

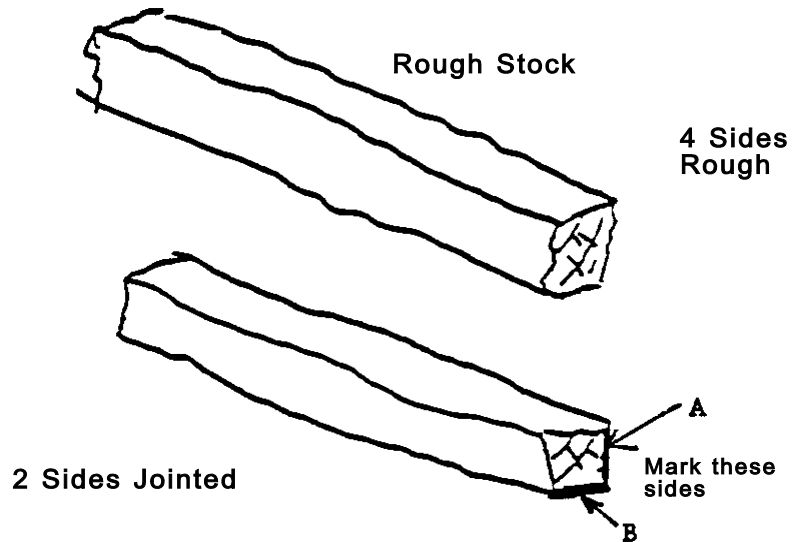
Exercise 3.2

USING A PLANER

| Completed | Procedure |
|-----------|---|
| □ | 1. Review the Planer Safety Rules. |
| □ | 2. Obtain 3 pieces of rough sawn stock. Note that 1 piece is "square", 2 are "flat". 1. 4/4 (1" nominal) x 4" x 15" 2. 8/4 (2" nominal) x 2" x 15" 3. 4/4 x 2 x 15 |
| | <u>Piece A (4/4 x 4 x 15)</u> |
| □ | 1. Joint one face of piece A on the jointer and mark. |
| □ | 2. Measure the MAXIMUM thickness of the flat exercise stock. Set the Planer to remove the 1/16" from the thickness. (Note: The Planer scale indicates the FINISHED THICKNESS of the piece, unlike the jointer scale, which indicates the DEPTH OF THE CUT.) |
| □ | 3. Switch the machine and feed the stock through, flat side down. Continue surfacing the piece, raising the table each time approximately 1/16", until the stock is 1/2" thick. One complete turn equals 1/16". |
| □ | 4. 1/2" is the minimum thickness allowable on the Oliver planer. To go thinner, switch to another planer, or obtain a Planer backing board from the instructor. Measure the thickness of the backing board and also the thickness of the thin exercise stock. |
| □ | 5. Lower the table and set the bed rolls in the proper position. Place the backing board on the table. |
| □ | 6. Set the machine to remove 1/16" from the thin stock as it is fed through. (Setting would be the combined thickness of the backing board and thin stock, minus 1/16".) |
| □ | 7. Feed the stock through the machine. Continue surfacing the stock until the stock is 3/8" thick. (Hint: turn the stock over with each pass, so that material is removed evenly from each side.) |
| | This completes the work on piece A |

Piece B (8/4 x 15)

- 1. Take the "square" exercise stock to the jointer, and using the procedures you have learned, joint 2 adjacent sides smooth and square with each other, as shown.



- 2. Mark the 2 jointed sides with chalk or soft lead pencil to indicate that they are machined.
- 3. Measure the piece to determine the maximum thickness. Set the Planer $1/16''$ less than that, and feed the piece through with a smooth marked side down. Feed the piece through on the same setting, but with the other marked side face down.
- 4. Continue surfacing the two adjacent unmarked sides until the piece is $1\frac{1}{2}''$ square. You have now completed the second part of this exercise.

This completes the work on piece B.

Completed

Procedure

Piece C (4/4 x 2 x 15)

- ❑ 1. Using the second flat piece, joint one surface and one edge and mark.
- ❑ 2. Rip stock to 1 5/8".
- ❑ 3. Set the Planer to remove 1/16" from your stock or 1 9/16".
Note: If using the Oliver Planer, install the correct size edge guide to keep the material square to the table.
- ❑ 4. Turn on planer and feed stock through. Decrease the thickness by 1/16" and surface other edge. You have now completed the planer exercise. Final width should be 1 1/2".
- ❑ 5. Plane the face of the piece to 3/4".

**Final dimensions of these surfaced pieces should be within $\pm 1/64"$.
Use a caliper to check your work as you proceed.**

Scoring Guide: √ = Criteria met
O = Criteria not met

| | | | | | |
|--|--|---|--|---|--|
| Thickness of piece A (.375") <i>1 point</i> | Thickness & Width of piece B (1.5" x 1.5") <i>1/2 point ea.</i> | Squareness of piece B (Edges 1 & 2) <i>1/2 point ea.</i> | Thickness & Width of piece C (.75" x 1.5") <i>1/2 point ea.</i> | Minimal Tearout or Burning (2 points) – Typical of all pieces | *Dimensional Accuracy +/- 1/64" |
| Quality <i>1 point</i> | Quality <i>1 point</i> | Squareness of piece B (Edges 3 & 4) <i>1/2 point ea.</i> | Quality <i>1 point</i> | | Quality: 18-22 KMPI, minimal snipe, no feed roll marks |

Total: _____ /10 (min score: 8/10)

Comments: