bk medical ●))

flex **Focus**
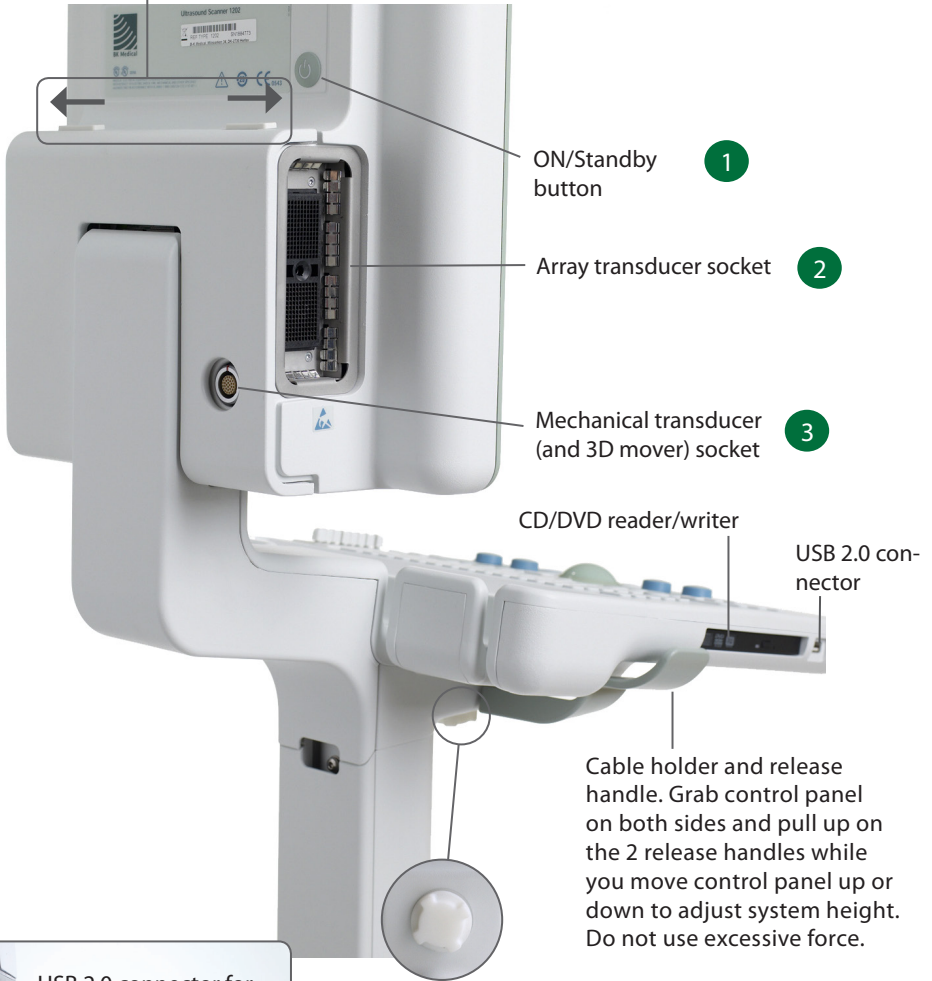## Ultrasound Systems

Part of the 1202 User Guide
Flex Focus = Ref. Type 1202

CE **0543**

Sliders to release scanner unit. See page 14.

ON/Standby button **1**

Array transducer socket **2**

Mechanical transducer (and 3D mover) socket **3**

CD/DVD reader/writer

USB 2.0 connector

Cable holder and release handle. Grab control panel on both sides and pull up on the 2 release handles while you move control panel up or down to adjust system height. Do not use excessive force.

USB 2.0 connector for touch control panel

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

Note: *Tighten knob before moving system.*

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. For systems with battery support, make sure that the batteries are charged fully before you turn on the system.

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.*

①

To Turn On:

Press ON/Standby button *one* time. Wait until startup screen disappears before you do anything else.

