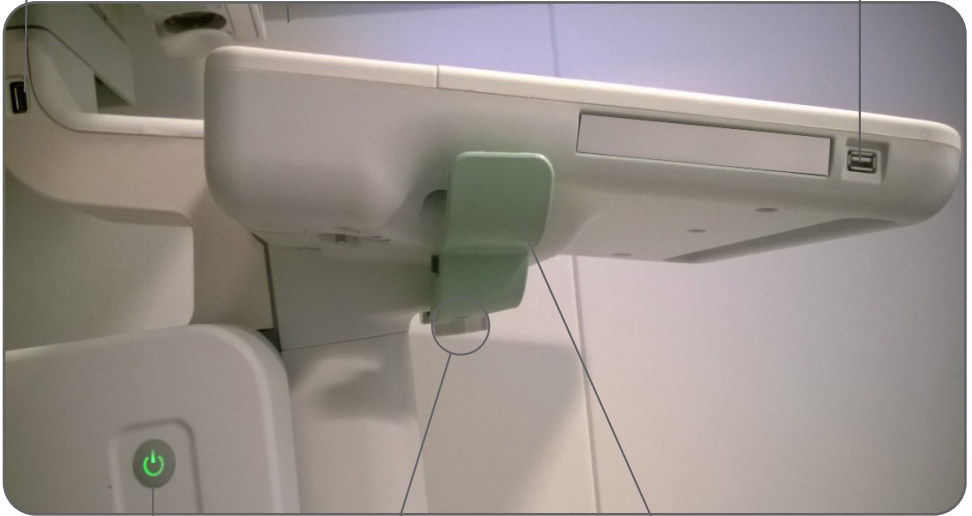


bk3000 & bk5000 Ultrasound System



USB 3.0 connector

USB 2.0 connector



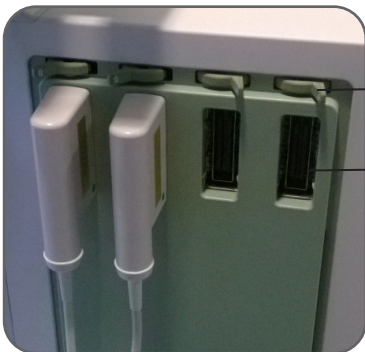
ON/Standby button

1

Turn knob to make system easier or harder to rotate on stand

Cable holder and release handle. To adjust system height, hold control panel on both sides and pull up on the release handles while moving the control panel up or down

Note: Tighten knob before moving system.



Flip lever left to lock, and right to unlock

Transducer socket 2



Lock wheels before use

Before You Start

Before you turn on the system, make sure that the installation has been approved by a qualified electrician or by hospital safety personnel.

Turning System On and Off

When you turn the system on or off, you must give the system enough time to save and recover open files and unsaved data. Otherwise, a serious system failure may occur that requires technical support.



Caution S-c4: *Never unplug the system from the wall while it is running. Turn off the system and wait for the light on the keyboard and the ON/Standby button to go out before unplugging.*

To Turn On:

- 1 Press the ON/Standby button *once*. Wait until startup screen disappears before you do anything else.

To Turn Off:

Make sure system is completely up and running. Press the ON/Standby button *one* time.

Note : *Always follow the recommended procedure for shutting down your system.*

Connecting Transducers

To Connect:

1. Insert transducer plug into socket with locking lever to the right.
2. Turn locking lever on socket to the left.

To Disconnect:

1. Freeze image.
2. Turn locking lever on socket to the right.
3. Remove plug from socket.

Performing an Exam

Keys are described on pages 6 and 7.



1. Press **Patient** key. Enter patient information. Patient ID field populates automatically with date and time. (Tab to move between fields.) Click **Start Exam**.



2. To change transducer type, press button on transducer or press **Probe** key and select transducer (probe) or click **Transducer** on the monitor.



3. To change exam type, press **Exam type** key or **Preset** on the monitor. Select examination type.

4. Imaging starts in 2D (B-mode).

5. Select highest frequency possible (**Freq** on monitor) to give needed penetration.



6. Adjust other imaging parameters. Turn **Depth** and **Gain** dials to adjust depth and gain as needed.



7. When you want to make a measurement or capture an image, press **Freeze** key to freeze image.



8. To make a measurement, press **Measure** key or select measurements on monitor. Make the measurement.



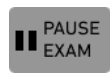
9. To make a calculation, press **Calculation** key or select calculations on monitor. Make the calculation.



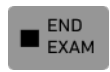
10. Press **Capture** key to capture the image (save it to system hard disk). It appears as a thumbnail. Frozen = image, Unfrozen = clip. (Spinning wheel appears on screen while capturing. Click again to stop recording.)



