



# How to FINE TUNE

your plane

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Every plane is a kit. In order to make fine shavings, you must improve it.

Merely sharpening the blade isn't enough.

You must fine tune five critical parts before your plane can sing.

## Five Parts

1) **The sole.** Lap it flat using sandpaper glued to  $\frac{1}{4}$ " glass or another flat surface. Use PSA sandpaper or regular sandpaper and a low-tack adhesive spray.

2) **The blade.** Both sides need attention. Lap some portion of the back. Grind and hone the bevel to the correct profile for leveling, smoothing or jointing.

To minimize blade chatter, lap the top (bevel) side of the blade where it contacts the frog.

3) **The chip breaker.** Sharpen it. Lap the bevel so it will contact the blade without any gaps. Be sure to leave clearance between the bevel and the blade.

4) **The lever cap.** Adjust its screw to provide maximum clamping pressure to the chip breaker and blade. But not too much pressure. You must still be able to turn the depth-of-cut adjusting nut with two fingers.

5) **The frog.** Move the frog forwards or backwards using the frog adjustment screw to create the optimal mouth opening for the work you're doing. To minimize blade chatter, lap the top side of the frog.

EASE LEADING EDGE WITH A FILE

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GRINDING ANGLE

HONING ANGLE

45° ANGLE OF ATTACK

→ 1-1/2" ←  
FLAT

—OR—

1/8" ←  
1°-2°  
BACK BEVEL

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	TRAD.	ALT.
GRIND	25°	30°
HONE	30°	35°

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STRAIGHT OR SLIGHTLY CURVED

↓  
↑  
ABOUT 1/32"

LEVELING  
#5, #6

1/8" WIDE CURVED TRANSITION  
1/16" R ROUNDED CORNER

SMOOTHING  
#3, #4, #4-1/2

STRAIGHT

JOINTING  
#6, #7, #8

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→ ←  
MOUTH OPENING

SETBACK

CLEARANCE

LAP HERE

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	MOUTH	SETBACK	FORCE REQUIRED
CURLY GRAIN	1/64"	1/64"	MOST
STRAIGHT GRAIN	1/32"	1/32"	—
THICK SHAVINGS	1/16"	1/16"	LEAST