To Turn Off:

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

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

Connecting Transducers

②

Array Transducers

To Connect:
1. Insert transducer plug into socket with locking lever in 3 o'clock position.
2. Turn locking lever on transducer plug clockwise to 6 o'clock position.

To Disconnect:
1. Freeze image.
2. Turn locking lever on plug counterclockwise to 3 o'clock position.
3. Remove plug from socket.

③

Mechanical Transducers

To Connect:
1. Align red mark on plug with red dot on transducer socket.
2. Insert plug in socket.

To Disconnect:
1. Pull back on plug locking mechanism (collar).
2. Remove plug from socket.

Performing an Exam

Keys are described on pages 6 and 7.

1. Press **Patient** key. Enter patient information. (Tab to move between fields.) Click **Start New Exam.**

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.

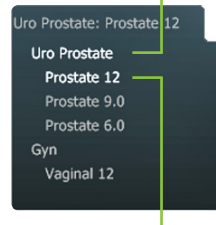11. Press **End exam** key to conclude exam.

Exam Type

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

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

The Diagnostic Setup 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.

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

Power Save

Systems with battery support can go into power save mode and the monitor will turn off.

To Restore the System to Normal Power:
- Press a key or press the transducer button
or
- move the trackball or touch the touch pad.

Keyboard

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

Patient
Exam type
Probe
Document
End exam

| esc | ! 1 | @ 2 | # 3 | $ 4 | % 5 | ? 6 | & 7 | * 8 | (9 |) 0 | _ - | + = | ← |

→| Q W E R T Y U I O P Å Ü Ç

⇧ A S D F G H J K L Æ Ø ↵

⇧ Z X C V B N M ; , < : . " . > \ ⇧

ctrl alt fn ` ¨ ^ ~ ← ↓ ↑ →

Doppler

Color

Adjust a value or size of zoom box, etc.

− +

B-Mode Image

Home   Auto

P1   P2

Capture

Volume
Baseline
Scale
P3

Trackball and keys with PC-mouse functionality

Select

Cancel/Undo

Select

Print

Freeze: Start/ Stop imaging

User-defined keys. See the *Flex Focus 1202 Advanced User Guide.*

Keys are Backlighted

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

Monitor Brightness

Increase	ctrl + ↑	
Decrease	ctrl + ↓	
Default setting	ctrl + D	

B-Mode Image Keys

Focus
Select focus indicator on monitor

Puncture Guide
Puncture line or brachy matrix on

Harmonic
Press for on and off

3D
3D on, or step through 3D states
Long press: 3D off

B-Mode/Gain
When imaging:
Press: B-mode
Turn: B-mode gain
When frozen:
Turn: Scroll Cine
Press: Change dial to Post Gain

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

Measure
Start default measurement

Calculate
Start first measurement for default calculation

Spectral Doppler Keys

Color Doppler Keys

Doppler Angle
Angle on and selected
Long press: Angle off

Steer
Change beam angle in Color/Power/ Doppler modes

Update
Changes which Triplex mode is imaging and which is frozen
Long press: Unfreeze both views

Power Mode
Press for on and off

Doppler Mode
Press: Doppler mode
Turn: Doppler mode gain
In B-mode, controls MI
In M-mode, controls M mode gain

Color Mode
Press: Color mode
Turn: Color/Power mode gain

Doppler Gate
In B-mode, Doppler gate on
In Doppler mode, assign cursor to Doppler gate

Color Box
Assign cursor to color box

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.

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

Select transducer

Select exam type

Enter patient information

Double-click or drag to enlarge and view captured image or clip

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Document pane

Pull here to enlarge image thumbnails

Click and drag to adjust focus area

UA1822UA1326

5.4 cm

Puncture line

Click here to select a different brachy matrix or puncture guide

Image data shown here

Cine Play
Off
Res / Hz
2/48 Hz
B Freq
10 MHz
B Gain
50 %

-0.8 cm

97%

UA1250

Measurements shown here

| Pr-W | 23.3 mm | Pr-H | 18.5 mm | Pr-L | 18.2 mm | MI: | 0.84<1.60 | TIS: | 0.2<2.0 |

General	Color	Doppler

Imaging Mode tabs

Depth +			100 Width	On Biopsy
Depth -	10 MHz B Freq	B Gain	Plane	Off Split

Workflow tabs

Off Advanced	3D		Capture	On Freeze

Image	Measure and Mark	Documentation

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.

