

Instrument Construction

Instructions for Building an Instrument Shelter

The GLOBE Instrument Shelter should be constructed of approximately 1.9 cm thick White Pine or similar wood and painted white, inside and out. A lock should be installed to prevent tampering with the instruments. Mounting blocks should be installed on the interior to insure that the max/min thermometer does not touch the back wall. The door is hinged on the side. This is not shown in the diagram. The parts should be screwed together or glued and nailed. The plans are specified in metric units, however, the original dimensions were in English units. Therefore, you should be prepared to make minor adjustments to dimensions depending on the local standard dimensions of wood in your region.

It is easier to purchase prefabricated louvre panels, and they are usually available for purchase. The primary criteria for constructing louvres is that they provide for ventilation of the instrument shelter while preventing sunlight and rain from entering directly. To prevent sunlight from entering the shelter we suggest that each louvre lat overlap slightly with adjacent lats (see diagram). There should also be a physical gap between lats of approximately 1 cm, and the lat angle should be roughly 50-60 degrees from horizontal.

Figure AT-IC-1: Instrument Shelter

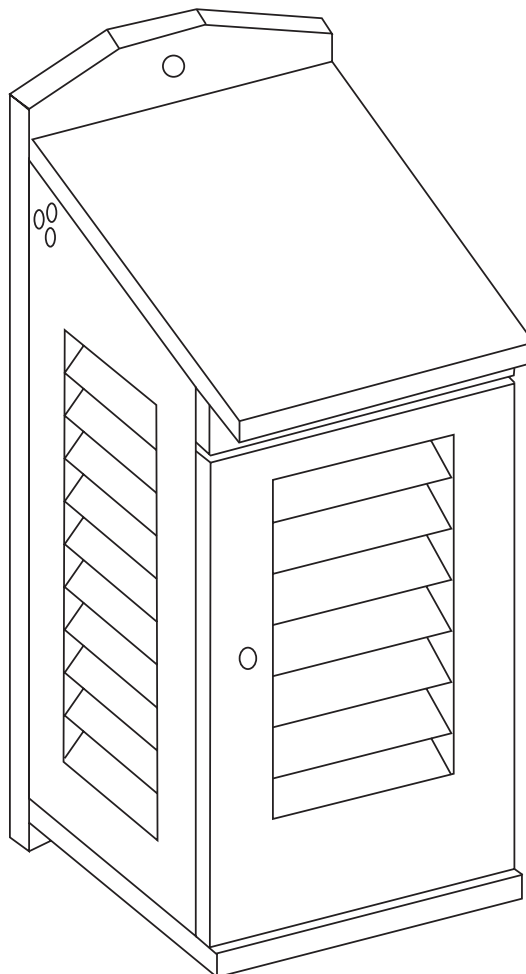
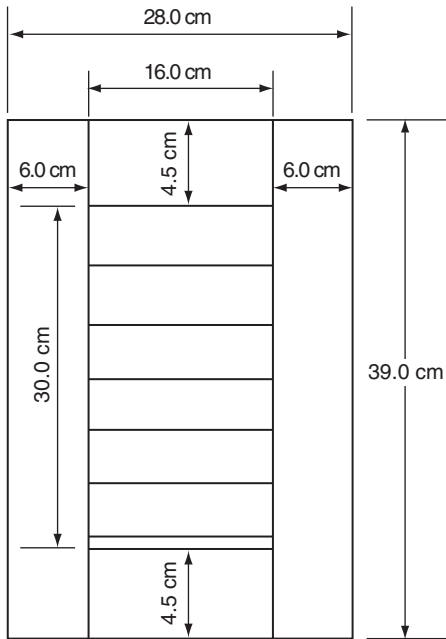
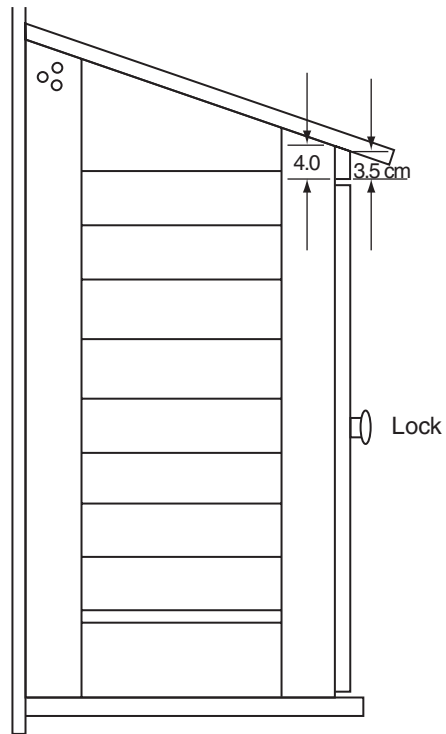


