Beats Per Minute (BPM)**



Choose the number of cycles



Position calipers

DISCLAIMER

This information is intended to provide instruction in the operation of your Signostics ultrasound device and is not a substitute for formal training. The applicability of these techniques and information should be independently verified and used at your own risk.