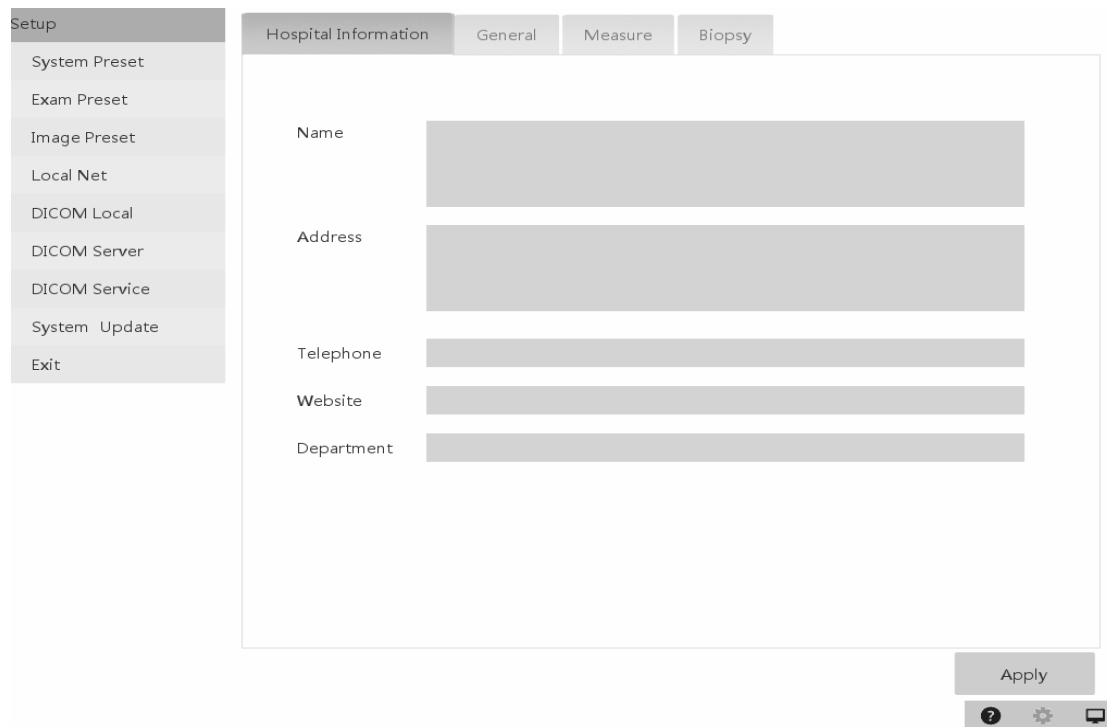


# Scan Pad Quick Start Guide

## Adding Your Company Name To Your Scans



Click the logo in the upper left corner of the screen to enter the “Setup” menu.



The screenshot shows the 'Setup' menu on the left with options: System Preset, Exam Preset, Image Preset, Local Net, DICOM Local, DICOM Server, DICOM Service, System Update, and Exit. The main screen is titled 'Hospital Information' and has tabs for 'General', 'Measure', and 'Biopsy'. Under 'Hospital Information', there are input fields for Name, Address, Telephone, Website, and Department. An 'Apply' button is at the bottom right, and a toolbar with a question mark, settings gear, and a speech bubble icon is at the bottom center.

Type your business name in the ‘Name’ box, and click ‘Apply’ (bottom right). Then click ‘exit.’

## Saving Images

1. Click the ‘freeze’ hard key button on the front of your machine. The picture looks like a snowflake. 
2. Click the ‘save’ hard key button on the front of your machine. The picture looks like a floppy disk. 

## Saving Videos

1. Click the ‘freeze’ hard key button on the front of your machine. The picture looks like a snowflake.
2. Click ‘Save Cine,’ which is a touchscreen button at the bottom left of your screen.

# Basic Image Optimisation

- Gain** To adjust the overall level of amplification.
- Operation** Rotate the knob clockwise to increase the gain, and anticlockwise to decrease it.
- Effects** Increasing the gain will brighten the image. However, noise will also be increased.

## Depth

- Operation** Press the knob at the front, then rotate clockwise to increase depth and anticlockwise to decrease. If you wait too long before rotating the knob, it will automatically revert back to gain.  
The adjustable depth values vary depending upon the probe type, with lower frequency probes having a greater depth range.
- Effects** Increase the depth to see tissue in deeper locations. Decrease depth to ensure that your area of interest fills as much of the imaging area as possible.  
Increasing depth will decrease the frame rate.

