

WWII – “HEDGEHOG” BEACH OBSTACLE

Manufacturing instructions

Select good quality plywood – you will need **3 BEAMS + 2 SUPPORT PLATES + 11 BOLTS & 11 NUTS**

- I BEAMS / ANGLE IRONS** – select ¼-inch thick plywood
prepare 2 boards of equal length 80-inch long
prepare 2 boards of equal length 79-inch long
prepare 2 boards of equal length 78-inch long (easy for transport, they will fit together)
- II** cut-out identical openings at both ends of each board (for dimensions, please see drawings)
- III** assemble 3 groups of 2 boards each (of equal length) at right angle, one on top of the other (not against each other) glue + nail and let dry (use marine glue for wood + fine nails) you will then have 3 plywood beams (see drawings)
- IV BEAMS / ENDING-CLOSURES** – select ½-inch thick plywood
Cut-out triangles for closing open ends of 3 beams (i.e 2 for each beam) position them flush with ends, glue + nail and let dry (see drawings)
- V BEAMS / STRENGTHENING** – select small ½-inch square rod (pinewood)
saw at appropriate length, and glue inside angle of plywood beams for additional strength – if necessary add a few additional nails from the outside (see drawings)
- VI BEAMS / HOLES for SUPPORT PLATES**
Drill 1 hole (1/4-inch) in center of every plywood beam one side only (lengthwise) to start with
...additional holes should be made when assembling (when positioning support plates)
- VII SUPPORT PLATES** – select 2 large squares of ¼-inch thick plywood
Saw as per dimensions (see drawings) drill hole (¼-inch) in center of panel and position hole on available hole of center of plywood beam + secure with bolt & nut – make sure support plate is well aligned, drill 2 additional holes thru support plate + beam + secure support plate to beam with additional bolts & nuts
- VIII ASSEMBLY**
Position other support plate on another beam (repeat step VII), align well + drill holes and secure with bolts & nuts to FIRST beam with attached support plate, finally ADD last beam (w/o support plate) position in between (crosswise) the already assembled 2 beams with support plates – it’s a bit of a puzzle, so you will need trying a few times ... anyway, the obstacle will always lean on 3 beam endings, and remain standing ... you will need 2 different lengths of bolts (maximum triple plywood thickness)
Assemble PRIOR to painting – the unpainted surfaces will allow you to re-assemble the hedgehog more easily ... I would also recommend numbering the unpainted surfaces in a sequential order .. for later use
- IX PAINTING**
If used on LAND, to depict road obstacle (original intention), paint them a very dark blue or black, in fact they’re steel beams ! (better use a water repellent primer first, or just add 2 layers of paint, use a good quality outdoor paint, preferably one that can withstand adverse weather conditions)
If used on BEACH (sand), to depict landing obstacle (D-DAY) paint them rusty-brown (again use a water repellent primer first, and coat with 2 layers of a good quality outdoor paint, preferably waterproof)
CAUTION, since our hedgehogs are made of plywood, they are much lighter than the originals, and they WILL float, so do not install them in deep water, position them in shallow water, at coastline, and moor them, or add some weight, if necessary – when using same, throw a little sand, seaweed, etc. and slightly dig them in .. it then looks so much better !

