

Healthcare

# CAE Blue Phantom User Guide

BPBF200-C Bone Fracture Ultrasound Training Block, crepitus  
BPBF200-G Bone Fracture Ultrasound Training Block, greenstick  
BPBV110 Branched 4 Vessel Ultrasound Training Block  
BPO100 Branched 2 Vessel Ultrasound Training Block  
BPP120 Pediatric 4 Vessel Ultrasound Training Block  
BPNB150 Regional Anesthesia Ultrasound Training Block  
BPTM130 Soft Tissue Biopsy Ultrasound Training Block  
BPFB140 Foreign Body Identification Ultrasound Training Block



CAE

#### Disclaimer

This product is a simulation device designed for training and demonstration purposes only.

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# Cautions and Warnings

Read this user guide, including all cautions and warnings, before you use your CAE Blue Phantom™ ultrasound training model. Use this product only as described in this guide. If you use the product incorrectly, it may be unsafe and will void your warranty. Keep this information for future reference.

## General Precautions

- Make sure the training model is set up on a stable, sturdy work surface such as a bed, stretcher, or table that will not collapse and cause injury to users.
- Heavier training models should be placed on a patient bed or stretcher rated to support such weight.
- Place the model on smooth surfaces only. Rough or uneven surfaces can leave impressions on the skin and damage the model.
- Do only the procedures supported by each product as described in this guide.
- Use only needles to access fluids.
- Do not use or store other sharp objects such as scissors, scalpels, or box-cutters with the training model.
- Do not pull on the training model skin. This can cause the skin to tear.
- Do not mark directly on the training model as this will permanently damage it.
- Do not insert any objects or tools into the model except for the equipment, accessories, or medical supplies intended for use with this model.
- Do not use chemical solvents on the models.
- Clean the training model with water and a light soap solution only. Do not immerse the model or use large amounts of liquid to wash it.

## Latex-Free

- All CAE Blue Phantom training models, products, and accessories are manufactured only of materials that do not contain latex.

## Needles and Catheters

- Use only new, sharp, unbent 18-21 gauge needles or 7F catheters. Smaller needles (higher than 22 gauge) can bend during use and damage the model.
- The self-healing feature of CAE Blue Phantom simulated tissue applies only to needle sticks from 18-21 gauge needles. Healing is not guaranteed if needles larger than 18 gauge, scalpels, or other sharp implements are used to cut into or pierce the model.
- Replace needles after ten uses. Dull needles can damage the model.
- Use extreme caution when using needles during training to avoid injury.

### Fluids System

- Use only CAE Blue Phantom fluids. Other fluids can affect the imaging quality and promote fungal or bacterial growth, and may void your warranty. Use fluids only as directed.
- Do not substitute any other fluid unless indicated by this guide.
- Do not modify the fluid reservoirs or any assembly components.
- Protect your eyes, skin, and clothing against accidental fluid exposure. Refer to the Material Safety Data Sheet (MSDS) for guidance.
  - May irritate eyes or skin; flush well with water.
  - May contain pigments that stain clothing; wash immediately with cold soapy water.
- Fluid is not intended for human consumption. If accidental ingestion occurs, drink a glass of water and consult a physician.

### Service and Repair

- The CAE Blue Phantom training models are not user-serviceable. Only a trained technician may open or disassemble the product.
- Unauthorized use or handling of the model may void the warranty.
- If you have a problem with your product, contact CAE Customer Support.

# Introduction

This user guide describes the features, use, and care of the following training models:

- CAE Blue Phantom Bone Fracture Ultrasound Training Block, crepitus (BPBF200-C)
- CAE Blue Phantom Bone Fracture Ultrasound Training Block, greenstick (BPBF200-G)
- CAE Blue Phantom Branched 4-Vessel Ultrasound Training Block (BPBV110)
- CAE Blue Phantom Branched 2-Vessel Ultrasound Training Block (BPO100)
- CAE Blue Phantom Pediatric 4-Vessel Ultrasound Training Block (BPP120)
- CAE Blue Phantom Regional Anesthesia Ultrasound Training Block (BPNB150)
- CAE Blue Phantom Soft Tissue Biopsy Ultrasound Training Block (BPTM130)
- CAE Blue Phantom Foreign Body Identification Ultrasound Training Block (BPFBI40)

These models are intended as platforms for the practice of ultrasound examination and various ultrasound-guided procedures. Each model is presented as a CAE Blue Phantom Signature Blue Block™.



**CAE Blue Phantom Signature Blue Block**

## Anatomy

CAE Blue Phantom training models are constructed using our patented Simulex™ ultrasound tissue which has imaging characteristics that mimic human tissue.

The models have use-specific anatomy or features:

- Bone Fracture Ultrasound Training Block, crepitus (BPBF200-C)
  - Crepitus bone fracture
- Bone Fracture Ultrasound TrainingBlock, greenstick (BPBF200-G)
  - Greenstick bone fracture

## Introduction

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- Branched 4 Vessel Ultrasound Training Block (BPBV110)
  - Two 4mm vessels, one each 6mm and 8mm vessel
- Branched 2 Vessel Ultrasound Training Block (BPO100)
  - One 6mm vessels, one 4mm vessel
- Pediatric 4 Vessel Ultrasound Training Block (BPP120)
  - Two 6mm vessels, two 2mm vessel
- Regional Anesthesia Ultrasound Training Block (BPNB150)
  - Three 5mm nerves, one 6mm vessel that bifurcates into three vessels
- Soft Tissue Biopsy Ultrasound Training Block (BPTM130)
  - 16 masses of varying size and echogenicity
- Foreign Body Identification Ultrasound Training Block (BPF140)
  - Metal projectile BBs
  - Metal shrapnel fragments
  - Wooden splinters
  - Metal needles
  - Large glass fragments
  - Glass shards

## Equipment Overview

The following items are included with your shipment:

- Ultrasound training model
- Plastic storage case

The following additional items are required for training but not included in your purchase:

- Ultrasound system with appropriate transducer
- Ultrasound gel
- Procedure equipment per local protocol

CAE Blue Phantom training models are compatible with any diagnostic ultrasound system. General frequency ranges for diagnostic ultrasound imaging are 2-20MHz.



