Developed by True Phantom Solutions Inc.

STIPULATION

The following content is compiled by True Phantom Solutions Inc. It contains the description of the product, specifications, images and special instructions to be followed while handling the product. It is advised that this document holds copyrights between two parties and hence, should not be distributed or published without mutual consent.

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1.Synopsis of the product:

Pediatric Full Human Body Phantom is an X-RAY CT and MR compatible training product. It is primarily used to train various patient positioning techniques. Often purchased by medical schools & teaching hospitals to train their radiology students & other medical professionals.

The Phantom consists of the following features:

- Anatomically correct full body divided into 10 parts as explained below.
- Realistic body tissue-mimicking material, compatible with CT & MR imaging.
- Useful to train/perform several patient positioning techniques under radiology.
- Shoulders can be rotated 360 degrees round ways and 180 degrees sideways.
- Movable Hip joints, knees, and elbows at respective degrees.
- Detachable Head, Torso & limbs.
- The bones have a realistic three-layered structure with inner porosity which can be adjusted
  according to the requirement of the project.
- Customizable with different pathologies (lesion, tumor, infection, abnormality) upon request.
- The phantom can be ordered in a transparent or skin-colored version.

Note:
Upon special request, the phantom features and the properties of the tissue mimicking materials can be customized based on the requirements of any project.

2. List of components:

1) **Pediatric Human Head for X-RAY CT and MRI training SKU: HD-P01 – 1 Unit**

- Anatomically correct realistic skull phantom
- Realistic brain tissue
- Gray matter (contrast x)
- Cervical spine

2) **Pediatric Human Torso for X-RAY CT and MRI training SKU:TO-P01 – 1 Unit**

- **Bones included:**
  - Complete Spine
  - Complete Ribcage
  - Shoulder (Clavicle & Scapula)
  - Pelvis
- **Thoracic organs included:**
  - Trachea and bronchi
  - Anatomically correct Heart
  - Lungs with lung vessels
- **Major abdominal organs included:**
  - Stomach
  - Liver
  - Kidneys
  - Spleen
  - Pancreas
  - Bladder
  - Gallbladder
  - Large & small intestines

3) **Pediatric Human Arms for X-RAY CT and MRI training SKU: AR-P01 – 2 Units**

- Arm (Humerus)
- Elbow joints
- Forearm (Radius, Ulna)
- Hand (wrist with fingers)
- Realistic skin-mimicking material surrounding the arm

Left arm

Right arm

4) **Pediatric Human Legs for X-RAY CT and MRI training SKU: LG-P01 – 2 Units**

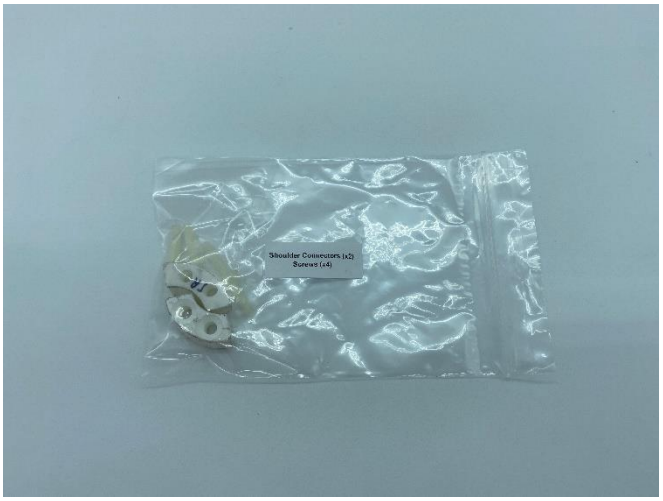
- Thigh (Femur)
- Knee joints
- Leg (Tibia, Fibula)
- Foot (Finger bones)
- Realistic correct skin-mimicking material surrounding the arm

Left leg

Right leg

5) **Assembly kit** **SKU: AS-P01**

Neck assembly kit



Shoulder assembly kit

Hip assembly kit

3. Assembling the full body phantom:

The individual parts of the full body phantom should be connected using the attached with the phantom assembly kit and plastic screws.

Please do NOT overtighten the screws when you assemble the phantom.

Step 1

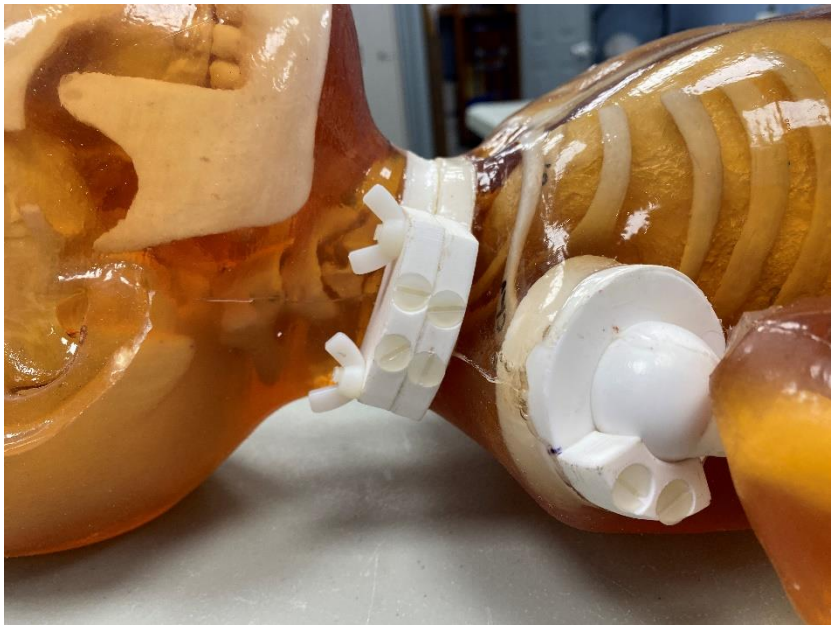
Connect the left and right shoulders using the assembly kit as it is shown on the following image (note that the image shows only the right shoulder; the left one is done in the same way as the right one):

