

## bk3000 & bk5000 Ultrasound System



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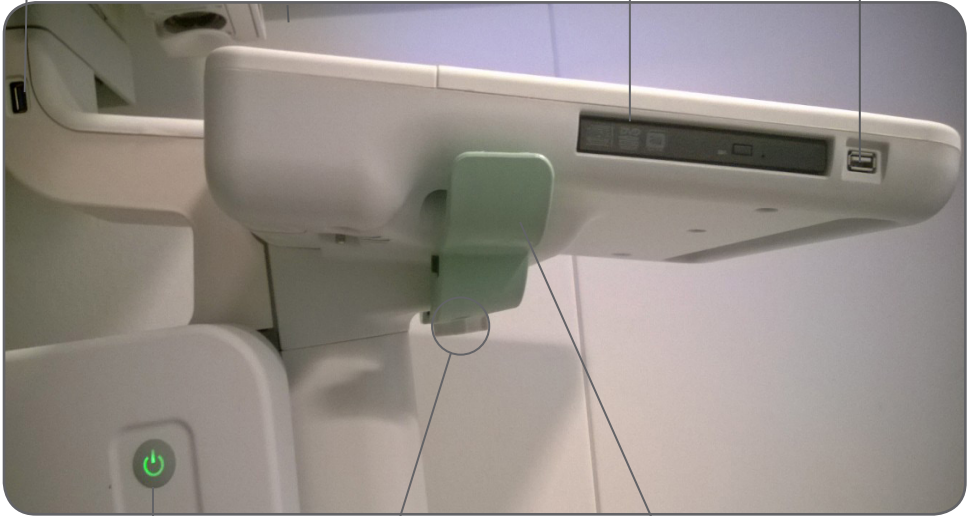
Part of the bk3000 & bk5000 User Guide  
bk3000 & bk5000 = Ref. Type 2300

 0543

USB 3.0 connector

CD/DVD reader/writer

USB 2.0 connector



ON/Standby button

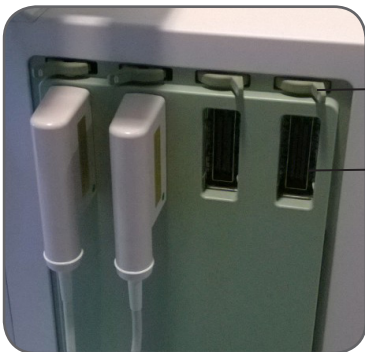
1

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.*

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### 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.

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

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## 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.



Patient



Probe



Exam type



End exam

1. Press **Patient** key. Enter patient information. Patient ID field populates automatically with date and time. (Tab to move between fields.) Click **Start New Exam** or **press unfreeze**.
2. To change transducer type, press button on transducer or press **Probe** key and select transducer (probe).
3. To change exam type, press **Exam type** key. Select examination type.
4. Imaging starts in 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. (Measurement tab opens.)
8. To make a measurement, press **Measure** key or select measurement keys on monitor. Make the measurement.
9. Press **Capture** key to capture the image (save it to system hard disk). It appears as a thumbnail at the top of the monitor. Frozen = image, Unfrozen = clip. Capture turns red while recording. Click again to stop recording.
10. Press **Freeze** key to start imaging again.
11. Press **End exam** key to conclude exam.

## Exam Type

An examination type specifies both a Pro Package and a Diagnostic Setup/Preset.

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

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

selected Pro Package



selected Diagnostic Setup

## Viewing and Copying Images

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

### View

Double-click thumbnail in document pane. Document is displayed in image area.

### Copy to USB or CD/DVD

#### To Copy Captured Images:

1. Insert USB device or CD/DVD.
2. Click each image to be copied. Frame turns blue.
3. Click **Copy**, then select destination (USB or CD/DVD). The options **without Patient ID** are recommended for patient security.
4. Images are copied to USB immediately. Click **USB Eject** to remove USB device.

When you select CD/DVD, images are copied to a staging area. To copy them to the CD/DVD, click Burn CD and follow instructions.

## System Busy

When the system is busy, a spinning disk appears on the lower right hand side of the monitor.

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**Note:** Wait until the spinning disk disappears before using any controls, including buttons on the transducer.

