

**Consona N8/Consona N8 Pro/Consona
N8 Super/Consona N8P/Consona OR/
Consona N8S/Consona N8T/Consona OI/
Consona OT/Consona OF/Consona OX/
Consona N8K/Consona N8Q/Consona
N8V/Consona N8 Exp/Consona N8 Elite/
Consona N8 Ultra/Consona N8 Plus**

Diagnostic Ultrasound System

Operator's Manual

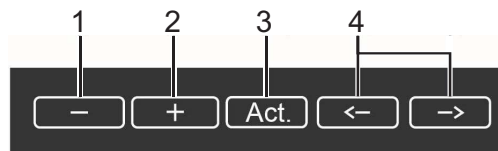
[Basic Volume]

- Click [Advanced], and then enable [Sampling Line Displaying]. The sampling line always appears after being set when entering PW/M/TVM mode for once. Press <PW>/<M> to enter the corresponding mode one time.

3D4D Preset Manager

Click [3D4D Preset Manager].

- Level: displays the scenario and subpreset item of the currently activated probe and exam mode. The scenario and subpreset item can be renamed or restored to factory settings.
- Scenario and Subpreset: the item can be deleted, added, and set to default active item, and the position can be adjusted.



No.	Item	Description
1.	Delete	Delete a selected scenario or subpreset.
2.	Add	Click a blank button, and select a desired scenario or subpreset under the currently activated probe and exam mode.
3.	Set to active	Set a scenario or subpreset to the default active item.
4.	Move to left/ right	Move a scenario or subpreset to the left or right.

- Click [Show Scenario Parameters] and [Show Subpreset Parameters] to view the Scenario and Subpreset parameters.

TIP:

It is unavailable for frozen dual-probe mode.

6.2 B Mode

B mode is the basic imaging mode that displays real-time views of anatomical tissues and organs.

6.2.1 B-mode Image Scanning

Enter the patient information, and select the appropriate probe and exam mode.

If the system is in other imaging mode, press to return B mode.

Adjust parameters to optimize the image.

6.2.2 B-mode Image Parameters

Image Quality

Used for switching B/THI and adjusting the frequency. The real-time value of frequency is displayed in the image parameter area, and if harmonic frequency is used, “F H” is displayed as harmonic frequency value.

The system provides a THI function using harmonics of echoes to optimize the image. Harmonic imaging enhances near field resolution and reduces low-frequency and large amplitude noise, so as to improve Small Parts imaging.

Please select the frequency according to the detection depth and current tissue features.

Gain

To adjust the gain of the whole receiving information in B mode. The real-time gain value is displayed in the image parameter area.

Rotate knob clockwise to increase the gain, and anticlockwise to decrease.

Depth

This function is used to adjust the display depth of sampling, the real-time value of which is displayed in the image parameter area.

Rotate knob clockwise to increase the depth, and anticlockwise to decrease.

Increase the depth to see tissue in deeper locations, while decrease the depth to see tissue in shallower locations.

Depth increase will cause a decrease in the frame rate.

TGC

The system compensates the signals from deeper tissue by segments to optimize the image.

There are 8-segment TGC sliders corresponding to the areas in the image.

Adjust the signal gain for the certain image area to get a balanced image.

Acoustic Power (A.Power)

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

NOTE:

You should perform exams according to actual situation and follow the ALARA Principle.

Scan range and FOV position

More information can be obtained without moving the probe or changing the sampling position.

NOTE:

- The FOV position/range is available only for the convex and phased probes.
 - When the scan range is adjusted to the widest, the FOV position cannot be changed.
 - You can get a much larger field of view when selecting a larger FOV, but the frame rate will decrease.
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B Steer

To steer the beam the probe transmits.

TIP:

Steer is available only for linear probes.

Line Density

The function determines the quality and information of the image.

The higher the line density is, the higher the resolution becomes.

Steer

The feature is used to adjust the ROI of color flow with different angles with immobility of the probe.

This function is used to adjust the scan angle of linear probes, so as to change the angle between the transmitting beam and flow direction.

TIP:

Steer is available only for linear probes.

Line Density

The function determines the quality and information of the image.

The higher the line density is, the higher the resolution becomes.

Packet Size

This function is an indication of the ability to detect flow, which is used to adjust the accuracy of color flow.

0 represents no packet size control.

The higher the sensitivity is, the more sensitive indication for low-velocity flow becomes. It affects the frame.

Flow State

Refers to optimizing the various flow states.

Persistence

This function is to adjust the temporal smooth to optimize the image.

0 represents no persistence. The bigger the value is, the stronger the effect becomes.

Smooth

This feature is used to reject the noise and smooth the image.

The bigger the value is, the higher the smooth becomes.

Scale

This function is used to adjust the speed range of color flow, which is adjusted through PRF in the system. The real-time PRF value is displayed in the image parameter area.

Aliasing may occur if low velocity scale is used and high velocities are encountered.

Low velocities may not be identified when a high velocity scale is used.

Baseline

Refers to the area where the velocity is zero in the scale. Adjust according to the actual situation so as to get an optimum flow display.

Positive value means to increase the signals below the baseline, and negative value means to increase the signals above the baseline.

Invert

To set the display mode of the color flow, the color scale will be inverted when the function is activated.

13.2.2 Pan Zoom

Perform the following procedure:

1. Use the [Pan Zoom] on the touch screen, or freeze the image and rotate <Depth/Zoom> knob to enter the pan zoom status. Image-in-image is displayed.
The image magnification factor value will display in real time in the image parameter area. For example, “Z 1.40” indicates that the magnification factor is 1.4.
2. Adjust the magnification factor to 1.00 to exit pan zoom.

13.2.3 Spot Zoom

Perform the following procedure:

1. Press <Freeze> to freeze the image and press <Depth/Zoom> knob to light the Zoom indicator.
2. ROI adjustment: press <Set> to switch between size and position status; roll the trackball to change the size/position. You can also change ROI size by rotating <Depth/Zoom>.
3. Press <Depth/Zoom> / <Update> key to enter Spot Zoom status.
 - Rotate the <Depth/Zoom> knob to change the magnification factor.
 - Use the trackball and <Set> key to change ROI size and position.
4. Press <Depth/Zoom> or <Freeze> to exit spot zoom.

13.2.4 iZoom (Full-screen Zooming)

Perform the following procedure:

1. Press the user-defined <iZoom> key to zoom in the image.
The zooming area includes image area, parameter area, image banner, and so on.
2. Press the user-defined key again to zoom in the image area only.
The image goes to full-screen.
3. Press the user-defined key again to exit.

13.3 Freeze/Unfreeze the Image

Press <Freeze> on the control panel to freeze a scanning image. In freezing mode, the probe stops transmitting acoustic power, and all images as well as the parameters are kept still.

Press <Freeze> in frozen mode to unfreeze the image, and the system continues image scanning.

Imaging Mode Switching When Frozen

Imaging mode switching in frozen mode follows the following principles:

- In splitting display B mode, press <Dual>/user-defined <Quad> key to switch among the windows; press to exit splitting display mode and enter the image of the currently activated window in full screen.
- In frozen mode, the system supports imaging mode switching between the sub-modes (only for the activated window). For example, if the frozen image is of B+C+PW mode, then the system supports imaging mode switching between B+C+PW, B+C, B+PW and B by pressing <C> or <PW>.
- The imaging mode and parameters of an unfrozen image is the same as the corresponding one that before frozen; but the display format is the same as the one before unfrozen.