## TGC

- The system automatically augments signals returning from deeper tissues, to compensate for attenuation. This can be overridden by the user, and the TGC (Time Gain Compensation) sliders can be used to increase or decrease gain at a range of depths.  
There are 8-segment TGC sliders of the control panel corresponding to 8 depth zones.
- Operation** Rotate the hard key multifunction knob, and eight control sliders will appear on the right of the screen. To increase the gain compensation at a depth of interest, move the TGC slider to the right. To decrease, move the TGC slider to the left.
- Effects** Use the TGC sliders to achieve a balanced, evenly gained image, for example to cancel out areas of acoustic enhancement posterior to fluid-filled regions (for example below the bladder, a cyst, or the posterior wall of the left ventricle).

- Frequency** To adjust the frequency of your ultrasound beam. Both B mode frequency and harmonic frequency have three modes: Gen (General), Pen (High Penetration – low frequency) and Res (High Resolution – high frequency).
- Operation** Click <Freq> to switch frequency mode.  
Generally, imaging larger animals or deeper structures will require lower frequency.
- Effects** The higher the frequency, the better the resolution - but the worse the penetration.  
Harmonic imaging enhances resolution and reduces low-frequency and large amplitude noise. However, there is some loss of axial resolution.

## Focus Position

This function is to adjust the focus position.

- Operation** Click the Focus Position and set it at or just below your level of interest.

# More advanced controls

## Acoustic Power

Refers to the power of ultrasonic wave transmitted by the probe, the real-time value of which is displayed in the image parameter area in the upper left corner of the screen.

- Operation** Adjust through the <A. Power> item in the soft menu.  
The adjusting range is 10%-100%, in increments of 6%.
- Effects** Generally, increasing the acoustic power will increase the brightness and contrast of the image as well as the penetration.  
  
Increasing acoustic power should be seen as a last resort, only after optimising all other controls. Always follow the ALARA (As Low As Reasonably Possible) principle.

## Expand mode

- Operation** Click [expand mode].
- Effects** Increasing sector width increases the imaging area, but causes a reduction in frame rate.

## Dynamic Range

This function is used to compress or expand the range of greys.

- Operation** Adjust through the [Dyn Ra.] item in the soft keys.  
Click <DR> in the upper left corner of the screen and move the slider to adjust the dynamic range.  
The adjusting range is 30-120dB in increments of 5dB.
- Effects** The greater the dynamic range, the greater the range of greys displayed, and hence the lower the contrast with more noise.

## Persistence

This function is used to average frames.

- Operation** Adjust through the [Persistence] item in the soft menu.  
The system provides 8 levels of frame averaging. 0 indicates that Persistence is off.
- Effects** Increasing persistence averages frames together, which can reduce noise and create a smoother image.
- Impacts** High persistence reduces frame rate and can give a delayed image, with loss of some detail.

## Grey Map

- Operation** Select among the maps through the [Gray Map] item in the soft menu and choose the one that best suits your eye.  
The system provides 18 types of gray map.
- Impacts** The function is available in real-time imaging, freeze or cine review status.

## Colorize Map

Allows a color 'wash' to be applied. This can help the eye to pick out details otherwise lost in a black and white image. The 'gold' color wash is popular for canine pregnancy scanning and when imaging the endocardium.

- Operation** Select the colorize map through the [Colorize Map] item in the soft keys.  
The system provides 4 colorize maps. 'Off' indicate the colorize is turned off.
- Impacts** The function is available in real-time imaging, freeze or cine review status.

## CrossBeam

Sends out multiple beams at different angles, improves image quality by averaging the returning signals.

- Operation** Click the soft key [ CrossBeam ] to turn on or off.
- Effects** Reduces noise, but at the expense of frame rate.

## Enhance

Enhances the borders of structures.

- Operation** Select the [Enhance] item in the soft keys.  
The system provides 4 levels to select from. 'Off' indicates that edge enhancement is off.
- Effects** Creates a sharper image.

## **TSI (Tissue Specific Imaging)**

The TSI function tells the machine what speed to assume the sound waves are travelling at inside the patient. By default, the machine assumes this to be the average speed of sound in soft tissue (1540m/s), but occasionally you may wish to override this, given that sound travels more slowly through fat and faster through denser materials such as bone.