

## Lesson 7: Squares and Directional Tools

### Introduction

In Woodworking, there are certain tools that we would need in order to work on our workpiece. These tools help establish a dependable reference that guides other tools to perform their needed work.

From ensuring perfect angles to creating complex bevels, this precision prevents misalignments, wasted materials, and frustration while working on the project.



### Woodworking Tools for Precision

#### Try Square

It is described to have a L-shaped tool which comprises a blade and a stock that is exactly fixed at 90 degrees. It is commonly used to check or mark right angles and straight edges within the workpiece.

- **Key uses:**
  - Confirming right angles on edges and faces
  - Marking square lines on wood
  - Ensuring joint accuracy during assembly
- **Importance:** A foundational tool for precision which ensures your parts are accurately squared is fundamental to quality woodworking.



#### Combination Square

A **Combination Square** is a multi-purpose measuring tool featuring a graduated ruler and adjustable head(s) for measuring, marking, levelling, and checking angles.

- **Key uses:**
  - Measuring and marking 90° and 45° angles
  - Acting as a depth or height gauge
  - Serving as a straightedge, marking gauge, or even a spirit level
- **Importance:** Offers versatility and precision in one tool—ideal for reducing tool clutter while maximizing functionality within the woodworking project.



## Sliding Bevel (T-Bevel)

A **Sliding Bevel** or also known as the “T-Bevel,” is an adjustable bevel gauge with a movable blade tightened via a screw or wing nut, ideal for transferring angles.

- **Key uses:**
  - Replicating and transferring arbitrary angles
  - Setting bevels for miters or complex joinery
- **Importance:** Essential for accurate angle transfers, especially in projects that require non-standard angles.



## Dovetail Marker

- A **Dovetail Marker** is a specialized layout tool designed for marking dovetail joint lines precisely. This is most useful when the individual is carving out dovetail forms for joineries or construction.



- **Key uses:**
  - Marking both the tail slope and end-grain line in one placement
  - Maintaining consistent dovetail angles across multiple boards
- **Importance:** Ensures accuracy and efficiency when laying out tight-fitting, elegant dovetail joints. Additionally, it provides a shortcut for the individual to craft the dovetail forms onto the workpiece.

### Marking Gauge

A **Marking Gauge** is a tool that scribes a line parallel to an edge using a beam and an adjustable headstock. It is most commonly used for wood joinery and sheet metal operations.

- **Key uses:**
  - Marking consistent layout lines for cuts or joinery
  - Ensuring uniform spacing for mortises and tenons
- **Importance:** Dramatically improves accuracy and consistency in repetitive layout tasks.



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## Terminologies

**Precision**– it refers to the exactness and the consistency of a measurement or result. It often describes how close multiple measurements of the same thing are to each other.

**Dovetail** – A dovetail is a type of woodworking figure most commonly used in the Dovetail joint. It is known for its interlocking wedge-shaped part, which resembles a dove's tail.

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