

How To: Re-align Lane Markers After Target Renewal.

Lane Alignments:

- Lanes will be laid out in sets of threes, centred on a line that is 5.5" left (west) of the centre of the bay.
- At the target, all lanes will be 104" wide, evenly spaced on this centre.
- All metal targets will be aligned on the middle of the corresponding lane.
- Markings on the last berm will match the target widths.
- All down-range lane numbers will be on the mid-line of the metal target.
- All lane divider markers and wind flags will be placed on lane boundaries that correspond to the lane boundaries *at the targets*.
- At the firing line, all lanes will be as wide as possible in that bay.
- Firing line numbers will be aligned on lane boundaries calculated for each bay, centred 5.5" left of centre.
- All numbers will alternate yellow-on-black and black-on-yellow as prescribed in IBU rules.

Marking Out the Lanes in Each Bay:

1. Find the centre of the bay at the firing line (done)
2. Measure 5.5" left and put a 1 1/4" screw half way into the wood to act as an anchor.
3. Find the centre of the last set of posts down range (last berm). Mark centre.
4. Measure 5.5" left and put in another screw, like you did on the firing line.
5. Run a line from the firing line screw to the last berm screw.
6. Mark where the line crosses each berm. [This is the centre of the set of three lanes \(CS\)](#)
7. From CS, measure 52" to the left and mark berm. This is the centre lane left boundary
8. From CS, measure 52" to the right and mark berm. This is the centre lane right boundary.
9. From each of these boundaries, measure out 104" to left and right as appropriate to get the outer boundaries of the left and right lanes for this set.

Repeat steps 7-9 for all berms in the bay.

Moving the Down-range Lane Markers, Numbers and Wind Flags:

1. Carefully remove the screws holding the lane numbers and soldiers (yellow and black rectangles)
2. Put these on top of the berm, preserving the colour orientations.
3. Replace soldiers on the front face of the berm, with the yellow/black boundary aligned with the *new* lane boundary markers. Re-use screws and holes if at all possible.
4. If there is a number on this berm, align it with the centre of the *new* lane as marked by the soldiers.
5. If there is a wind flag, remove it at the 2x4 to berm junction without disassembly.
6. Transfer the near wind flag to the back side of the first berm and the far wind flag to the backside of the last berm; align with the right edge of the centre lane (Rule 3.4.6).
7. Re-install; ensure that the support is tight and vertical.
8. Look up the width of the bay + 11"; divide by 3; this is the firing line lane width.

Repeat for the next bay.

Moving the Firing Line Lane Numbers:

Each of the existing numbers is a triangular construction that has to be moved, and in some cases dismantled. *Bay 15-13 has been completed as an example.*

- Using a pry bar and hammer, gently lever up the existing numbers so that the whole structure comes loose.
- Turn upside down and hammer the screws down until the heads pop clear on the other side.
- Turn right side up and remove screws.

Number sets that are mid-bay can now be installed directly onto the firing step at the lane boundary.

- Find the lane boundary as calculated at the firing line.
- Install the numbers 1 1/2" back from the edge of the wooden firing step with the back edge of the triangle parallel to the front edge of the firing step (use screws).

For the between-bays numbers, you will have to dismantle the triangular structures:

- Undo the screws holding the Coroplast numbers; set the numbers aside.
- Undo the screws holding the plywood sides to the central support.
- Use the pry bar to remove the base. *Flatten the nails before discarding the base.*
- Save the plywood sides and put them with the corresponding number (this is important!)

Re-install the numbers to the sides of the corresponding pillar: For each number:

- Match up the number and plywood supports.
- Arrange the plywood support so that its front edge is 1" back from the edge of the firing step.
- Arrange the plywood so that the bottom edge is touching (flush with) the firing step.
- Arrange the plywood so that it is slightly slanted towards the centre of the pillar (remember that the lane boundary is on the edge of the pillar, not in the middle of it).
- Screw the plywood to the pillar.
- Using the old screws and holes, re-attach the Coroplast number to its plywood support.