http://ugca.org/03jan/gusinstructions.htm

Meet "Gus," a Low Cost Mannequin for Military Uniforms

Photos of "Gus" mannequins in a prize winning WW1 display can be seen at the Utah Gun Collectors Association January 2003 show

This information is shared by permission of the designer, Gus Bryngelson

"Gus" is easily made by anyone with even basic tool skills and a few dollars worth of material. The biggest cost is the styrofoam head which will cost about $10 to $15 depending on source. Once you understand the basic design, it is easy to make alterations, or substitute materials or make them fancier. Note that while these are cheap and easy to make, the materials used or poor construction can damage uniforms. "Gus" should not be used for very valuable or very fragile items, or for long term display. (Any sharp edges or splinters on the wood may snag or puncture fabric. Corrugated cardboard is slightly acidic and may weaken fabric left in contact with it. Concentrated weight (e.g.- pants resting on the "hips") may stretch or puncture fabric.)

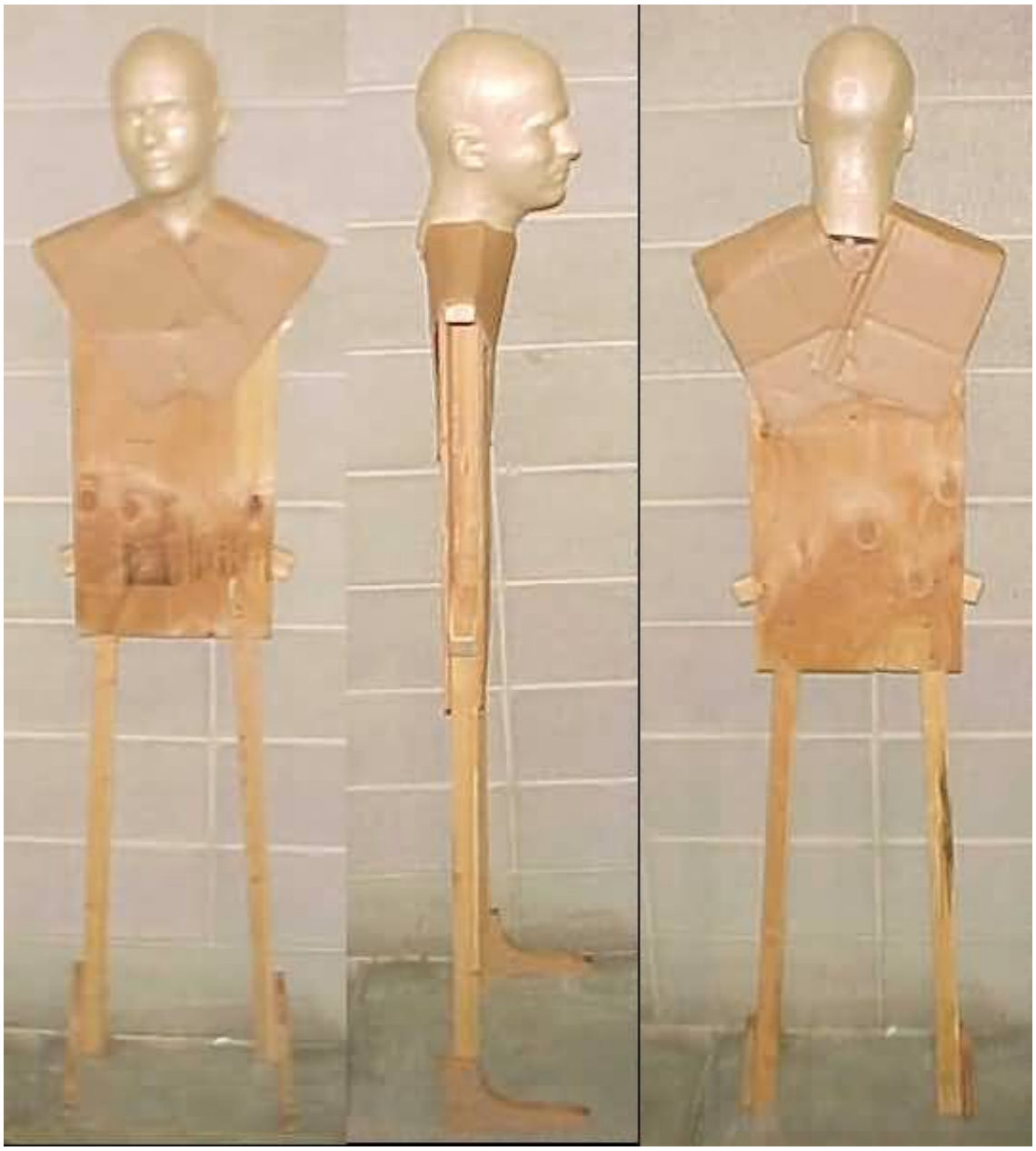
For common WW1 or more recent items they are a good temporary substitute for museum or even department store quality mannequins, which can cost hundreds of dollars to over a thousand dollars. For a valuable Civil War uniform you really should spend the money to get a suitable mannequin if you want to display it.