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

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.
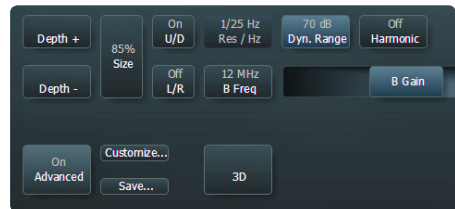
Visible Controls

Tabs can be customized to include different controls, so your monitor may not look exactly like the one pictured. The *Flex Focus 1202 Advanced User Guide* contains information about customizing your setup.
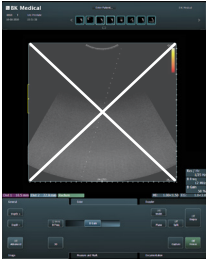
Basic Tabs (Advanced Off)
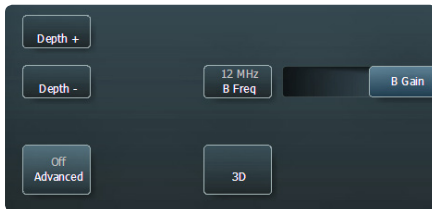
Basic tabs contain the most often used controls.

Advanced Tabs (Advanced On)

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

Touch Monitor

Note: The ultrasound image part of the monitor is not touch-sensitive.

Make sure that the monitor is clean before you start imaging. If you attach a sterile cover to the lower part of the monitor (to cover the monitor controls), make sure that the scanned image is not covered.

Look directly at the monitor, not at an angle, to ensure that your touch is accurate.

If a monitor key is not highlighted, you cannot use it – you may need to freeze or unfreeze the image.

To click a monitor control, tap it with your finger or use the touch pad on the control panel. The monitor reacts *when you remove your finger*, not when you touch it.

To undo a measurement, double click and hold.

For "**More**" lists, use the slide bar on the right to scroll up and down in the list.

Document Pane (Top of Monitor)

Slide your finger down the right side of the pane to enlarge the documents. To browse through the documents, flick your finger across the thumbnails. Drag to review thumbnails.

Special Monitor Controls

Monitor Control	Function/Note
Reset	Return to default settings for the exam type
B Gain Near	Adjust the gain in the near part of the image
B Gain Far	Adjust the gain in the far part of the image
Multiselect	When this is on, documents you select are added to a selection. When this is off, only the one document you select remains selected.

Keyboard on the Monitor

Click **Enter patient** and a monitor keyboard opens for you to enter patient information. You can also access the keyboard via the **Keyboard** tab.

Shift, Ctrl, Alt and fn Monitor Keys

Use these special keys to type special characters or obtain additional keyboard function-ality. For example, click **Shift** and then click **5** to type %.

Touch Control Panel

Capture an image to the system hard disk or print it. User-defined.

Touch pad to move cursor on monitor.

Select

Adjust value or size of zoom box, etc. Holding your finger on the key repeats the action.

In B-mode, adjust Depth. If Doppler on, adjusts Doppler PRF. If Color is on but not Doppler, adjusts Color PRF.

Adjust gain for one mode only, the first in this list that is active: Doppler, Color, Power, B-mode.

Freeze. Start/Stop imaging.

To Select:

Press anywhere on the +/- key (except at either end) or press anywhere on the touch pad.

To Drag:

To drag an object on the monitor, select it and slide your finger on the touch pad to move the cursor. If you use the touch pad to select, keep your finger down after the second press and slide it around.

Long Click (to Delete a Measurement, Label or Body Mark From the Monitor):
1. Place the cursor.
2. Press the touch pad or **Select** twice, holding the second press to be a long press.