11. Press **Freeze** key to start imaging again.



12. Click **Pause exam** on the monitor to pause exam.



13. Click **End Exam** on the monitor or press **End exam** key to conclude exam.

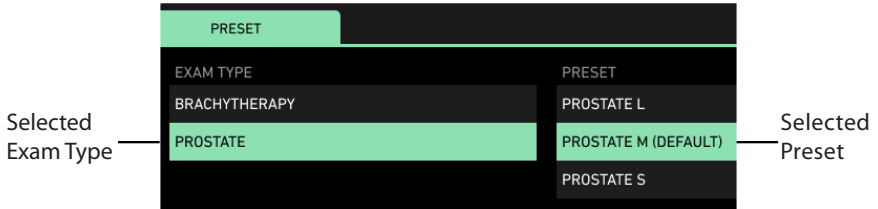


Exam Type and Preset

An examination type specifies both an Exam Type and a Preset.

The Exam Type affects the system user interface — which tabs and controls are displayed, which measurements are allowed, etc.

The Preset affects the ultrasound image — sets the gain, depth, frequency, etc.



Viewing and Copying Images

To select captured images to view them or copy them to another device, use the document browser at the top of the workspace (described on pages 8 and 9).

View

Click thumbnail in document browser. A green frame with a 'Close' label appears on the selection and the document is displayed on the monitor.

Copy to USB, PACS, or a network drive

To Copy Documents to an External Location :

1. Open review window by clicking the **Review** tab. Insert USB device if needed.
2. Click **Patient List** or the **Completed Exams** tab under **Review**.
To retrieve patient list, the current exam must be ended.
3. Select the patient, whose examination you want to copy.
4. Click **Export**.
5. Select the destination, format, and patient data identification and click **Export** again. **De-identify patient ID** is recommended for patient security.
6. The data is copied to the selected destination.

System Busy

When the system is busy, a progress circle appears left of the document browser, or a progress bar is displayed on top of the monitor.

Note: Wait until the progress circle/bar disappears before using any controls, including buttons on the transducer.

Keyboard

See 'Performing an Exam' page 4









TGC sliders
Adjust gain in different parts (depths) of the image

User-defined keys. See the *bk3000/bk5000 Advanced User Guide*.






Keys are Backlighted	
If light is	Key function
Bright	On
Dim	Available but not on
Off	Unavailable

Monitor Brightness	
Increase	+
Decrease	+
Default setting	+ D





2D (B-Mode) Image Keys

<p>Focus Select focus indicator on monitor</p> 	<p>Puncture Guide Puncture line or brachy matrix on</p> 
<p>Harmonic Press for on and off</p> 	<p>3D Press for 3D box and click again to start 3D acquisition Long press: 3D off</p> 
<p>2D (B-mode)/Gain When imaging: Press: B-mode Turn: B-mode gain When frozen: Turn: Scroll Cine Press: Change dial to Post Gain</p> 	<p>Zoom/Depth Turn: Adjust depth Press: Zoom box on Turn: Resize zoom box 2nd press: Zoom area inside box 3rd press: Zoom off, dial returns to Depth Long press: Zoom off</p> 
<p>Measure Start default measurement</p> 	<p>Calculate Start first measurement for default calculation</p> 

Spectral Doppler Keys

<p>Doppler Angle Angle on and selected Long press: Angle off</p> 
<p>Update Changes which Triplex mode is imaging and which is frozen Long press: Unfreeze both views</p> 
<p>Cancel/Undo Same functionality as Update key in most Exam Types.</p> 
<p>Doppler Mode Press: Doppler mode Turn: Doppler mode gain In B-mode, controls MI In M-mode, controls M mode gain</p> 
<p>Doppler Gate Press for on and off</p> 

Color Doppler Keys

<p>Steer Change beam angle in Color/Power/ Doppler modes</p> 
<p>Power Mode Press for on and off</p> 
<p>Color Mode Press: Color mode Turn: Color/Power mode gain</p> 
<p>Color Box Press for on and off</p> 

Volume



Baseline



Scale

Adjust Color/Power/
Doppler scale/PRF



Invert

Invert Doppler spectrum
(or color scale)



Home

Return to
default settings for
current preset



Auto

2D returns to default
preset gain.
D-mode optimizes PRF
(scale) and baseline.
Long press activates
Auto Gain

Split Screen

Split screen so 2
views are displayed,
or change which view
is active



Long press: Split
screen off

Imaging Plane

Change imaging plane
on biplane and triplane
transducers

Long press = press for 1–3 seconds.

Monitor Display and Functionality

Patient: Enter Patient ...