The dimensions shown seem to work well with the most commonly encountered uniform sizes, but you can easily adjust any dimension as needed to make "Gus" fit the uniform.

Material list (for one "Gus")

Material	Quantity	Purpose	Size
3/8" to 1/2" thick plywood-	2	torso pieces	approx 12" x 24" each
3/8" to 1/2" thick plywood-	2	feet	approx 6" x 9" each
2"x2" pine	2	legs	approx 35" each

2"x2" pine	1	shoulder	approx 14.5"
2"x2" pine	1	hip	approx 14.5"
2"x2" pine	1	backbone	One backbone approx 16"
1/2" or 5/8" dowel	1	neck	approx 10"
Heavy corrugated cardboard	2	collarbones	approx 7" x 24 " each
Dry Wall screws	2 doz.	assembly	approx 1 1/4" to 1 1/2"
Styrofoam head "male features" flesh tone (shown) or white. You can use any head you can find locally but the male features add a lot. Cost about $10.00 to 12.00 for the male feature heads, and under $5.00 for plain no feature heads.	1	head	full size



Construction Tips and Options:

1. The torso is a sandwich made from two pieces of plywood 12" x 24" with 2" x 2" pine pieces between them for the shoulders and hips. The shoulder piece is placed even with the top, and the backbone down the center. The hip bone runs across the torso with the top of the hips 17" from the top of the shoulders. The shoulder and hip will stick out evenly on both sides, and edges should be smoothed/rounded off and the top angled down a bit. (The photos show "Gus" with the hip and shoulder each made of two pieces and set at a slight angle, but we suggest just using a single piece and trim the

ends). Smooth any exposed edges of the torso (or just cover the edges with duct tape) to avoid damaging your uniforms. It is a good idea to put an old T-shirt on "Gus" to protect your uniform items from contact with the wood or cardboard.

2. The legs are about 35" long and run inside the sandwich to rest against the hip, for about 36" measurement from the ground to the hips. This can be adjusted as needed to fit the length of pants you will be using.. Legs are spread slightly with about 7" between at the bottom of the torso, and about 10-12" apart on the ground.

3. Adjust the size of the "feet" to fit in whatever shoe or boot you will be using. When fastening the foot to the leg, it is best to have the mannequin tilting very slightly forward to make it more stable, otherwise it may fall over backwards easily. For easier storage or transportation you may want to make the legs removable (secure with dowels or something easy to remove instead of permanently screwing in place)

4. The neck dowel is centered at the top of the torso, and the heads are normally made with a hole in the neck. The head just rests on the dowel, which should be strong enough to wear a helmet or hat. If desired, you can make the dowel removable from the torso to simplify storage or transportation. If you do not need to display a helmet or hat, you can skip the neck and head and use a nice cloth to fill out the neck of the uniform.

5. The collarbone installation should wait until you are ready to mount a specific uniform. Uniforms seem to vary quite a bit in the amount of slope needed and the width, and you can also increase the hip to collarbone height a bit if necessary by mounting the collarbones a bit higher. You could use a heavy duty stapler instead of screws to secure the collarbones. If you wanted to get fancy or don't like the acidic nature of cardboard, you could use heavy fabric over padding material such as is used in pillows or craft projects. (Check Wal-mart or fabric stores.)

Other Options:

1. Filling out torso and legs- Several strips of cardboard could be attached to the torso, loosely enough that the space behind can be filled with crumpled paper or padding material. (Newspaper is a bad choice as the ink may get on your hands and on the uniform while handling). Cloth or mesh could be used instead of cardboard. Chicken wire could be used if you like to wrestle with that but you need to figure out some way to attach it to the torso (screw and large washers, staples?)

2. Arms and hands- We do not know of a source of inexpensive hands, so there is little point in trying to build arms. Arms make it harder to dress the mannequin. If you feel adventuresome, you probably could bend some stiff wire, metal rod or flexible copper tubing to shape. (Tape measure your arm for rough measurements.) Upper part could be a friction fit in the shoulder, or fit in a hole with a pin to secure it. Plan on sticking the arm up the sleeve and into the shoulder. Gus would be easier to dress that way than trying to do it like real people do. Wire/rod/tubing could extend out the sleeve to provide

support for a rifle or equipment if you want to get fancy. You might try gloves as hands, but that may be more work than the results justify.

3. Increased stability options- Add a short piece of 2" x 2" as a spacer to the back of the calf on one or both legs, which will allow a support to clear the boots. Use wooden or metal support fastened to the spacer block to extend down to ground level. Attach the support to a flat piece of metal or plywood large enough to make it stable, or add a simple "T" to the bottom to prevent tipping over to the front or back. Another option would be a simple brace attached to the back of the torso (maybe with a hinge?) above the hips that would be underneath the tunic, but over the pants, and not require any cuts. (This will not work with coveralls or flight suits.)

We hope this information helps you enjoy your collection more.