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# 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	 + <b>D</b>





## B-Mode Image Keys

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

## Spectral Doppler Keys

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

## Color Doppler Keys

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



### Auto

B-mode 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 Functionality

The screenshot shows the ultrasound monitor interface with the following callouts and annotations:

- Select transducer:** Points to the 'E14C4: S' dropdown menu.
- Select exam type:** Points to the 'E0D1: Prostate S' dropdown menu.
- Enter patient information:** Points to the patient ID field '(201408070959)1'.
- Double-click or drag to enlarge and view captured image or clip:** Points to a row of image thumbnails.
- Document pane:** Points to the area containing the patient ID and a 'Dual Guide - UA1328, UA1328' label.
- Pull here to enlarge image thumbnails:** Points to the right side of the thumbnail row.
- Click and drag to adjust focus area:** Points to the yellow focus area on the B-mode image.
- Click here to select a different brachy matrix or puncture guide:** Points to the 'Dual Guide' label.
- Puncture line:** Points to the yellow line on the B-mode image.
- Measurements shown here:** Points to the 'PR-W 15.2 mm', 'PR-D 15.9 mm', and 'PR-L 10.5 mm' labels.
- Image data shown here:** Points to the technical data box on the right showing Res / Hz (2/63 Hz), B Freq (12 MHz), and B Gain (50 %).
- MI: 0.85<1.50 TIS: 0.6<2.0**
- Imaging Mode tabs:** Includes 'general', 'Color', 'Doppler', and 'Elasto' tabs.
- Workflow tabs:** Includes 'OFF Advanced', 'Capture', and 'OFF Freeze' buttons.

To minimize *all tabs*, click the workflow tab on top. To open again, click any tab.

To open a workflow tab that is not on top, click it.

Start/stop imaging



# Monitor Controls

The Pro Package 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 Pro Package.

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

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**Note:** “Click a tab” means click the tab name.

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## Workflow Tabs

Workflow tabs open automatically as needed. That way, only relevant controls are displayed. You can also open a tab manually to see its controls as described on page 8.

“Freeze” toggles between **Image** and **Measure and Mark** tabs.

## Imaging Mode Tabs

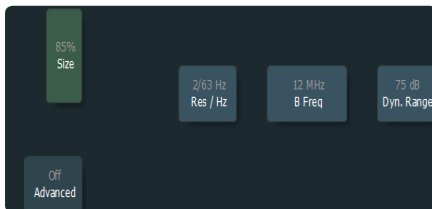
Controls on the **Image** workflow tab are grouped on various **Imaging Mode** tabs.

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

## Visible Controls

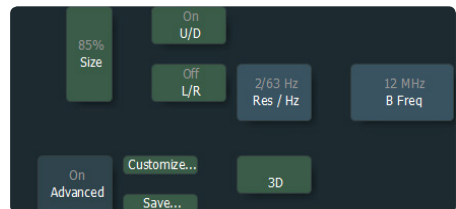
Tabs can be customized to include different controls, so your monitor may not look exactly like the one pictured. The *bk3000/bk5000 Advanced User Guide* contains information about customizing your setup.

### Basic Tabs (Advanced Off)



Basic tabs contain the most often used controls.

### Advanced Tabs (Advanced On)









To see and use all available controls for a workflow tab, click **Advanced**.

# Basic Monitor Controls

Key	Function/Note
3D	Turn on 3D imaging
Archive	Send to PACS (DICOM) or staging area for archive CD
Biopsy	Display puncture line or brachy matrix
Bodymark	Bodymark on image
Capture	Save image (if frozen) or clip (if imaging) to system hard disk
Copy	Copy to USB or CD/DVD
Depth -	Decrease max. tissue depth shown (increase magnification)
Depth +	Increase max. tissue depth shown (decrease magnification)
Dyn. Range	Adjust contrast
ETD	Enhanced Tissue Definition (reduce speckle)
Freeze/Unfreeze	Start/stop imaging
Freq	Change imaging frequency
Gain	Adjust gain of selected mode
Harmonic	Tissue harmonic imaging
L/R	Image orientation left/right
Pro Package	Select different Pro Package
Save...	Save setups
Scale	Adjust Color/Power/Doppler scale/PRF
Simultan	Both split-screen views imaging simultaneously (Color or Power mode in one view only)
Size	Image bigger or smaller
Split	Split screen into 2 views
U/D	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.

## [www.analogicultrasound.com](http://www.analogicultrasound.com)

This guide is also available on the BK Ultrasound 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@bkultrasound.com](mailto:info@bkultrasound.com). We would like to hear from you.

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