Transducer: E14CL4b (T)

Exam type / Preset: Prostate/Prostate M

Image data:

2D/B Mode	MI: 1.74
TIS: 0.31	5 MHz
2D/B Freq	50 %
2D/B Gain	Med/20 Hz
Res / Hz	3.8 MHz
Color Doppler Mode	50 %
C Freq	1.3 kHz
C Gain	
C PRF	

Measurement data:

Prostate	
W	3.11 cm
H	2.40 cm
L	3.33 cm
Volume	13.02 cc

Velocity Scale: +2.6 cm/s, -2.6 cm/s, M6/M3

Battery and storage indicators: BATTERY 97%, STORAGE USED 28%, FROZEN, DO NOT POWER OFF

Snowflake icon to show that image is frozen: FROZEN icon

Document browser: 1, 2, 3, 4, 5, 6

DICOM and Wi-Fi Indicators: DICOM, WIFI

Workflow tabs: IMAGE REVIEW, MEASUREMENTS >, CALCULATIONS >, LABELS >, BODYMARKS >, CINE >, User, Settings

Imaging mode tabs: 2D, COLOR, PW, CW, POWER, ELASTO, M-MODE, 3D, FUSION

Imaging plane indicators: BIOPSY, R/L INVERT, INVERT, LIVE DUAL, D CURSOR, COLOR MODE VELOCITY, DUAL, FREQUENCY 7.5, POWER DOPPLER, SCALE 0.5 KHZ, T, S

The Workspace:
 This includes the document browser,
 workflow tabs, and imaging mode
 tabs

Monitor Controls

The Exam Type determines what tabs are available and which controls they contain. For example, the M-mode tab or 3D tab is available only when it is part of the selected Exam Type and the license is in the system.

Available controls depend on whether the image is scanning or frozen.

Note: "Click a tab" means click the tab name.

Workflow Tabs

Workflow tabs control whether you are working with the image or with a document. When working with the image, these tabs determine whether you are looking at measurements, calculations, labels, bodymarks, or cine. The two buttons in the workflow tabs take you to User Information or Settings.

Imaging Mode Tabs

Controls on the **Image** workflow tab are grouped on various **Imaging Mode** tabs.


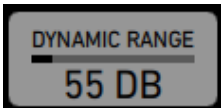
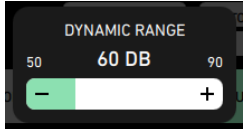

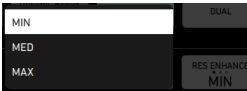
- Click **Image** tab to display mode tabs on the top. In order to activate, click **Unfreeze**.
- To start an imaging mode, click the tab while imaging. It opens so you can use the relevant controls.
- Clicking the imaging mode tab on top turns off that imaging mode.

Visible Controls

Tabs can be customized to include different controls, so your monitor may not look exactly like the one pictured. The *bk3000/bk5000 Advanced User Guide* contains information about customizing your setup.

Parameter Buttons

There are three types of parameter buttons:







Toggle buttons that are selected / deselected by a click, such as Biopsy		
Scale buttons marked by a slider that you hold and slide to adjust parameters, such as Dynamic Range.		
Buttons with dropdown menus to select from. These are marked by a number of dots related to the number of menu items, such as Res Enhance.		

Basic Monitor Controls

Key	Function/Note
Biopsy	Display puncture line or brachy matrix
Bodymarks	Select and place bodymarks
Calculations	Make calculations
Cine	Activate cine buttons
Dynamic Range	Adjust contrast
Dual	Activate/-de-activate split screen imaging
Frequency	Change imaging frequency
Harmonics	Activate tissue harmonic imaging
Image	Activate imaging mode tabs
Labels	Select and place labels
Live Dual	Simultaneous imaging
Measurements	Make measurements
Res Enhance	Adjust balance between resolution and frame rate
Review	Activate image reviewing options
R/L Invert	Invert the image orientation right/left
Sector width	Expand and reduce sector width
U/D Invert	Invert the image orientation up/down

These are the controls needed for basic examinations.
 For information about other controls, see the *bk3000/bk5000 Advanced User Guide*.

Your Custom Keys

Key	Function/Note
	
	
	
	
	
	

Your Notes

This Book is not a Complete User Guide

Before you use the system, you must read the Safety chapter in the *bk3000 & bk5000 User Guide*. It contains safety information that is important for avoiding injury and for avoiding damage to the equipment. You must also read *Care and Cleaning*, which contains information about cleaning and disinfection as well as information about required inspections, calibration and maintenance. The *bk3000/bk5000 Advanced User Guide* contains detailed information for the advanced user.

bkmedical.com

This guide is also available on the BK Medical website. Please go to the *Customer Service* section to download user manuals.

If you have comments about the user documentation, please write to us at info@bkmedical.com. We would like to hear from you.

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