

Bending the EMT

1. **Layout and marking the EMT for bending.** The layout information is provided on the detail sheet. It is easier to layout and mark all the EMT at one time and provides the first opportunity for the crew to work together. Mark the full circumference of each "stick" of EMT. After marking, remove the EMT to an out-of-the-way place on the floor (nothing falls off the floor). "Ownership" of the marked EMT is not important at this time. Let the Scout know this.
2. The first snow shoe bending person or bender (B #1) selects a stick of EMT. With the assistance of the next person to bend up a set of shoes, bender #2 (B #2), the EMT is set into the tool with the center line point, "CL", at the tool's index mark. B #2 steadies the work table while B #1 makes the first bend of 90° The rest of the crew (the observers) need to stand back while bending is in progress. Getting hit with EMT hurts!
3. B #1 then turns the EMT over and again sets the "CL" point at the tool's index mark and bends the EMT until it looks like a large hair pin with parallel sides.
4. The 3rd and 4th bends are at the "C" points. Set the EMT into the tool with the first "C" point at the tool's index mark. Layout a bend line on the plywood of approximately 11° , for discussion purposes, this line is our "reference line". The exact angle is not as critical as the need to make all the bends the same, so mark the plywood with the reference line angle of your choice. Mark the plywood with a solid black line that everyone can see and use . . . having done so, all the snowshoes will look the same. Bend the first leg to the reference line. Turn the shoe over and bend the other leg to the reference line. The legs will now be crossed.
5. The 5th and 6th bends are at the "D" points. Set the EMT into the tool with the "D" point at the tool's index mark. Noting the direction of the bend on the detail sheet, bend the first leg to a point just short of the reference line and mark this point. [This will make the shoe a little bit narrower at the back, allow it to slide out of its snow pocket when in use.] Turn the shoe over and bend the other leg to the same 2nd reference line.
6. It may be necessary to make some minor adjustments to remove any irregularity. At this point, the 1st snowshoe is done until the 2nd shoe looks like the 1st.
7. Bend the 2nd shoe like the first, following instructions 2 thru 6 above.
8. With a second EMT bender, or having removed the bender from the plywood, bend the toes of each shoe, one side of each shoe at a time. This is a freehand bending operation and requires a second person to stabilize the bender. The second person must securely hold the bender handle vertical with the bender head up. The rubber tip from a crutch . . . available from a drug store . . . , mounted on the end of the handle makes this chore easier and will protect a finished floor. Set the EMT into the tool with one of the "A" points at the tool's index mark. When making the first of the next 4 bends, note the angle on the tool. You are establishing the snowshoe nose turn-up for both shoes with this first bend. The second bend on the first shoe is easy . . . bend the mating side in the same way and make the tails come together. The 2nd shoe is done the same way as the first. Use the same angle used on the first shoe and the nose turn-ups will be the same.
9. Place duct tape around the tails to keep them together. Particularly with Scouts, everyone must mark their duct tape with their name. This prevents arguments of who owns the best looking snowshoes! In the snow, they all perform the same function.

Mechanical Connections of the Frame

1. With the duct tape holding the pairs of legs together and before the excess EMT material is cut off, drill 2 holes thru the tails and bolt the tails together with carriage bolts. Cut the excess bolt off flush with the nut, file the bolt end smooth and center punch the ring of the nut and bolt thread to prevent the nut from turning.
2. Drill a third hole thru both legs just above the join of the legs. The nail or bolt (your choice) that is placed thru these holes will secure the lashing. Retain the fastener by riveting the nail end or nutting the bolt (center punch the bolt as discussed in #1 above).
3. Cut the excess EMT off about $\frac{3}{4}$ " below the 2 bolts, file the ends of the EMT to remove any burrs and seal the ends of the EMT with rain gutter sealant. The sealant should be "caulked" into each end of the shoe until it passes and seals the webbing retainer "nail" (or screw) holes. The sealant prevents water from entering the EMT, freezing, and making the shoe heavy.