The Remote Control UA1237 for the Flex Focus 1202 touch monitor is described in the Flex Focus 1202 User Guide.

Basic Monitor Controls

Key	Function/Note
3D *	Turn on 3D imaging
ACI *	Angular Compound Imaging (improve organ definition)
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
Res/Hz	Select resolution/frame rate
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 *Flex Focus 1202 Advanced User Guide*.
* Optional, not available on all versions of the *Flex Focus 1202*

Your Custom Keys

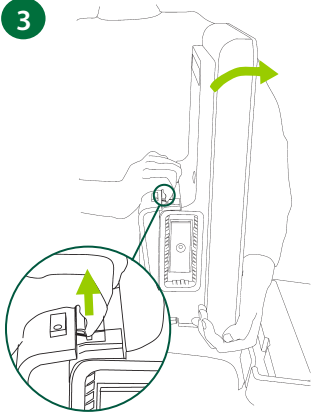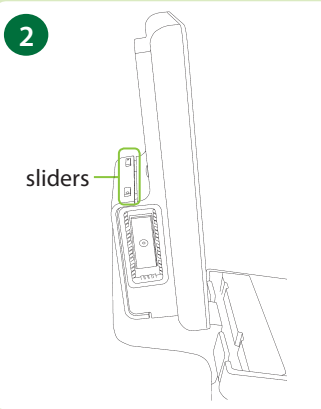| Key	Function/Note
P1	
P2	
P3	

Your Notes

Undocking and Docking the Scanner Unit
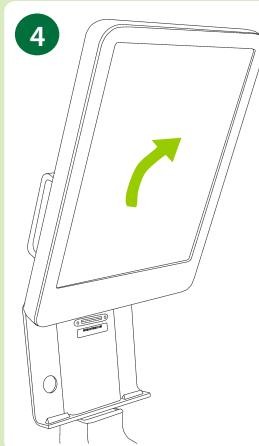
Removing the Scanner Unit From a Docking Unit

1 Turn off the system and disconnect all transducers.

Push the 2 sliders away from the middle.

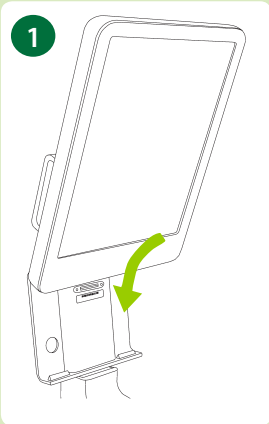The scanner unit tilts forward in the dock.

2

sliders

3

Hold the scanner unit securely while you reach inside the slot to release the safety bracket. *The bracket may be warm*.

4

Remove the scanner unit from the dock.

Docking the Scanner Unit

1

Tip the scanner unit and slide it into the dock.
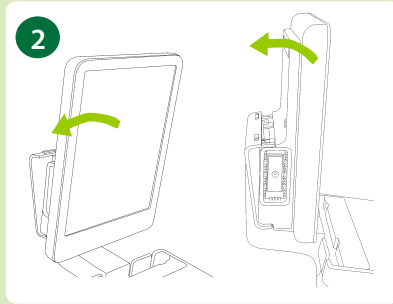
2

Tip the top of the scanner unit back until it clicks into place.
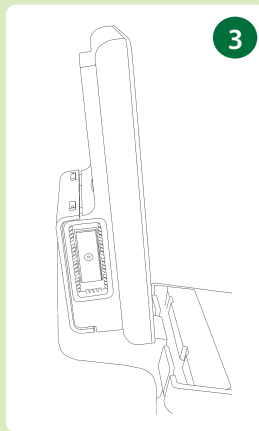
3

The system looks like this when it is correctly docked.

This Book is not a Complete User Guide

Before you use the system, you must read the Safety chapter in the *Flex Focus 1202 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 *Flex Focus 1202 Advanced User Guide* contains detailed information for the advanced user.

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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.