# Using the Training Model

This section has information and instructions about the setup and use of the training model and any specific training procedures.

## Setup

Follow the guidelines below to unpack and set up your CAE Blue Phantom training model.

1. Open the shipping carton:
  - Use extreme caution with sharp tools, such as a box cutter, to avoid damage to the training model.
2. Unpack the equipment:
  - Remove the training model from its shipping container. For heavier models, use proper lifting techniques to prevent bodily injury.
  - Review the equipment, accessories, and supplies to make sure all necessary pieces are present. See the *Equipment Overview* section of this guide for a list of items included with this model.
3. Set up for training:
  - Put the model on a stable patient bed, stretcher, or table.
  - Prepare your ultrasound system and equipment.
  - Gather any procedural equipment and supplies.

## Training

This section provides information about using your model for training and practice.

### Ultrasound Scanning

Note: CAE Blue Phantom products do not teach ultrasound procedures or techniques. Refer to your institution or training program for more information.

To scan with your training model and conduct a simulated ultrasound-guided procedure:

1. Place the model in the appropriate position for scanning.
2. Place ultrasound gel on the transducer or on the training model in an adequate quantity so that the transducer slides effortlessly on the model. Add more gel as needed.
3. Adjust the ultrasound system controls per your training protocol and the manufacturer's instructions. Optimize the image with the ultrasound controls as needed.

# Ultrasound-guided Procedures

In addition to ultrasound scanning, some block models are designed for specific ultrasound-guided needle procedures. For the models listed below, use your normal protocol and equipment for the procedures, and follow your institution's policies and guidelines.

### **▲ CAUTION**

Do not use antiseptics, such as iodine, on the training model. This can cause permanent damage to the model.

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Follow these procedure-specific guidelines for your model:

### **Regional Anesthesia Ultrasound Training Block (BPNB150)**

For optimal performance of the training model, follow these steps:

1. Purge all air from the needle before infusing simulated anesthetics into the model.

NOTE: Accidental infusion of air into the model during training can cause air to remain within the tissue or needle track. The Simulex tissue then will not "heal" and this will result in a visible needle track or air bubble. Remove the trapped air by injecting the same access point with fluid until the air is flushed from the system.

2. Inject the fluid. As you inject the simulated anesthetic, you will observe the accumulation of fluid at the needle tip location.

NOTE: Do not inject tap water into your training model. Infuse only local anesthetics, saline, sterile water, or CAE Blue Phantom fluid.

3. After the injection procedure is completed, remove the fluid from the model by drawing back the syringe plunger to withdraw the infused fluid.

### **Soft Tissue Biopsy Ultrasound Training Block (BPTM130)**

When a tissue sample is taken from the block, it leaves an air-filled space the same size as the sample. Once a tissue sample is removed, it cannot be re-inserted. Therefore, this product has a finite lifespan.

### **Branched 4-Vessel Ultrasound Training Block (BPBV110), Branched 2-Vessel Ultrasound Training Block (BPO100), Pediatric 4-Vessel Ultrasound Training Block (BPP120)**

These models are pre-filled with ultrasound fluid. During use, users may withdraw fluid to confirm needle placement. Any fluid withdrawn must be refilled because it is important to maintain the fluid level within the vessels.

To maintain the fluid level, the user immediately injects any withdrawn fluid back into the model at the injection site. Take care not to inject any air into the model when using this method.

# Care and Maintenance

With proper care, your training model will remain in optimal condition and ready for use.

## Storage and Transport

Follow these guidelines to properly store or transport your model:

- Storage temperature degree range: 45 to 85 °F (7 to 29 °C)
- Store the model in its plastic storage case.
- Ensure any tubes are not pinched or compressed under the block. This will damage the tubes and void the warranty.
- Transport the block in its plastic storage case.

## Cleaning

To maintain the product skin for the lifespan of the product, clean the exterior of the model after each use. Follow these steps:

1. Mix one cup of tap water with ¼ teaspoon of mild liquid soap (such as dish soap).
2. Gently clean the model's exterior with the soap mixture and a soft, non-abrasive sponge or cloth.
3. Rinse lightly with clean water.
4. Dab or pat with a clean, soft, lint-free cloth to dry the product after cleaning. Do not wipe or rub the skin, which can damage it.
5. After the model has dried completely, lightly coat the external surface of the model with baby powder and dust off any excess.

## Help and Technical Assistance

For assistance, contact CAE Customer Support. Contact information for all regions is available on the back cover of this guide and on the CAE Healthcare website.

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## Healthcare

For more information about CAE products, contact your regional sales manager or the CAE distributor in your country, or visit [caehealthcare.com](https://caehealthcare.com).

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For customer support, please contact CAE.

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