Step 2

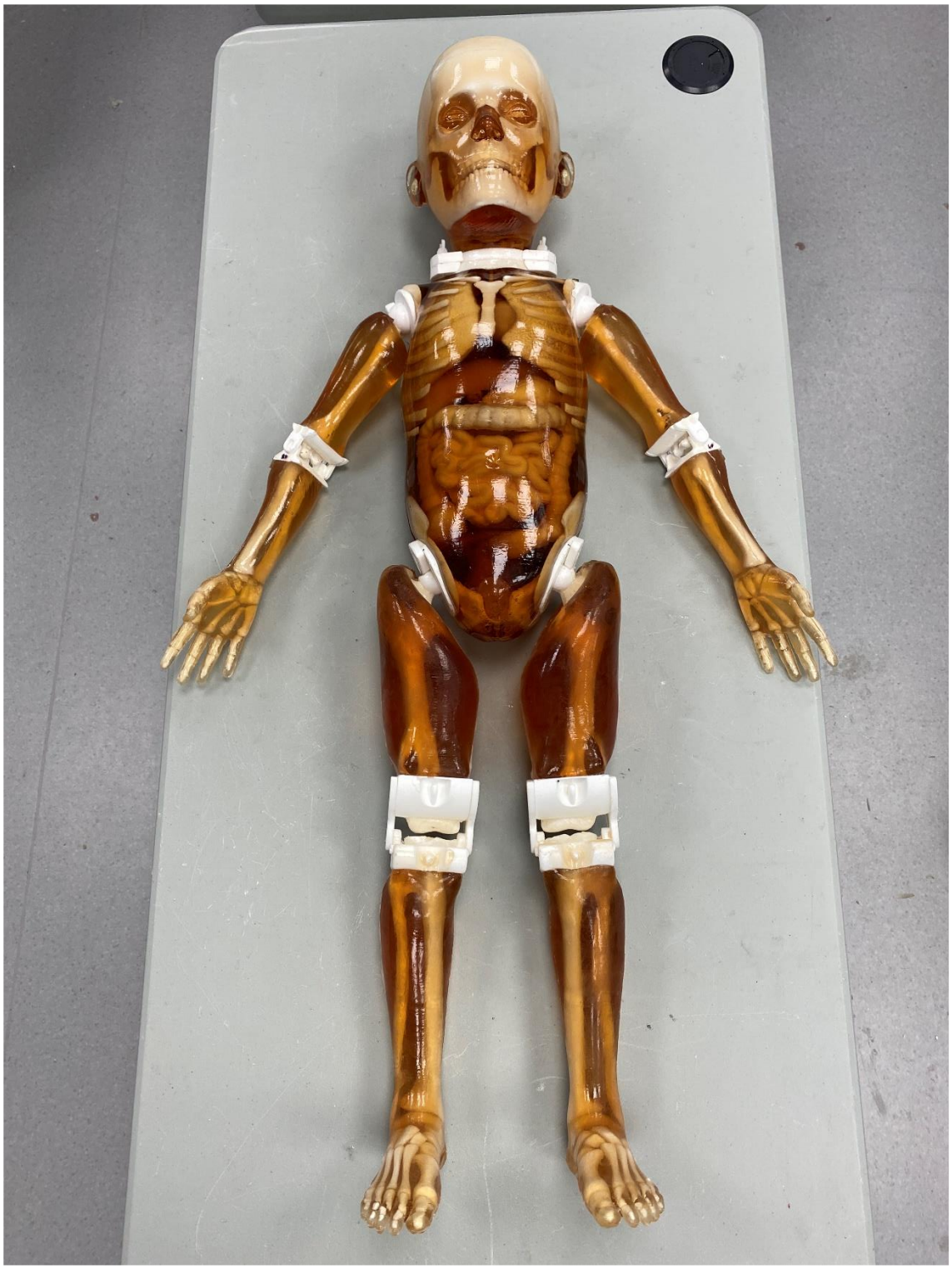
Connect the legs with the pelvis using the hip joints:

Step 3

Connect the head using the neck connectors (note that the assembly kit includes four short and four long screws; the long screws should be used for the head part, the short screws should be used for the torso part):



The entirely assembled phantom should look as follow:



4. SPECIAL INSTRUCTIONS:

a. Scanning the phantom

The phantom is fabricated based on the anatomy of an actual human body and it can be scanned in supine, prone and fowler's positions, more importantly, scanning can be performed from multi directions.

- For ultrasound applications, this phantom can be scanned either with or without the ultrasonic gel
- For MRI or X-Ray CT applications, the artificial heart can be filled with any common contrast agents.

b. Storage and handling

•The phantom is made of urethane-based material, and it should be protected from a direct exposure of any strong UV light.

•The experiments conducted on phantom can be performed in a sunny lab, but it is not recommended to leave the phantom under direct sunlight for weeks or months. If the phantom is not in use, we strongly recommend storing it in a dry and dark place.

c. Cleaning

- The phantom is water resistant, and it can be cleaned after its use. It is ideal to clean it either with water or with soapy water.
- The phantom is relatively resistant to chemicals but if stronger solvents are meant to be used with the phantom, we recommend doing a small test on the small part of the flat soft tissue. The chosen solvent can be applied on the small part of the phantom for a few hours.
- If there is no visible effect on the surface of the phantom it is safe to assume that the phantom is resistant to the tested chemical, and it is safe to use it for the rest of phantom (including inside of the heart). In other cases, avoid the solvent or contact us for alternatives.