Figure AT-IC-2: Instrument Shelter Dimensions

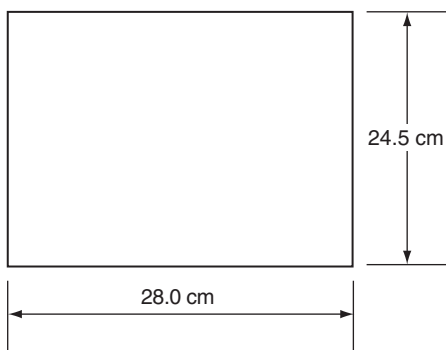


Front Door

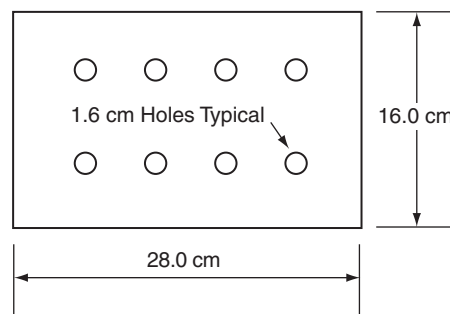
Note: Louvres are 0.64 cm Thick and 4.5 cm Wide



Side View



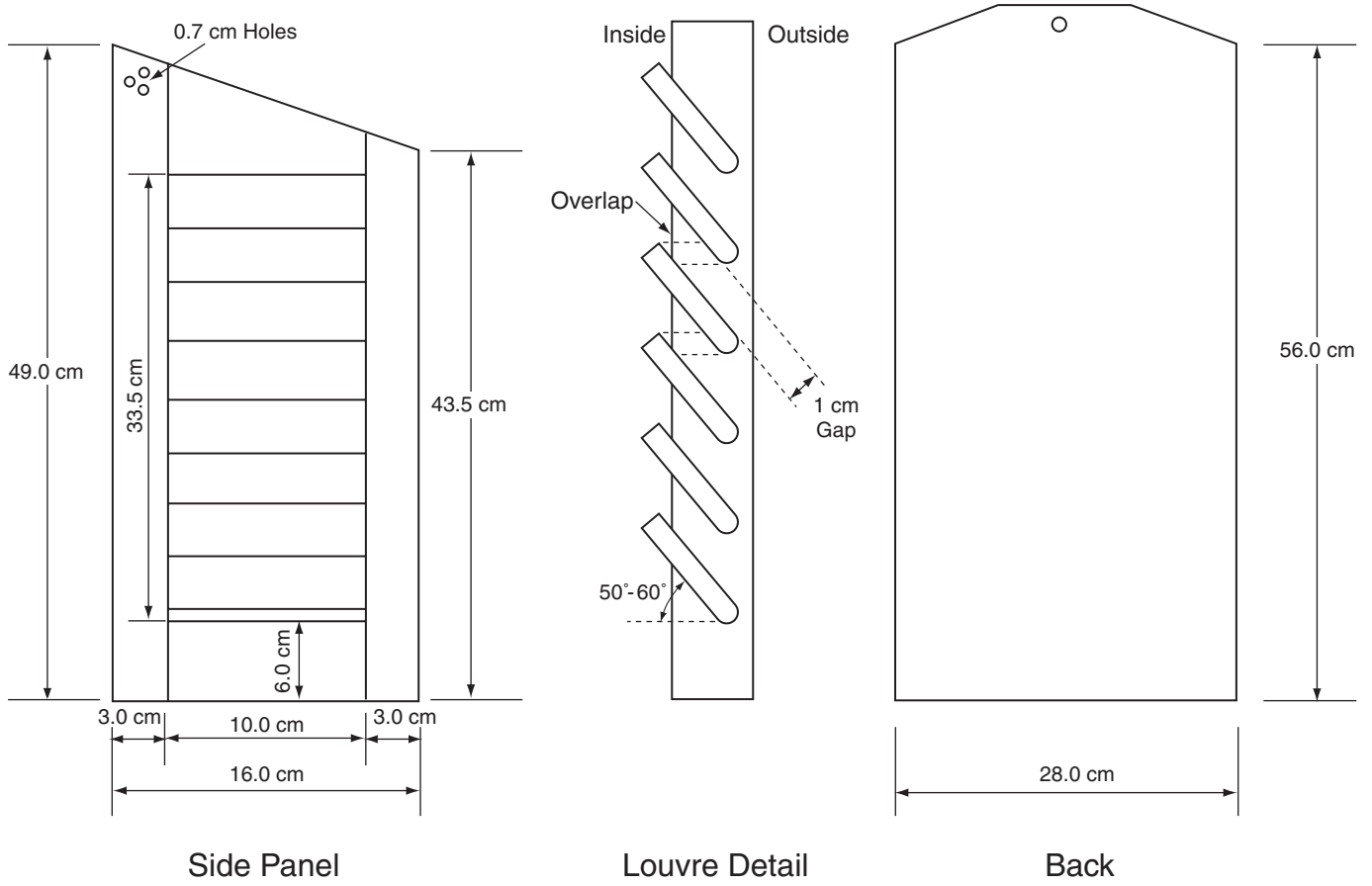
Roof



Bottom

Outer Dimension Inclusive of Louvre Panels

Figure AT-IC-3



Instructions for Constructing a Snowboard

A snowboard is a thin, flat surface that rests on top of earlier layers of snow. New snow falls on top of it and can be measured with a meter stick. The board should be made of plywood about 1 cm thick. It must be light enough so that the existing snow will support its weight. It should be at least 40 cm by 40 cm in area so that more

than one snow depth measurement can be made and so that samples may be collected for both snow water equivalent and snow pH. The snowboard must be painted white. A flag will be needed to mark the location of the snowboard so that it can be found following a fresh snowfall.

Figure AT-IC-4: Snowboard Dimensions

